

MANAGING HEALTH ISSUES IN GAUTENG SCHOOLS: AN
EVALUATION OF THE ADMINISTRATIVE EFFICACY OF THE FIRST
AID (FA) PROVISIONING

by

SAMUEL BINDUKO

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Declaration

Student number 4283 297 7

I declare that **MANAGING HEALTH ISSUES IN GAUTENG SCHOOLS: AN EVALUATION OF THE ADMINISTRATIVE EFFICACY OF THE FIRST AID (FA) PROVISIONING** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

.....

SIGNATURE

(S BINDUKO)

.....

DATE

DEDICATION

This thesis is dedicated to my grandson, **Nathanael Chigwada**, to spur you on so that you achieve more in the **LORD**, to make up for the time this thesis took out of our playtime.

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ABSTRACT

Injuries, illnesses and deaths happening in schools are a growing menace in Gauteng province, South Africa. This qualitative research study sought to evaluate the administrative efficacy of first aid (FA) provisioning in Gauteng schools in the wake of rampant injuries, deaths and disfigurement among learners and teachers, as documented in the local print and electronic media. An emergent research design underpinned by a phenomenological theoretical perspective unravelled the administrative efficacy of the provisioning of FA in two pre-schools, two primary schools and two high schools in Gauteng province. Observations in one school, semi-structured face-to-face interviews with one pre-school manager, three FA appointed persons, one deputy headmaster and a subject head of department, as well as focus group discussions with learners and teachers in two schools, were the data-gathering tools. A thematic analysis approach was the method adopted to analyse data. Research findings indicate very low levels of FA literacy and competency among learners, teachers, pre-school managers and principals in the sampled schools. I recommend and advocate a national conversation aimed at instituting a massive drive to make it mandatory for all learners and teachers to be trained in FA.

KEY WORDS

Management, health, safety, evaluation, administration, efficacy, first aid, health education.

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ABBREVIATIONS/ACRONYMS

ABC	Airway, Breathing, Circulation
AEDs	Automated External Defibrillator.
AIDS	Acquired Immuno-deficiency Syndrome
ATLS	Advanced Trauma Life Support
ATNC	Advanced Trauma Nursing Council
BLS	Basic Life Support
CDC	Centre for Disease Control and Prevention
COO	Chief Operations Officer
CPR	Cardio-pulmonary Resuscitation
DBE	Department of Basic Education
DDG	Deputy Director General
DHSD	Department of Health and Social Development
DoE	Department of Education
EMS	Emergency Medical Service
ER24	Emergency Response (24 hours)
FA	First Aid
FGDs	Focus Group Discussions
GDE	Gauteng Department of Education
GERD	Gastro-oesophageal Reflux Disease
HASAWA	Health and Safety at Work Act of 1974 (UK)
HIV	Human Immunodeficiency Virus
HSC	Health and Safety Council
HSE	Health and Safety Executive
LEAs	Local Education Authorities (UK)
LO	Life Orientation
LSFA	Life-supporting First Aid
LO	Life Orientation
MEC	Member of the Executive Council
NEPA	National Education Policy Act 27 of 1996
PedFACTS	Pediatric First Aid Training for Caregivers and Teachers
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995
SABC	South African Broadcasting Corporation
SAFAL	South African First Aid League
SAMU	Somme Academic and Medical University
SASA	South African Schools Act 84 of 1998
SCA	Sudden Cardiac Arrest
SGB	School Governing Body
SMT	School Management Team
SPSS	Statistical Package for the Social Sciences
UK	United Kingdom (of Great Britain and Northern Ireland)
UNISA	University of South Africa
USA	United States of America
WHO	World Health Organisation

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CHAPTER 1

OVERVIEW AND ORIENTATION OF THE STUDY

1.1 Introduction

“I did not send her to school to die” (Ngcobo 2015:22). These were the words of a distraught father whose Grade 12 daughter died when a classmate pulled a chair from under her as she was about to sit down in one of the high schools in Gauteng province, South Africa.

“Death is everywhere ...” so begins the Multi-choice Dish Satellite television (DStv) channel number 128 Sony Max programme entitled “*1000 ways to die!*” Life is a great risk. It is one of the paradoxes of life that by merely living, one risks dying! It is with this idea in mind that one needs to guard life at all cost with all means at one’s disposal. When death strikes, ambitions are cut short, dreams and futures are terminated.

In many cases death does not come suddenly. Usually there are “tell-tale” signs such as bleeding, choking, asphyxia, allergic reactions, panic attacks, fainting, the last kicks before a person finally succumbs to death. It is at this point that first aid (FA) plays a crucial role in a school setting. First aid intervenes at this stage and prevents death or suffering. The primary purpose of FA is to protect life (Greeff 1995:10).

Wagida and Hanan (2014) assert that childhood injuries constitute a major public health problem worldwide and FA is an effective life-preservation tool at work, school, home and in public spaces. The need for efficient, effective and proactive FA provisioning in a school set-up cannot be over-emphasised. At the core of this FA provisioning is the management function. Fallon, Begun and Riley (2013:2) assert that “management evokes images of control, motivation and operations.” In a school, this function is vested in the principal.

Education encompasses the intellectual, physical, emotional and moral development of a child. This broad aim of education demands that education provision does not focus on the intellectual realm alone, but also on the physical, moral, FA, health and safety issues affecting learners at school. The National Education Policy Act 27 of 1996 (NEPA) defines education as “... any education and training provided by an education

institution, other than training as defined in section 1 of the Manpower Training Act, 1981 (Act No 56 of 1981). According to the policy, this education and training is "... directed at enabling the education system to contribute to the full personal development of each student."

It is an indisputable fact that over the years the principal aim of education has been academic achievement (Hayward 2013; Van Houtte 2005; Liangwe-Mazengwe 2013). In South Africa specifically, success in education is measured against the backdrop of Grade 12 or "*matriculation*" pass rates. Little is ever mentioned concerning successes in the physical and spiritual realms. Education officials rarely mention strides that they have made in the realm of health and safety in schools. The impact of learner health and safety on academic achievement is not given prominence.

It is important to take note that the primary purpose of education could be compromised if health and safety issues are not taken care of. Soni (2012) argues that health is rightly described "as the greatest of our possessions, one of the most essential to the enjoyment of all our faculties and blessings," hence it should be highly prized and guarded. Anything that tends to threaten one's health could be viewed in the light of this statement. Injuries, illnesses and deaths in a school need to be managed and treated effectively because they disturb the "enjoyment of our faculties", including academic learning. It would be futile to get learners through the school system and not take due care of their lives, health and wellness.

Mthombothi (2014:21) argues that every year "we witness self-congratulatory orgies by politicians and education authorities for what they want us to believe is another haul of stupendous matriculation results." This apparent obsession with academic achievement at all cost has clouded our judgement on the ideal to educate children fully, i.e. mentally, physically and morally.

It is regrettable that health and safety issues are only being acknowledged superficially because of incidents happening in South African schools today. I argue that this study is important because it evaluates the level of FA provisioning in schools, as it should not take a major accident happening in one school to jog the minds of education policy-makers into putting in place measures that cater for FA provisioning in schools. Until a

study to determine the efficacy of FA provisioning in Gauteng schools is done, education stakeholders might have to wait in limbo. Policies exist on paper to deal with health and safety in schools, but it remains to be seen if they are being implemented. The relevant NEPA provisions have been cited below.

The National Education Policy Act 27 of 1996 (NEPA), in its national policy on HIV/AIDS, for learners and educators in public schools, and students and educators in further education and training institutions sections 7 and 8, read together with sub-sections, empowers the Member of the Executive Council (MEC) to create a safe school and institutional environment by ensuring that:

Section 7.2 All schools and institutions should train learners, students, educators and staff in first aid, and have available and maintain at least two first aid kits, each of which should contain the following:

- 1. Two large and two medium pairs of disposable latex gloves;*
- 2. Two large and two medium pairs of household rubber gloves for handling blood-soaked material in specific instances (for example when broken glass makes the use of latex gloves inappropriate);*
- 3. Absorbent material, waterproof, disinfectant (such as hypochlorite), scissors, cotton wool, gauze tape, tissues, containers for water and a resuscitation mouth piece with which mouth-to-mouth resuscitation could be applied without any contact being made with blood or other body fluids.*
- 4. Protective eye wear; and*
- 5. A protective face mask to cover nose and mouth.*

Section 7.4 Each classroom or other teaching area should preferably have a pair of latex or household rubber gloves.

Section 7.5 Latex or household rubber gloves should be available at every sports event and should also be carried by the playground supervisor.

Section 7.6 First aid kits and appropriate cleaning equipment should be stored in one or more selected rooms in the school or institution and should be accessible at all times, also by the playground supervisor.

Section 7.8 The contents of the first aid kits, or the availability of other suitable barriers should be checked each week against a contents list by a designated staff member of the school or institution. Expired and depleted items should be replaced immediately.

Section 7.9 A fully equipped first aid kit should be available at all school and institution events, outings and tours, and should be kept on vehicles for the transport of learners to such events.

Section 7.10 All learners, students, educators and other staff members, including sport coaches, should be given appropriate information and training on HIV transmission, the handling and use of first aid kits, the application of universal precautions and the importance of adherence to universal precautions.

Section 7.10.1 Learners, students, educators and other staff members should be trained to manage their own bleeding or injuries and to assist and protect others.

Section 7.10.2 Learners, especially those in pre-primary and primary schools, and students should be instructed never to touch blood, open wounds, sores, breaks in the skin, grazes and open skin lesions of others, not to handle emergencies such as nosebleeds, cuts and scrapes of friends on their own. They should be taught to call for the assistance of an educator or other staff member immediately.

Section 7.10.3 Learners and students should be taught that all open wounds, sores, breaks in the skin, grazes and open skin lesions should be kept covered completely with waterproof dressings or plasters at all times, not only when they occur in the school or institution environment.

Section 7.11 All cleaning staff, learners, students, educators and parents should be informed about the universal precautions that will be adhered to at a school or institution.

Section 7.12 A copy of this policy must be kept in the media centre of each school or institution.

The above NEPA legal provisions were used to evaluate the level of FA provisioning in Gauteng schools for this study. There is a growing realisation that education does not take place in a vacuum and other factors, such as health issues, influence academic achievement (Department of Basic Education Action Plan to 2014; Blase & Blase 2002; Zapulla 1983). Emphasising the importance of health in education, Sherrow (1991:53) purports that in order to study any subject successfully students must arrive at school “physically and emotionally well enough to learn.” School administrators face more and more questions about how schools can cope with poverty, teenage pregnancy, drug abuse and violence (Ibid).

Although academic education takes precedence over everything else, school administrators cannot afford to ignore other important aspects that affect learners and educators, such as health, safety and FA provisioning. This is even more important for South African schools, in the light of the statement made by Maluleke (2014:17), who posits that “... in South Africa we seem to specialise in dying easy, dying often and dying prematurely.” It is against the backdrop of this realisation that I felt that there was a need to explore and evaluate the administrative efficacy of FA provisioning in Gauteng schools.

1.2 Background to the need for first aid in schools

Greeff (1995:10) defines a first aider as a “person who arrives at the scene of an accident and is qualified to render aid until such time that medical or paramedical help becomes available.” The definition above raises two important fundamentals of the presence at the scene of an accident and qualification to administer FA in a school setting. First aid provisioning in schools falls under the aegis of health and safety in schools. Soni (2012:31) postulates that health education has come a long way. In the

early days, health education took the form of instruction in anatomy and physiology. In the South African context there is no specific time-tabled slot for health education. Learners are taught life skills within the broad learning area called Life Orientation (LO). There is nothing specific on FA in these LO lessons. Educators and learners have to enrol for FA training separately from the normal school time-table, often at their own expense. According to Soni (2012:31), the challenge for educators today is to motivate learners to improve their own health status through self-direction. Children's health is an important concern for all societies, since it contributes to their overall development. Health, nutrition and education are important for the overall development of the child and these three inputs need to be addressed in a comprehensive manner (Ibid).

The South African education system exerts greater emphasis on academic achievement. A holistic approach to education takes into account the development of a child's physical, intellectual and spiritual being. Although the 'clarion call', *a healthy mind in a healthy body*, reverberates through all communities, school performance in South Africa has been measured against success in the academic sphere alone. This is illustrated brazenly by the MEC's press statement that the principals of Gauteng schools that achieved matriculation pass rates of less than 20% in 2016 had "... kissed their principalship goodbye" together with those "... officials who were meant to give support to those principals" (Falanga 2015:1). The article, entitled "*Heads to roll over results: Axe looms for principals of poorly performing schools*" was the headline news story for *The Star* of 7 January 2015. Soni (2012:37) asserts that the aim of health education from kindergarten to grade 12 is to enable students to apply health knowledge in their daily lives in order to increase health-enhancing behaviours and decrease health-risking behaviours. Taken in this context, FA involves avoiding harmful actions such as pulling out a chair as someone is about to sit, in the incident referred to in the introduction and later in the section on the place of FA in health promotion.

It is vitally important that FA provisioning takes a vanguard role in the school health education and promotion drive. Referring to the American situation, Soni (2012) notes that "... unfortunately health education still suffers from lack of importance in the school curriculum and a lack of adequately trained educators." If we wish to help prevent many of the conditions that are now the leading causes of death, then we must emphasise

prevention in our efforts (Ibid). First aid provisioning in a school set-up should encompass preventative measures and the inculcation of values that limit harmful and injurious activities.

The FA incidents from developed countries provide valuable lessons for less developed countries such as South Africa in the form of experiences that they have already gone through.

Greeff (1995:10) is quick to give a word of caution from the onset that a first aider is neither a medical doctor nor a nurse and is therefore limited in the treatment that he/she may administer. This important factor, however, does not imply that the first aider is not essential. The first aider is actually very important in the health management chain and fulfils a crucial role in the initial stages of injuries or emergencies. There is, however, an inherent danger for the first aider in using traditional medical knowledge or myths and common sense at an accident scene, as this may have dire medical and legal consequences in the event that someone subsequently dies or is permanently incapacitated as a result of a first aider's actions. A legal suit becomes obvious in a case where it is later discovered that the person who administered FA was not qualified.

The school is not expected to offer medical services, which is the preserve of professional nurses, paramedics and doctors. The school however, is duty-bound to administer FA according to NEPA in its national policy on HIV/AIDS, for learners and educators in public schools, and students and educators in further education and training institutions sections 7 and 8. The management of health issues in schools is hence restricted to FA provisioning for learners and teachers. This is a basic right that is embedded in the Constitution of the Republic of South Africa.

In the South African context, the Constitution of the Republic of South Africa, Act 108 of 1996, reigns supreme and supersedes all acts and laws passed at national or local government levels. It is the supreme law of the Republic of South Africa and therefore any law or conduct that is contrary to the Constitution is invalid (Constitution 1996, Act 108 of 1996). The Constitution embodies the Bill of Rights (Chapter 2), which affirms basic human rights for all citizens regardless of "race, creed, sex or age". The South African constitution's Bill of Rights, Chapter 2, advocates the right to a safe

environment. A number of Constitutional mandates have been cited below to strengthen the case for FA provisioning in schools.

Section 11 states that *“everyone has the right to life”*.

Section 24 *Everyone has the right-*

1. to an environment that is not harmful to their health or well-being;

Section 27 (1) *Everyone has the right to have access to-*

health care services, including reproductive health care;

(2) The state must take reasonable legislative and other measures, within its available resource, to achieve the progressive realisation of each of these rights.

(3) No one may be refused emergency medical treatment.

Section 28 (1) *Every child has the right –*

to basic nutrition, shelter, basic health care services and social services;

not to be required or permitted to perform work or provide services that-

(ii) place at risk the child’s well-being, education, physical or mental health or spiritual, moral or social development.

In this section “child” means a person under the age of 18 years according to the constitution.

The above sections of the Constitution of the Republic of South Africa strengthen the case for FA provisioning in schools, as anything to the contrary would be *ultra vires* the Constitution. The constitutional mandates are general principles that are refined by laws passed by the national parliament or provincial authorities.

Stressing the importance of FA in schools, the Saint John's Ambulance asserts that "... first aid in your school can be the difference between a life lost and a life saved." Greeff (1995:10) concurs and adds that the timeous treatment of acute haemorrhage, i.e. bleeding, the correct handling of fractured limbs and the correct administering of cardio-pulmonary resuscitation (CPR) to patients in cardiac arrest have not only eased the pains of millions, but have also saved the lives of thousands.

After completing level 3 of the FA course administered by the South African First Aid League, I realised the importance and need for school administrators, learners and teachers to deal effectively with health issues in schools. The FA course revealed important aspects of health and safety in schools that have, in my experience, often been overlooked but are crucial in the provisioning of FA in schools.

This study provided an evaluation of the administrative efficacy of FA provisioning in schools that would assist policymakers to prevent unnecessary pain, death and suffering. Maluleke (2014) ironically argues that South Africans are spoilt for choice when it comes to dying; they "... die waiting for ambulances and the police."

According to Greeff (1994), "the need for first aid knowledge and the effective application thereof has become an essential part of our communities." This important aspect needs to be emphasised among all South Africans (Ibid). I strongly concur with Greeff (1994) because wherever there are people, there is going to be a medical condition requiring FA. A worst-case scenario will serve as an example to prove this point. Learners may be enjoying a lunch pack during break, oblivious to the lurking and deadly possibility of choking. It would be disheartening to lose a learner because of lack of FA provisioning.

The national policy on HIV/AIDS, for learners and educators in public schools, and students and educators in further education and training institutions, sections 7 and 8, were used to form the 'golden thread' in the study. The NEPA legal provisions cited above are the only legal instruments guiding FA provisioning in South African schools. The fact that these legal provisions were crafted with the specific aim of dealing with HIV/AIDS transmission in schools implies that they are not the right instruments to deal with FA needs in schools. A reading of the clauses reveals their inclination towards

HIV/AIDS rather than the efficacy of FA provisioning. Despite the lack of a legal framework to deal with FA, the NEPA provisions were used to evaluate FA provisioning. The national policy on HIV/AIDS, for learners and educators in public schools, and students and educators in further education and training institutions sections 7 and 8 is going to appear in the last chapter where they will be critiqued against their relevance to FA provisioning in Gauteng schools.

The education system in South Africa can take a leaf out of the American system. Soni (2012:39) provides the following information from the United States of America (USA): Most states and districts in the USA have adopted a policy stating that schools will teach at least one of the following:

1. Prevention of alcohol and other drug use.
2. Asthma awareness
3. Emotional and mental health
4. Prevention of food-borne illnesses.
5. HIV prevention.
6. Injury prevention and safety.

The fact that the USA education authorities realised the importance of health and safety issues in schools is a step in the right direction.

1.3 Statement of the problem

The problem statement is formulated around the fact that learners' health in a school environment is at stake and school administrators, educators and learners need knowledge and skills to administer FA competently where it is needed to save lives and stabilise casualties before the arrival of emergency services. The problem is that management of FA provisioning in schools has not been assessed and evaluated to determine its efficacy in South Africa in general and Gauteng province in particular.

It is appreciated that the study does not focus on the management of health problems *per se*, because this is a specialist area requiring the services of health personnel and special schools. It is the critical period between injury and the arrival of emergency services at school that is problematic. Stop-gap measures need to be put in place in the

form of FA to prevent loss of life and relieve pain. School administrators should be in the vanguard of ensuring that this happens as expeditiously as possible. As new health problems emerge, administrators need to be prepared to deal with them proactively.

1.4 Aim of the study

The study aims to evaluate the administrative efficacy in FA provisioning, literacy and competency among school managers, teachers and learners in Gauteng schools.

1.4.1 Objectives of the study

The objectives of the study are:

- 1.To evaluate the level of literacy and competence on FA provisioning among educators, learners and school managers of NEPA sections 7 and 8, of the national policy on HIV/AIDS, for learners and educators in public schools, and students and educators in further education and training institutions.
- 2.To explore the impact of FA literacy and competency on learners and teachers.
- 3.To identify injuries and illnesses occurring in schools.
- 4.To find out what school managers are doing to provide FA to learners and teachers.
- 5.To suggest possible ways of improving the provisioning of FA in Gauteng schools.

1.5 Research questions

The investigation was guided by the following two main research questions:

- 1.What are the key stakeholders' literacy and competency levels of sections 7 and 8 of the national policy on HIV/AIDS, for learners and educators in public schools, and students and educators in further education and training institutions?
- 2.How do these literacy and competency levels affect FA provisioning practices at schools?

1.5.1 Sub-questions

1. What injuries and illnesses occur in schools?
2. How does the school management deal with medical emergencies?
3. What role does the school management play in the provisioning of FA knowledge and skills to school principals, learners and educators in schools?

1.6 Rationale and significance of the study

The rationale to study FA provisioning came in the wake of many cases where I witnessed learners experiencing fractures, headaches, drowning, allergic reactions, epileptic fits, convulsions, nose-bleeding, hiccups, etc. In one incident described below, I was faced with a scenario where I did not know what to do when a girl learner was involved in a near fatal drowning incident while out on a school educational trip. This was a tipping point in acceding to the need for research into FA provisioning in Gauteng schools.

I had taken out a group of learners on a school weekend campout. The learners asked to go swimming in one of the pools at the campsite. I was sitting by the poolside watching the proceedings with a supervisory eye. The deep end of the pool was 2.3 metres deep. Among the learners in the pool were a substantial number who could not swim. I made sure that those learners were restricted to the shallow end.

Unbeknown to me, one learner had taken it upon himself to teach a girl to swim. As the girl's skills showed improvement, the two, "instructor and student", ventured towards the deeper end to prove the newly acquired swimming prowess. Apparently the girl panicked and as she went down and sank, she got hold of the boy's legs. The pool was a hive of activity and there was a lot of noise and screaming. I noticed that the boy was in distress as he kept bobbing in and out of the water. When I checked I saw the girl swirling near the floor of the pool under the water.

With some of the learners' cell phones and electronic audio-gadgets in my pockets, I could not jump into the pool. I also panicked and started yelling for everyone to come out of the water and assist the drowning girl. The girl was saved. I had no clue what was

supposed to be done to expel the water that the girl had swallowed while drowning. This was before I took any FA course. What kept coming back into my mind was what I was going to say to the principal and the girl's parents if the worst had happened and the girl had drowned and died I wince and shudder every time this thought crosses my mind.

The above scenario may have happened to other educators with different consequences. I realised the need for school managers to equip educators and students adequately, in particular with FA skills, in order to deal with a plethora of medical conditions that threaten students' learning on a daily basis. In a quest to determine the existing situation with regard to the management of health in schools in general and the provisioning of FA in particular, I discovered a gap in the documented literature on FA provisioning in the South African context. The following cases also helped to strengthen the rationale for and significance of embarking on this study.

The owner of a crèche in Kempton Park was convicted by the local magistrate's court in January 2014 for falsifying an FA certificate (Smit 2014:9). This came after a seven-month-old child died at the crèche in July 2013. The accused's lawyer appealed the court ruling on the basis that when the child was enrolled at the crèche, none of his medical history was supplied and the crèche owner was doing CPR on the child when his mother took him to hospital instead of waiting for an ambulance "which had already been called". Apparently the fraudulent FA certificate was a means of covering up for the pending court case. This study was significant in that it sought to unravel the level of FA literacy and competency in Gauteng schools, not just possession of an FA certificate.

In a second incident, within a space of one year and within 10 kilometres of the previous case, a learner at a primary school died at a pre-school after a jungle gym fell on him on 22 April 2014 (Smit 2014:1). The circumstances concerning this incident were not clear, as the deceased child was not enrolled at this crèche but had an arrangement to wait for his father to pick him up from the crèche after school hours. Notwithstanding the conditions surrounding the tragedy, there is a need to evaluate the efficacy with which schools are administering FA in Gauteng, as the situations described above are devastating for any parent.

The reaction of parents to the loss of their children differs from place to place. Each situation is different, but in the examples cited in this study, a pattern could be discerned. One mother who lost her seven-month old baby at a day care centre responded “ ... no one is perfect except God, we all make mistakes but the mistake and negligence in not following correct procedure cost me my son” (Tshelo 2015). In cases where parents lose a child, parents would rather not pursue the case through the courts, as this would keep reminding them of their loss, but deep down in their hearts they blame negligence on the part of the school management and staff. In the case cited above, when asked what they thought about the death of their son, the parents were simply resigned and thought it was “God’s will” and nothing could be done to bring back their son. I strongly feel that sometimes people blame God for what they could easily have prevented themselves through correct FA procedures.

In the third incident, a mathematics teacher collapsed and died while teaching on 31 July 2014 (Dhlamini 2014:1) A close family member said that learners who were in the classroom at the time said the teacher was writing something on the board when she suddenly stopped and complained that she was not feeling well. It was at this stage that FA skills and knowledge could have proved invaluable. She collapsed soon afterwards in front of the class and died. As if this was not enough, another teacher at the same school suffered a debilitating stroke in January 2015 and was admitted to the intensive care ward of a private hospital.

A grade 12 learner collapsed at the school gate soon after writing a preliminary examination at the school where I was teaching in September 2015. He was admitted to a local hospital where he died a few days later. Apparently the grade 12 learner had experienced coronary thrombosis due to a blood clot in one of the veins around his brain.

In the event of cardiac arrest or heart failure, there is a new invention called an automated external defibrillator (AED) that can “increase the survival rate for sudden cardiac arrest (SCA) by up to 75% by delivering a life-saving shock within the first few minutes of an attack”. AEDs can make the difference, as medical help typically arrives outside average survival time. Facts about SCA are stated by the AEDs manufacturers (HeartSine) on its website. These are:

- 1 Seven million people worldwide are affected by SCA annually.
- 2 SCA can happen to anyone, anywhere, at any time.
- 3 Only 5-10% currently survive SCA.
- 4 84% of SCA events occur outside a health care setting.
- 5 SCA survival rates of up to 75% have been achieved when effective CPR is applied and AEDs are readily available.

Apparently the AED could have been beneficial in the two cardiac arrest situations described above. AEDs manuals can give instructions and guidelines on how to administer CPR in the event of SCA, but this is now too late for the teacher and the grade 12 learner who succumbed to SCA.

In the following incident, the South African Broadcasting Corporation (SABCtv) news channel 404 played a video clip during the 7 o'clock evening news on 26 August 2014. In the clip, a learner at a certain Gauteng secondary school was shown wheezing and gasping for air after an asthma attack. The school's security guard was busy on his cell phone, oblivious to the plight of the breathless girl. Another learner was trying to "console" the sick girl by patting her back. When the video clip captured on a cell phone was shown to the girl's parents, they wept. The principal of the school refused to see the cell phone footage.

Commenting on the video clip, the MEC for Education bemoaned the situation and put the blame on the security guard who he thought was supposed to be dismissed. If the security guard, learners and staff had been trained in FA, they would have known how to assist the girl in the event of an asthma attack. Apparently the girl who kept patting her wheezing friend's back did not know what to do and thought that what the girl needed was reassurance that she was going to be fine, eventually. It is likely that the security guard thought the girl would recover, as asthma attacks are "known" to come and go over time. What many people may not be aware of is the fact that some people have succumbed to and died from asthma attacks.

It is illuminating to point out the fact that all four cases cited above happened within a 20 kilometre radius, within a space of one year! One is bound to shudder at the situation unfolding all over the country. Maluleke (2014) describes the situation aptly when he

says "... for us, it seems easier to die than to live; easier to die than to persevere in pursuit of education, persevere in the acquisition or perfection of skills, the execution of a career or the development of our communities."

It is not the purpose of FA to stop people from dying, which no one can do, but to save lives and relieve pain. It is imperative to point out that FA is no panacea for death. People may still die regardless of FA provisioning. What is of significance for this study is that a proactive stance could help stop some deaths from occurring in South African schools by empowering teachers and learners with FA skills and knowledge. What is of significance for this study is the fact that the status quo of FA provisioning in South African schools has not been studied and evaluated with a view to assisting policy makers and stakeholders in coming up with a vibrant FA provisioning programme in schools. The last thing that any parent would expect is a phone call from a school informing them about the demise of their child. Calling an ambulance while doing nothing in the meantime is not enough.

Speaking about climate change, the one-time USA presidential candidate, Al Gore (2012:5) had this to say;

"As human beings, we are vulnerable to confusing the unprecedented with the improbable. In our everyday experience, if something has never happened before, we are generally safe in assuming it is not going to happen in the future, but the exceptions can kill you and climate change is one of those exceptions".

I strongly concur with Al Gore and believe that lack of FA provisioning in schools is one other exception with the possibility of killing learners and educators. This study sought to determine what was happening in Gauteng schools with regard to FA provisioning. According to the husband of the high school mathematics teacher who collapsed and died in front of her class, the teacher did not have a single health problem "her whole life" until the fateful day before her fifty-third birthday (Dhlamini 2014:1). This heart attack epitomises heart disease as a truly "silent killer" and calls on schools to be prepared through FA training.

In incidents of sudden and unexpected death, people feel it is too late to lay the blame on anyone. One often hears the bereaved sighing "... it won't bring them back!" Maluleke (2014:17) sums it up aptly when he says "young and old, individual and community, the government and people, police and citizens; all seem resolutely reconciled to the 'dolus' of death and dying". 'Prevention is better than cure' is a very popular adage. Teachers, learners and principals must be trained and equipped to administer FA. If someone died while people were administering correct FA procedures, then people would be justified in saying that there was nothing they could do to assist. There could be a lingering feeling of guilt that something could have been done to save a life, if people did nothing to help a dying learner or teacher. One is left guessing and imagining what the parents of the girl who had the asthma attack would have thought at the funeral if the worst had happened and she had passed away.

In the preface to the FA manual, Greeff (1994) writes:

"It is the dream of the South African First Aid League that every citizen of this country should undergo at least the basic lifesaving first aid training. In this regard the first priority is every mother or person who takes care of a child and every worker who, with appropriate skills, can save the life of a fellow worker".

This study is significant in that it sought to evaluate a very important aspect of the teaching and learning process in a school, i.e. the health and safety of learners and teachers in schools. FA provisioning is one basic facet of a school system that should be studied to inform other subsidiary aspects such as teaching and learning. This study established why the area of FA provisioning is a priority: it is a matter of life and death. The study explained how it built on previous research in other countries and the contribution it made to the existing body of FA knowledge, school managers, learners, Department of Basic Education (DBE) and other stakeholders.

As a signatory to the Convention on the Rights of the Child, South Africa has pledged to put child care at the vanguard of its drive, giving children's needs first priority. Ill health, injuries, accidents, illnesses and other challenges still prevent many children from growing into productive, capable citizens, who can help their communities grow and

prosper (Greeff 1994). In order for learners to achieve their potential, they must be healthy, attentive and emotionally secure.

The gravity of the health issues facing South African schools today calls for urgent proactive intervention. The following scenarios set the scene for urgent research attention to the provisioning of FA in South African schools today.

The Minister of Health, Doctor Aaron Motsoaledi, posits that “alcohol is bringing South Africa to its knees” (Davids & Narsee 2015:1). Apparently the Minister had driven around Limpopo province late on Christmas day 2015 when he was surprised “to see groups of drunken young people in almost every village”. Speaking of the gravity of the problem, he said “I was in deep depression about where our country is heading to. I even stopped and said ‘My God!’ that was during the night! They were just there to drink alcohol, both young girls and young boys” (Ibid). Next to the article reporting worrying drinking trends for South Africa was an article expressing equally worrying pregnancy statistics. Pillay (2015:1) quoted one health MEC who welcomed newly born Christmas babies “but was concerned about the number of teenage mothers”.

The increase in teenage pregnancy has an obvious implication that school managers may have to deal with early “labour pains” emergency childbirth or even premature childbirth at school! This comes in the wake of DBE regulations that no pregnant girl learner may be excluded from school on the basis of being pregnant. The results of the Annual Schools Survey, released by the DBE in early October 2013, showed that 582 girls aged between eight and 14 fell pregnant in 2010. According to Govender (2013:6), these pregnancies included:

- 1.26 pupils in Grade 3, in which almost 70% of the pupils in the grade were either eight or nine years old;*
- 2.51 Grade 4 pupils, of whom the majority were aged either nine or 10;*
- 3.122 Grade 5 pupils aged either 10 or 11;*
- 4.383 Grade 6 pupils aged 12, 13 or 14.*

Given that these statistics were from primary schools, one can be forgiven for envisaging the situation unfolding at high schools where learners are likely to be more

sexually active. FA is therefore not just restricted to injuries per se, but also to illnesses and pregnancies occurring at school.

Teenage pregnancy is given here as just one of the health issues requiring FA, but there are many other medical conditions such as injury, asthma, bee stings, fainting, epilepsy, allergies, nose-bleeding and syndromes that learners and educators experience on a day-to-day basis. School managers are tasked with ensuring safe environments (South African Schools Act 84/1998). Without the effective administration of FA, lives could be lost or relief of pain and suffering could be delayed (Johnson 1993; Leandri 2011).

The fact that educators and administrators have found learners bringing dangerous weapons to school calls on them to be well equipped in dealing with stab wounds, gunshot wounds, cuts and lacerations. About 3 000 delegates who attended the National Educators' Unions' conference in December 2013 unanimously endorsed a resolution calling on the DBE "... to strengthen security at schools following a spate of attacks on educators" (Govender 2014:10). Maluleke (2014:17) argues that whereas other societies would appear to do anything and everything to "postpone and ward off death, in South Africa we seem eager to meet death halfway; by embracing it for ourselves, forcing it upon others or allowing the conditions that breed death to persist and prevail."

Describing the situation unfolding in the USA at that time, Koop (1989) decried that despite medical advances, "... Americans remain stymied by the steady drumbeat of death and disfigurement attributable to childhood injuries." Injuries, both violent and unintentional, were one of the most significant public health issues facing children at the time, but public outrage was absent and as a result, proven solutions were unused and thousands of children died each year (Ibid). The preceding statement was made against the backdrop of huge successes in health care in the USA. These successes included immunisation, antibiotics and unlocking the secrets of the human genome. This statement may also hold true for Gauteng schools. One has not heard about a community-initiated drive to provide FA in schools.

It is common knowledge that violent crime is South Africa's biggest problem, with the city of Johannesburg being called the crime "capital" of the world. Maiden and

Terblanche (2006) argue that South Africa has the highest rates of violence in the world and community violence, in the form of carjackings, bank robberies, automated teller machine bombings, rape, beatings, street robberies, burglary and homicides, has a spill-over impact on the South African workplace. This violence is manifesting itself in the form of violent learners bringing weapons to school, reflecting the society they come from.

Learners' involvement in various sport disciplines brings to the fore issues of injuries and fractures. Learners playing and running around during break are susceptible to injuries that call for school managers' competence in the administration of FA. It is common to see an ambulance and emergency services personnel at major sport events to take care of injuries. The researcher seeks reasons why the same should or should not happen at schools.

It is common practice to view notices warning people of danger and evacuation procedures in various buildings. 'Safety First!' is the all too familiar adage and slogan. This study sought to find out if the same was happening in schools.

1.7 Theoretical and conceptual framework

A qualitative research approach that was underpinned by a legal rationalistic paradigm explored the effectiveness with which FA was managed in Gauteng schools. A phenomenological framework was employed to ascertain the schools' responses to emergencies through an analysis of participants' focus group discussions (FGDs), interview transcripts and observations to determine the level of FA literacy and competency among learners, teachers and principals in Gauteng schools. Induction was involved, using specific and concrete observations to develop abstract, logical relationships between FA provisioning and administrative efficacy.

The over-arching theoretical framework undergirding this study is called "developmental contextualism" and hinges on the fact that there are links between health and learning (Lerner 1984, 1986, 1995). This theory links up with and may have been the precursor of the systems theory. Such a theory deals with human development and draws much from Werner (1948), Piaget (1952) and Bronfenbrenner (1979, in Lerner 1995).

“Developmental contextualism” is a complex process in which the many parts of a person continuously interact with one another to produce a complex whole person. In educating the child we are not solely concerned with the intellect alone but inadvertently also give due regard to health and safety issues, especially FA provisioning in the school set-up. In this regard, developmental contextualism is similar to the systems theory, where many aspects link up in moulding the whole person. Lerner (1995) lists the principles that underpin an understanding of how human beings develop as:

1. Development occurs in relation to context.
2. Development occurs at bio-pyscho-social levels.
3. Development occurs across one’s lifespan and in a pattern involving risk and resilience.

Learning has to be seen in context. The contextual factors add up and produce a whole child. If schools leave out some of the contextual building blocks for learners, they run the risk of producing “half-baked products”. According to Lerner (1995), theories about how children develop make clear that contexts that promote children’s health and safety simultaneously provide conditions that support children’s academic achievement. Conversely, contexts that impede children’s physical, emotional and social development are likely to contribute to academic failure (Ibid). Johnson (1993:50) concurs and adds: “when crises occur, they may hurt children, disrupt school functioning, and leave lasting marks that can directly and negatively affect student performance.”

It is imperative that the efficacy of all sub-systems, FA provisioning included, are evaluated to ensure that they work efficiently and effectively to produce a whole child. Schooling takes up a large part of a child’s day for the better part of each year and whatever affects the mood, climate and effectiveness of the school directly affects the child (Johnson 1993).

1.7.1 Conceptual framework

Literature consulted alluded to the fact that school health programmes are premised on a traditional conceptual definition of health and safety (Marx, Wooley & Northrup 1998). A number of conceptual frameworks have been proposed in literature. The most widely used conceptual framework for comprehensive school health is the “co-ordinated school

health” model proposed by the Centre for Disease Control and Prevention in the USA and later refined by Marx, Wooley and Northrup (1998). This framework identifies eight major conceptual components considered critical to a co-ordinated or comprehensive programme for school health. The areas include health education, physical education, health services, nutrition services, counselling, psychological and social services, a healthy school environment, health promotion for staff and parent or community involvement. For this research study the conceptual framework was located within the notion of health and safety in schools.

1.7.2 Theory in administration

There may be more than one theory of administration, but the theory selected for this study was the one propounded by Halpin (1966:50), who asserts that the ultimate criterion of an administrator’s effectiveness should be expressed in terms of group or organisational achievements in respect of the changes in the organisation’s accomplishments that can be attributed to the behaviour of the administrator. Two different administrators can accomplish different achievement levels, depending on their administrative efficacies. This criterion reflects the differences between the organisation’s achievement at time “A” and its achievement at time “B”. Cattell in Halpin (1966:50) defines a leader as a person who has a demonstrable influence upon group syntality. Leadership is measured by the magnitude of the syntality change (from the mean) produced by that person, i.e. by the difference between syntality under his/her leadership and the syntality under the leadership of the average or modal leader (Ibid).

The fact that two different principals or pre-school managers have different leadership capabilities, implies that their administrative efficacies can also be different. In a school situation, it therefore depends on the administrative efficacy of a particular principal, that FA provisioning is effectively administered.

It is possible to compare two schools in terms of their administrative efficacies in FA provisioning represented by A and B. In the case of this study, the task of the paradigm is FA provisioning. The behaviour of two administrators with reference to FA provisioning in two different schools will show results. Assuming that all other variables are the same and all things being equal, if the administrator for school A has superior leadership

behavioural skills than the one for school B, it would follow that the amount of “desirable” change in the achievement of school A would be greater than the amount of change in the achievement of school B. I used this paradigm in my study to compare and demonstrate how the administrative efficacies of the different sampled schools’ capabilities translated into desired FA provisioning achievement levels.

The Education Service Advisory Committee of the Health and Safety Commission (HSC) says in the introduction to a book written by Lauplugh and Pagan (1996:3): “ensuring health and safety in schools and colleges is an essential part of a school manager’s responsibility”. This cannot be achieved by one person alone. Overall effective health and safety management, including personal safety and security, has to be in place. It also has to affect the more general aspects of management as well as each member accepting responsibilities (Ibid). It calls upon principals to be qualified first aiders to initiate sustainable change in schools.

Weber’s (1894) legal-rational theory was adopted for this study. According to Max Weber (1894) the purest form, the ideal type of authority, is bureaucracy. In a school set-up, nothing matters so much for the school management team (SMT) as adherence to the dictates of rules, regulations and policies as expounded by the relevant departments and government, in this case the Department of Education (DoE). School administration has to be carried out within a prescribed legal framework - the Constitution, the NEPA and the South African Schools Act 84 of 1996 (SASA). Weber (1894) argues that authority is vested in a set of rules and rule-bound institutions. The creation and changing of rules are outside the control of those who administer them. This is a form of leadership in which the authority of an organisation or a ruling regime is largely tied to legal rationality, legal legitimacy and bureaucracy (Ibid). FA administrative efficacy has to be evaluated within the legal framework of the requisite policy guidelines. A cursory glimpse of the policy guiding FA provisioning leaves a lot to be desired. The policy was basically crafted with HIV/AIDS in mind, not FA provisioning. FA provisioning is subsumed under the policy that is heavily skewed in favour of curbing HIV/AIDS transmission.

First aid provisioning has to be viewed in the context of laws governing health and safety in schools. Adherence to the dictates of the provisions of the acts were used to

evaluate the administrative efficacy in FA provisioning for the sampled schools. The task for the school administration was to comply with the demands of the relevant rules and regulations governing FA provisioning in schools. The efficacy of FA provisioning in Gauteng schools had to be evaluated against the backdrop of the relevant laws and the constitutional mandates.

As a key proponent of methodological anti-positivism, Max Weber (1894) argued for the study of a social action through interpretive, rather than purely empiricist means. This assertion ties up well with this study where FA provisioning was studied *vis à vis* the provisions of the Constitution, the NEPA and SASA. The interpretivist paradigm can also be called the “anti-positivist” paradigm because it was developed in reaction to positivism. It is also sometimes referred to as constructivism because it emphasises the ability of the individual to construct meaning. Interpretivism’s main tenet is that research can never be objectively observed from the outside; rather it must be observed from inside through the direct experiences of the people (Weber 1894). FA experiences of principals, learners and teachers informed this study.

According to Mack (2010), interpretivism was not radical enough because it did not represent the researcher who sought change and to challenge social phenomena. For this reason I also felt a need to adopt a tincture of the critical paradigm. The critical paradigm stems from critical theory and hinges on the belief that research is conducted for “the emancipation of individuals and groups in an egalitarian society” (Cohen *et al* 2007:26, in Mack 2010). Critical theory hinges on the premise that social science research should become “an emancipatory and transformative force “in society (Marx 1845, in Babbie & Mouton 2001:34).

The critical educational researcher aims not only to understand or give an account of behaviours in societies but to change these behaviours. Critical theory originated from the criticism that educational research was too technical and concerned with only efficiency and rationality of design, neglecting social inequalities and issues of power (Gage 1989, in Mack 2010). According to the critical theorists, researchers should be looking for the “political and economic foundations of our construction of knowledge, curriculum, and teaching.” (Gage 1989:5, in Mack 2010). The fact that people are continuously constructing, developing and changing the everyday common-sense

interpretations of their worlds should be taken into account in any conception of social science research (Babbie & Mouton 2001:28). There is a need to pursue a new trajectory in FA provisioning in schools that is emancipatory in its outlook.

1.7.3 Theories of evaluation

Before I adopted the theory for evaluating this study, it was necessary to examine what the evaluation process entails. According to Thompson, Kegler and Holtgrave (2011:200), "... evaluation uses social science research methods to determine whether programmes or parts of programmes are sufficient, appropriate, effective and efficient." Evaluation also generates information about how to improve programmes that do not meet these criteria (Ibid). Thompson *et al* (2011:200) argue that evaluation differs from research in that its primary purpose is to provide information for decision makers to help them make judgements about the effectiveness of a programme and to help them make improvements to a programme. It was necessary to evaluate the *status quo* of FA provisioning before determining whether intervention strategies were needed or not. This is affirmed by Popham (1988:11), who asserts that researchers want to draw conclusions; evaluators are more interested in decisions. Scriven (1962, in Popham 1988:13) concurs and adds that formative evaluation refers to appraisals of quality focussed on instructional programmes that are still capable of being modified.

According to Popham (1988), the heart of the formative evaluator's strategy is to gather empirical evidence regarding the efficacy of various components of the instructional sequence and then consider this evidence in order to isolate deficits and suggest modifications. Although this assertion refers to evaluation of teaching and learning, it also holds true for FA provisioning. At the planning stage of any evaluation programme, evaluation activities should be integrated into the design and operations of a programme. Once begun, evaluation should continue throughout the duration of the programme, only ending once a final assessment has measured the extent to which the programme met its intended goals (Thompson *et al* 2011). First aid provisioning evaluation in a school environment is an on-going exercise; the target is forever shifting forward. The road to FA provisioning in schools will forever be under construction and reconstruction, as dictated by the evaluation results.

In public health and health promotion, four types of evaluation models are widely recognised. These are formative, process, outcome/summative and economic evaluation. Formative evaluation targets the inputs and activities of a programme at its commencement. Process evaluation assesses the way the programme is delivered, rather than the programme’s effectiveness. It is a way of quality control that documents what is provided by the programme and compares it to what was supposed to be provided to determine any gaps.

Outcome evaluation is linked to outcomes. This type of evaluation is used in experimental and quasi-experimental research designs where outcomes of knowledge, attitudes or behaviour are typically assessed with pre-tests and post-tests, administering the measures before and after participants take part in the evaluation programme (Thompson *et al* 2011). The post-test will show the effects of the intervention on the behavioural, knowledge or attitudinal changes that were brought about by variables being tested. The change is attributed to the intervention for producing the post-test results.

Scriven (1962, in Popham 1988:13) distinguished between formative evaluation and summative evaluation. About the latter, he said that summative evaluation “refers to appraisals of quality focussed on a completed” instructional programme. Popham (1962) emphasised evaluation of the instructional programme, but I have adopted the formative evaluation model for FA provisioning. Economic evaluation, as the name implies, takes stock of the programme’s costs to determine whether the effects it produces are worth the programme’s costs. A summary of the four types of evaluation is shown below, adopted from MacPherson and Mckie (2010:456).

Evaluation style	Looks at:	Ultimate forms:
Formative	Development, operation, outcomes	Provides information to make changes in the programme.
Summative	Resources going in and the outputs achieved.	Did the programme achieve what it set out to do?
Process	Operational processes	Understanding of how the programme worked and why.
Impact/outcomes	Wider impact of the programme.	Measuring the outcomes of the programme.

Figure 1.1 Types of evaluation (MacPherson & Mckie 2010:456)

The model adopted for this study is a combination of the formative, summation and process evaluation styles. The current state of affairs with regard to FA provisioning in Gauteng schools was evaluated against the backdrop of expected norms and standards as benchmarked against the policy of NEPA. Featherstone and Romano (1977:412) assert that “administrative performance is constantly appraised.” This is more important for FA provisioning so that the *status quo* is continuously appraised to keep up to date with changing times, events and illnesses in schools.

Tones and Tilford (1995:1) have this to say about evaluation: “The fundamental purpose of the evaluation process is to determine the value or worth of an activity; success or failure in respect of some valued goal.” Evaluation is concerned with effectiveness, i.e. it says whether or not the evaluated goal has been achieved. It also makes statements about efficiency by providing an indication of the extent to which the measures designed to achieve the evaluated goal have been effective, by comparing them with alternative and competing measures (Tones & Tilford 1995). This is the evaluation framework that underpinned this study. The provisions of NEPA and all its relevant subsections were used to measure and evaluate the FA administrative efficacy in schools.

1.8 Research design and methodology

The research design selected was closely linked to the research aim and objectives. The intentional selection of a particular design is supported by McMillan and Schumacher (1989:8), who assert that “the deliberate choice of a design increases the likelihood that the data will yield information on the research question.” On the research design to be chosen, the researcher was guided by the principle put forward by Slavin (1984:4), who asserts that “the best research design is one that will add to knowledge no matter what the results are.” The critical skill in research design is to decide upon a question that is important and then to choose research methods that will answer the question as unambiguously as possible, given the limited resources (Ibid). According to Cohen and Manion (1995), in qualitative research the researcher typically uses an emergent design and makes decisions about the data collection strategies as the study progresses. This is the approach that I adopted for this study. The research process unfolded and was shaped by the demands brought to bear on the study by prevailing

circumstances. According to Polkinghorne (2005), data sources for qualitative research are interviews, observations and documents. I used these data-gathering tools for this study.

1.8.1 Research design

The research design adopted for this study was the emergent model. The design was shaped as the study progressed to suit circumstances. The emergent nature of problem definition in ethnographic research is encapsulated in statements made by Agar (1980:70 in Cohen and Manion 1995), who states that,

You cannot specify the questions you are going to ask when you move into a community; you do not know how to ask questions yet. You cannot define a sample ...

Although this borders on the extreme, one needs to go into the field with a working document; a blueprint that guides the researcher and charts the way forward. The following section describes this blueprint.

Focus group discussions were guided by a semi-structured interview guide. The semi-structured interview guide helped to chart the confines of the research questions. First aid provisioning issues were recorded as the participants discussed the issue, using an Olympus audio recorder. I chaired the discussion and brought refinement to the needs of the research aim and objectives. A democratic evaluation model was adopted where information was supplied in response to the needs of all those involved in what was being evaluated i.e. FA provisioning (Atkinson, Delamont & Hammersley 1993:23).

The qualitative approach was the better option selected to adequately address the research questions, which could not be quantified by numbers but explained by means of words. According to Newby (2010:116), qualitative approaches are “soft”, descriptive and concerned with how and why things happen as they do. The experiences and impact of FA provisioning were best described by words. Observations were used for this study against an observation protocol during break and sport activities. Interviews were held over six months from February to July. A qualitative research strategy was the

suitable approach because the study was conducted in a natural setting of social sectors, the school (Neutens & Rubinson 2010:319).

I collected data from learners, teachers and managers at schools. Data were derived from observations, documents and interviews with participants in the form of words combined to form sentences, which were difficult to transform into numbers for analysis (Polkinghorne 2005). Numbers inherently formed part of how many interviewees were involved and the demographic composition of the sample, etc. This study used the qualitative research strategy because it is inquiry aimed at describing and clarifying human experience as it occurs in people's lives (Polkinghorne 2005).

Interview recordings were transcribed verbatim. To analyse participants' interview scripts I put them into coded families that produced themes from the various scripts. From these themes, a description was integrated to explain a phenomenon. Data were coded to comply with particular themes. Interviews and focus group discussions were recorded and then the voice recordings were later transcribed. Interviews sought to elicit information that was subsequently analysed in the light of the research topic. Focus group interviews with learners and educators were carried out in classrooms or offices at break and after school hours so as not to interfere with teaching and learning. Permission from parents was sought by means of assent letters in the case of minors. Deviations from the interview schedule were allowed to accommodate individual situations and circumstances.

I used inductive thematic analysis to process research findings. This is a process of discovery and analysis in the field, preliminary analysis of data, categorisation and ordering data to identify emerging patterns, themes and descriptive analytical synthesis (McMillan & Schumacher 1989). Inductive analysis meant that the patterns, themes and categories of FA provisioning emerged from data gathered from interviews, observation and FGDs. Patterns and themes were not imposed on data prior to data collection and analysis, as is done in verification research (McMillan & Schumacher 1989). Data obtained from focus group interviews, observations and face-to-face interviews moulded the themes and categories used to answer the research questions for this study. Literature was then used to confirm or illuminate research findings.

The information gathered was analysed against the backdrop of FA provisioning in schools as documented in the literature. Constant reference was made to literature where findings from this study confirmed or differed from previous studies. The researcher also used grounded theoretical research, whereby concepts obtained from observations and interviews were derived from data and therefore called “grounded” theory (McMillan & Schumacher 1989).

1.9 Population and sampling procedures

It was not feasible to include all schools, learners, educators and managers in Gauteng province. The researcher purposefully selected six different schools for study. It is important to note that the schools involved ranged from Grade R to high school. The study population was made up of all pre-schools, primary and high schools in Gauteng province. Two pre-schools, two primary schools and two high schools were selected for study using the purposive, or judgemental, sampling method. Two pre-schools were selected using the following criteria: one private pre-school and one institutional pre-school. The two primary schools were selected using the following criteria: one former model “C” public school and one township public school. The high schools were selected using the following criteria: one exclusive ‘top-notch’ private school and one former model “C” high school.

The different schools were selected for the sake of comparison and to achieve adequate coverage of the different types of schools in Gauteng province. The schools were also selected for being typical cases representing illnesses, injuries and deaths that were highlighted in the print and electronic media. The study selected these schools because of the fact that they were information-rich. Providing enough situations to study accidents, injuries and illnesses affecting learners in a school resulting from various sport activities, social problems and general health issues.

1.9.1 Units of analysis

The entities in form of human beings that I used to probe included learners, educators, school managers and the Deputy Director General (DDG) for education in the Gauteng provincial legislature. I chose 10 learners from school E for FGDs and 10 learners from

school F. I ensured that there was a gender balance of five boys and five girls. This was not possible for school F because it was a boys' only school. I selected six managers for face-to-face interviews. These entities provided information about my research topic.

1.10 Data collection methods and tools

According to Jenne and Green (1976:33), data for evaluation are collected from existing records or by using a wide variety of survey instruments. Data were obtained from stock inventories of FA kits. Data were basically gathered through FDGs with learners and educators. Face-to-face structured interviews were held with selected school managers and the MEC at the provincial offices of the Gauteng Department of Education (GDE). Observations were carried out in one school during break times and sport activities.

Babbie and Mouton (2001) argue that FDGs and interviews have high face value, as one can observe the body language. Care was taken not to violate the law, although it was practical to ask for learners' school files to look into their medical history. All identifiable information was treated with confidentiality.

1.11 Limitations and delimitations

The study was limited in terms of the time factor. Data collection needed to be done over a relatively long time span. The researcher needed to go back and forth interviewing as many learners, educators and SMT members as possible to get a variety of views. The duration of the data collection and observation was slightly over five months because the DoE did not allow research activities in the fourth term because of the end-of-year examinations and during January because of new-year registration. The time factor was solved by observation at the school where I was teaching which was done over a month. I felt that whatever needed to happen in FA provisioning, did happen during that month of observation.

An inherent limitation of the interview as a research instrument is that the interviewees may not be completely truthful in their responses in order to please the researcher or to protect their role (Catania 1999). To curb this, the researcher was careful not to indicate

agreement with the educators or preference for the direction of the discussion (Branch 2007:277). That, however, did not completely eradicate this flaw. I made use of triangulation to increase the trustworthiness of the data. I countered the possibility of interviews being untruth by using observations, FGDs and face-to-face interviews. Closely related to this is the reluctance of young people in some cultures to speak in the presence of seniors or older people. This was curbed by separating learners' FGDs from their educators' discussions.

On entry, Ball (1993:34 in Babbie and Mouton 2001) says permission from the principal does not always guarantee the cooperation of educators or students, as the researcher may be "tainted" by the entry process when identified with the formal authorities. The researcher had to gain legitimacy and renew it repeatedly rather than simply having it officially granted (ibid). A mutual relationship was established, especially with gatekeepers and receptionists, to gain access.

1.12 Emergent data treatment

Data that emerged from the study and were directly related to the research aims and objectives were included in the findings. Data that emerged from the study but bore no direct relevance to the topic were discarded. Such data were mentioned in the section that dealt with recommendations for further study in the last chapter of this study.

1.13 Clarification of concepts

Higgs and Smith (2012:3) introduce their book by asking: "What do words mean?" We do not often give thought to what we say and mean. Maybe that is the main reason why people usually come back to set the record straight, accusing reporters of quoting them out of context. Stand-alone words do not mean much. Words and concepts have to be understood in context. Even if we cannot define exactly what we mean by a word, we need to be as precise as we can (Higgs & Smith 2012:6). This is the hallmark of this section, whereby words and concepts are given their contextual meaning in the parameters of this study. This involved being consciously aware that the words and concepts used cannot be defined clearly (ibid).

1.13.1 Evaluation

Kayasira and Gwasira (2005:19 in Chireshe 2008) define evaluation as the judgement of the quality of something. The Wikipedia free on-line encyclopaedia defines evaluation as a systematic determination of a subject's merit, worth and significance, using criteria governed by a set of standards. Wikipedia goes on to describe fully the scope and intent of evaluation by saying it can assist an organisation, programme, project or any other intervention or initiative to assess any aim, realisable concept/proposal, or any alternative to help in decision-making, or to ascertain the degree of achievement or value in regard to the aim and objectives and results of any such action that has been completed. Smith, Sinclair, Raine and Reeves (2005:7) define evaluation as "the critical assessment of the value of an activity. This is the meaning of evaluation adopted for this study. The purpose of evaluation is to provide evidence for decisions about which services should be provided by identifying which interventions work and which are affordable" (Jenkinson 1997, in Smith *et al* 2005:9). In short, evaluation of the administrative efficacy of FA provisioning set out to determine the value and worth of FA activities in schools *vis à vis* provisions of the NEPA as read with relevant sub-sections of sections 7 , 8 and set standards and norms of FA ontology.

1.13.2 Administration

Taken at face value, the administrative function involves management. The Pocket Oxford Dictionary defines the word "administer" as 'to manage business affairs', etc. The Wikipedia on-line encyclopaedia defines administration as having to do with maintenance and supervision. In this study, the administrative function will include the total programme of planning, organisation, implementation and evaluation of FA in a school setting. This function inevitably falls under the jurisdiction of the school principal assisted by the SMT. The SMT includes the principal, the deputy principal(s) and the heads of departments of different subjects or learning areas.

1.13.3 Management

When juxtaposed against administration, management refers to the act of directing people towards accomplishing a goal (Wikipedia). According to the Wikipedia online encyclopaedia, it is that function that co-ordinates efforts of people to accomplish goals and objectives using available resources efficiently and effectively. It involves planning,

staffing, leading, controlling and organising (Ibid). In the context of this study management and administration will be used interchangeably, as both were of necessity invaluable in ensuring the efficacy of FA provisioning. The principal of a school is responsible for this function together with the SMT.

1.13.4 Efficacy

The word efficacy was selected intentionally instead of efficiency or effectiveness. According to the Pocket Oxford Dictionary, the word efficacy means “producing the desired effect”. Wikipedia on-line concurs with this definition and says that efficacy is “the capacity to produce effect.” In medicine, it is the ability of an intervention or drug to produce the desired effect (Ibid). In FA provisioning, one is not so much concerned with efficiency, but with efficacy. According to the Oxford dictionary, the word efficiency means “producing something with minimum waste or effort.” Effectiveness is closer in meaning to efficacy, as it means producing the intended results, but falls short when applied to the health and medical field.

Efficacy describes the benefits obtainable from an intervention under ideal conditions, while effectiveness describes the benefits of health services measured by improvements in health in a real population (Smith, Sinclair, Raine & Reeves 2005). Efficiency has to do with cost-effectiveness. Efficacy is preferred over the other two words because it is associated more with the effectiveness of something in producing the intended result. First aid procedures are based on skills and principles that need to be applied to solve a particular illness, injury or disease. Two qualified first aiders are likely to employ more or less the same procedures, except where there is need for improvisation with materials to suit particular situations. The Macmillan English dictionary for advanced learners defines efficacy as “effectiveness in producing the result that you intended.” Efficacy goes beyond efficiency and effectiveness for this study.

1.13.5 First aid

The concept of FA is self-explanatory. It is the first assistance after injury or illness that is given to a person before the arrival of medical or paramedical personnel. This is the first help that a sick or injured person gets before medical professionals arrive. Doctors,

nurses and paramedics cannot be everywhere all the time. First aid bridges the gap between injury or sickness and the arrival of medical professionals who will duly take over. It must be borne in mind that “first aid is based on proven techniques of treatment in the event of an injury or sudden illness” (Greeff 1994). FA is a specialised profession. Greeff (1994) defines a first aider as “... any person who arrives at the scene of an accident and is qualified to render the correct treatment with whatever materials are available at the time and endeavours to stabilise the victim until such time that medical help becomes available.” For this study FA means the help that is given to educators and learners before the arrival of emergency services personnel.

1.13.6 Health

The definition of health adopted for this study is the one given by the World Health Organisation (WHO) in 1946 (Jenne & Green 1976). Health, according to the WHO, is “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” Although some people have a problem with the word “complete”, this is the most versatile definition used (Jenne & Green 1976). First aid falls under the ambit of health education and the aim of education is the development of the child holistically, i.e. physically, mentally and morally. Managing health issues in a school environment has more to do with health education, health promotion and FA provisioning.

1.13.7 Provisioning

The term provisioning was used instead of provision. The present continuous tense was preferred because it implies that the act is ongoing. In this study, provisioning refers to the whole process of planning, execution, feedback and feed-forward of FA in schools. The word provision has some overtones of a done deal, belonging in the past. It also has undertones of preparing for the future. Provisioning is present and continuous.

1.13.8 Managers

For the purpose of this study the word manager was preferred over principal as the head of the school. This was done to cater for the pre-schools where the word principal would not have fitted well. “Principal” is defined as the “chief administrator of a school”

in North America, and the “chief executive and chief academic officer of a university or college” in the United Kingdom (UK - English online dictionary). It is generally accepted that a principal is the head of a college or institution of higher learning. Pre-schools are as a general rule, in the South African context, run by managers.

1.13.9 Pre-school

The word is self-explanatory. A pre-school is given a number of names in different places: kindergarten, crèche, grade R, grade 0 or pre-school. As the name implies, it encompasses an institution that offers care and education of children before formal school, i.e. grade 1. In many cases the children who attend such a school are below the age of five years. For the purpose of this study, the word pre-school has been used throughout instead of kindergarten or crèche.

1.14 Chapter division

The research report was presented in six chapters, summarised below.

Chapter one gave the motivation for the research, a general outline of the intention of the research, the introduction, background to the study, statement of the problem, the theoretical framework adopted for this study, significance of the research, aim, explanation of key concepts and chapter division.

Chapter two documented literature that dealt with the contextualisation of the study. In this chapter, the critical structure of the literature review was given. This chapter formed the bedrock on which the research was built. It put the study into context and established parameters for the study by elucidating the history and advent of FA in schools. Theoretical and conceptual frameworks that were used to ventilate the literature review study were explained.

Chapter three presented literature on previous research studies done on FA provisioning in schools. The chapter started by looking at studies of FA provisioning in the first world, Asia, Africa and finally South Africa. The main focus was the *status quo* of management of health issues internationally and in South Africa’s Gauteng province. Policies and measures were presented to explain the GDE’s expected norms and

standards regarding FA provisioning. Chapter three sought to establish policies and gaps with regard to FA provisioning in schools. The Gauteng position was benchmarked against international trends. Chapters two and three formed the literature review.

Chapter four described and explained the research design and methodology employed in gathering and presenting data for this study. Justification for the choice of the research design and methodology was inherently given. Issues of ethical considerations and trustworthiness of the research study were explained in this chapter.

Chapter five presented the research findings and the discussion of findings as mirrored against the research questions, aims and objectives.

Chapter six, the last chapter, gave the concluding remarks, the contribution of this particular study to the body of knowledge, limitations of the study and recommendations for further study.

1.15 Summary

Chapter one laid the groundwork for the research study and set the scene for the research journey. Having given the background and overview of the research study in Chapter one, Chapter two chronicled how the literature review was done in order to put the study into context. The history of FA and its appearance in schools was described. This provided a birthing room for the study, it was like the weft and warp threads where tapestry is woven, something like a cartoonist's caricature, a skeleton on which to build flesh.

1.16 Projection for the next chapter

The next chapter deals with the critical structure of the literature review, the ontology and history of FA. It must be clarified that the chapter documents how the literature was reviewed against the backdrop of the research questions. This was a very important feat, as the theoretical assumptions and the way the literature review was done set a precedent for Chapter three, which deals with the body of knowledge concerning FA provisioning in schools and previous studies on FA.

CHAPTER 2

THE ADVENT OF FIRST AID IN SCHOOLS

2.1 Introduction

The research journey was planned and charted in Chapter one. A layout of why the study was necessary and how it was intended to be accomplished was given. Chapter two established the groundwork by setting the stage for the study. Literature on FA provisioning in the school context was reviewed and critiqued against the backdrop of the research questions.

2.2 The critical structure of the literature review

To set the scene for the study, it was necessary to posit the structure of the literature review on the research topic against the stated aim and objectives. In this section the critical structure of the literature review process was described and explained against the backdrop of the research questions. This was crucial to ensure that the literature review met the requisite attributes of being “comprehensive, deep, critical and systematic” (Gumbo 2013). The theory underpinning the literature review was also described in this chapter and an explanation of why the literature review was carried out in the prescribed manner was given. It was sensible to reconsider the research questions, since they helped to shape the structure of the literature review. The research study was guided by the following two main research questions:

1. What are the literacy and competency levels among managers, teachers and learners in Gauteng schools of the NEPA on FA provisioning in South Africa?
2. How do these literacy and competency levels affect FA provisioning practices at school level?

Francis (2013) argues that researchers begin their quest with a problem and through a systematic process of uncovering information piece together a story that informs contemporary understanding. Interpreting the data that leads to the generation of the story/history is supported by an evidence trail and clear articulation of assumptions the

researcher has made to proffer an understanding of the historical phenomena being investigated (Ibid). FA provisioning in the school context assumes a historical narrative that demands of us to bend backwards, in order to leap into the future. We can only get a better understanding of the present and the future by digging into the past. There was a need, therefore, to trace the origins of FA in order to get a proper glimpse of the advent of FA in schools.

Clarifying the intent of the research through enunciation of a research question or questions defines the parameters of the study and guides the data generation and analysis methods to be employed (Lewenson 2011, in Francis 2013:61). To answer the above questions, it was necessary to review relevant literature. The structure of the literature review was streamlined and critiqued against the backdrop of the research topic. This structure determined the nature, scope and type of literature that was reviewed. The research questions acted as a mirror against which the literature was reflected, reviewed and structured.

The literature review was inherently undertaken in three broad categories. Firstly, literature on the theories underpinning health research and methodology was documented to place the research study within the relevant theoretical and conceptual frameworks of FA provisioning. This literature encompassed the philosophy, paradigm and psychology of workplace safety, with particular reference to FA provisioning in schools. It was mainly found in primary and secondary sources.

Secondly, literature dealing with the history of FA provisioning in schools was reviewed. Literature in this category included the general history of FA and the advent of FA in the schools of the 'First World', Africa, South Africa and Gauteng province. Closely related to the advent of FA in schools was the associated legal implications of FA provisioning and the psychological basis of workplace safety. Literature in this category was, of necessity, very old, dating back to the early days of FA at the turn of the nineteenth century and before.

The third literature category zeroed in on the contemporary issues on FA provisioning in schools. This literature category included previous research studies on FA provisioning in schools. It formed a launching pad and the basis of the research study, as gaps were

identified in FA provisioning in the South African context. Literature in the last two categories was studied in a cascading format, i.e. from a global view to a continental view, then to a national perspective and finally a regional view. This 'funnel' structure of the history of FA cascading down to the Gauteng province from a world view was necessary because health care systems globally vary and they tend to show differences in health outcomes related directly to the wealth of a country (WHO 2010).

The literature on the history of FA was important for this study to position the study within a worldwide context. FA provisioning in Gauteng schools was benchmarked against the global, continental and national norms and standards. A study of FA provisioning in developed countries helps to avoid repeating mistakes and reinventing the wheel. A comparison of literature from the developed countries with Africa also revealed gaps in knowledge that provided the rationale and significance for undertaking this study.

Literature dealing with school-based illnesses and injuries was consulted to bring to light the sort of illnesses, injuries and accidents bedevilling schools. This literature was found in textbooks, magazines, journals and current news items in the print media and television broadcasts. The current deaths and injuries in schools were the justification and rationale for this research study. This literature accounted for the numbers of deaths and disfigurements attributed to school injuries, deaths and illnesses *vis à vis* the assertion that non-communicable diseases and injuries caused an estimated 33 million deaths in developing countries in 2004 and will account for a growing proportion of total deaths in the future (WHO 2010). A summary of the literature review sources is given in table 2.1.

FA literature was obtained from the tabulated sources below.

Table 2.1 Sources of information

Textbooks	Television live broadcasts	Online sources	Observations at break and during sport activities
Newspapers	Journal articles	Dissertations and theses	Interviews, telephone and informal oral engagements
First aid manual	SASA NEPA	Constitution of the Republic of South Africa	School injury/ incident reports and records
Magazines	Documents at school.	School policies on health and safety	The Law of Delict/ basis of negligence

After having identified the literature sources to answer the research questions, it was necessary to describe the theoretical framework adopted to undertake the literature review. According to Panther (2015), there are basically three frameworks for doing a literature review. These are thematic, historic and chronological. The thematic literature review arranges literature in terms of themes or issues, through which similar themes are grouped together. For this study, the main theme running through was FA provisioning in schools. Thematic reviews may be chronological because although the study may focus on one topic or theme, it may still be organised in a chronological order of events.

The historical literature review takes into account events that happened in the past. The chronological review orders sources by years of publication. All three frameworks were used at different stages to study evaluation of the administrative efficacy of FA provisioning in Gauteng schools. The story of FA unfolded from ancient times, when it was just starting, to the present, when it has assumed new dimensions. The chronological literature review took into consideration the order of dates in which the literature was written. First aid provisioning in schools was traced chronologically from ancient days. For the purpose of this study, all three frameworks were used at different stages of the study.

The importance of the literature review to any research study cannot be overemphasised. According to Gumbo (2013) a literature review, which he prefers to call 'a scholarly review', is a broad, comprehensive, in-depth, systematic and critical review of scholarly publications, unpublished scholarly materials and scholarly personal communications on a particular topic. This definition raises important aspects of the depth and breadth of the review.

The literature review for this study consisted of both primary and secondary sources. It included books, theses, documents and incident reports, articles, internet sources, e-journals, newspapers and acts of parliament. The research topic and questions determined the type of literature that was reviewed. The University of South Africa's (UNISA) librarians also lent valuable assistance during a literature search. After requesting a literature search for my topic, the UNISA library staff furnished me with over 135 different sources of literature related to my topic. It was then left to me to sift through the sources and focus the literature to meet my study aim and questions. A brief outline of historical research is given in the next section, as it relates to FA provisioning rather than the thematic and chronological perspectives. A training workshop hosted by the UNISA librarians for Masters and doctoral students proved invaluable in accessing and using e-resources, e-journals and the 'refworks' referencing tool.

2.2.1 Historical literature research

Francis (2013) asserts that data are gathered from many sources that the researcher believes will provide insight into the period of time or foci of research interest. It was necessary to consult literature dealing with FA in schools over time. Some of the sources consulted were relatively old, since there was a need to trace the evolution of FA through time. FA provisioning in schools has not been a permanent feature of school curricula since formal school education began. The advent of FA in schools is historically nuanced and situated. Francis (2013) asserts that historians begin their quest initially by posing a question that is historically contextualised. In the case of this study the questions were where, how and why did FA come to schools?

There are many approaches that can be adopted to explore research questions that are historically situated (Brennan 2011, in Francis 2013). History is the study of past events.

There are many types of historical research approaches, such as oral histories, historiography, social and chronological historical accounts, all of which offer a window to glimpse what has occurred in times gone by (Ibid). According to Francis (2013:56), understanding the past to inform the present and the future is a recognised field of qualitative research inquiry. Looking at the past to inform the future is a common feature of research. Interest in how people lived in the past has and will continue to captivate future generations of people globally (Ibid). An understanding of the history of FA gives us a better grip of contemporary issues pertaining to FA provisioning in the school context.

A study of past FA provisioning practices was necessary for this study in order to inform future trends and practices. Warelow and Edward (2007:57, in Francis 2013:56) affirm that understanding of the present is made clearer when we are able to look to the past and the present, and examine how the present has been informed by the past, and acknowledge that both, the preceding and the present, are mutually important. It was also necessary to be cognisant of the important fact that times change and future generations of researchers, like those of today who are interested in history, will need to be mindful not to judge yesterday on contemporary beliefs and understandings (Sweeney 2005, in Francis 2013). When we view the elementary stages of FA provisioning in ancient times, we must be careful to situate them in the ancient context and time. We do not have to judge them on the basis of modern times.

Data for historical research are generated using techniques that include reviewing texts often located in libraries and other archival repositories (Lusk 1997, in Francis 2013:58), collecting artefacts that provide insight into the lives of people in the past and investigating archival or documentary evidence. Data sources may include primary and secondary sources. Primary data sources are evidence left by those who have lived during the time or events being studied (Wood 2011, in Francis 2013). Much of the literature consulted for this study was from secondary sources, which assumed historical attributes.

Secondary sources of data are accounts of historical events or time provided by others who may or may not have used primary data sources to construct and theorise on the same foci as a researcher who is new to the field of study (Lewenson 2011, in Francis

2013:60) Reviewing the historical commentaries of others provides insight and often clues to data sources that may not have been considered. This approach may also provide a level of confirmation for researchers when the interpretations of others' investigations align with their own (Ibid). This concurrence was noted where a number of different authors and researchers agreed on certain aspects of FA. Godden and Forsyth (2003, in Francis 2013) advocated this process, suggesting that ensuring familiarity with events of the day, including the social, economic and political situations, provides background for understanding the period and the people. Recognising that secondary data sources are always another's interpretation is central to the process of critique and establishment of an audit path for the study (Francis 2013).

The scope of the literature review demanded that sources consulted conformed to the dictates of the topic and research questions. Since the study was located in the discipline of school health and safety, the journals consulted had a lot to do with health and safety issues in a school environment. The topic straddled across disciplines, hence the literature review was of necessity a potpourri that included issues on the psychology of workplace safety, medicine, law and emergency care. It was sometimes very difficult to locate the literature review within one particular field, as it inadvertently veered into uncommon territory and talked about purely legal niceties such as the "law of delict" and the "basis of negligence". Legal terms do not predispose themselves to the dictates of paraphrasing because that may alter or distort their meaning. For this reason many of the legal provisions were quoted verbatim. Shifting from the legal field, the literature took another trajectory and went on to assume purely medical jargon, talking about medical terms such as CPR, coronary thrombosis and AED. The research topic charted the scope of the literature study.

Having covered the salient aspects of the literature review that answered the research questions, I felt that my information-seeking was broad and good enough to ensure that all the relevant literature concerning FA had been consulted. The literature search from the UNISA library provided a wide range of sources on the topic. The literature search broke down the research topic into small manageable chunks and provided the literature that was related to the sub-topics. I consulted this literature to suit the research study. It was easy to refer to the sources, as the UNISA literature search

provided direct “url” links to the original e-journals, e-resources and full texts online. Besides the literature provided in the literature search, I also consulted literature relevant to my study through the Google Scholar search engine. The sifting mechanism ensured that I did not consult material that was irrelevant to my study. I believe that the number of sources consulted was broad enough to cover the salient aspects of the research study. I am a qualified level 3 first aider and the knowledge and skills I acquired through this course assisted me to embark on the study from an informed position.

2.2.2 Critical analysis of the literature

The literature review was a “review” of the literature on the research topic in the literal sense. It was not a summary of sources consulted. My voice and interpretation of the literature weaved through the tapestry of the consulted literature. Where it was necessary to cite or quote authors, it was done to strengthen, confirm, support or illustrate a point. Through the use of a synthesis matrix, I followed through a set of concepts, comparisons and different views expressed by the authors of the respective literature consulted. The literature review was not just a list and summary of quotations. I also cited and discussed previous research studies that were similar or those that contradicted my research study.

2.2.3 Relevance of the literature review

The literature review was appropriate to the study and it was useful, as it met the requirements of a literature review as listed by Taylor (2015). According to Taylor (2015) a literature review must do the following:

- 1.Be organised around and related directly to the thesis or research question one is developing.
- 2.Synthesise results into a summary of what is and is not known.
- 3.Identify areas of controversy in the literature
- 4.Formulate questions that need further research.

The literature on the history of FA, previous research studies on FA and its bearing on health and safety in schools gave me the premise on which to foreground this study.

The results were synthesised and summarised to make the findings visible enough to readers. Controversial areas such as FA training for minors and the need for FA training were interrogated with various authors and researchers on the subject of FA provisioning in a school setting. The last Chapter also gave recommendations for further study.

2.2.4 The organisation of the literature review - A synthesis matrix

The literature review was organised in the form of a synthesis matrix. A synthesis matrix is a chart that allows a researcher to sort and categorise the different arguments presented on an issue (Pather 2015). It is a table with spaces across the top where sources are recorded and along the side of the table to record the main points of arguments on the topic under discussion. For this study an illustration is given below:

Table 2.2 Synthesis matrix for the research study

Theme/topic	Source A	Source B	Source C	Source D	Source E
Theoretical/ conceptual frameworks	Creswell (2007)	Babbie & Mouton (2010)	Mack (2010)	Gelderblom (2010)	Smith et al (2005)
Managing health issues in Schools	SASA (1996)	National Education Policy Act (1996)	RSA Constitution (1996)	Greeff: (1994/5)	School health policies
Evaluating school health programmes	Jenne & Greene (1976)	Tones and Tilford (1995)	David & Williams (1987)	Popham (1988)	Koop (2000)
Measuring administrative efficacy	Soni (2013)	Cooks (2002)	Barling & Frone (2002)	Feartherstone & Romano (1977)	Fetterman (1986)
FA provisioning in schools; Europe, Africa, RSA and Gauteng province.	SASA, GDE policies	Symposia on school management	Online sources	Saint John's Ambulance	Journals: the history of FA
Previous FA research studies	Norway (Bollig, <i>et al</i> (2008-11)	China (Li, <i>et al</i>) (2012/14)	Sweden (Online)	Egypt (Wagida & Hanan) (2014)	India (Pallavisarji, <i>et al</i>) (2013)

The theoretical framework adopted to undergird this study was described and explained in Chapter one. It was imperative to position the literature review study within a particular theoretical lens so that this study could be interpreted from the perspective of that particular theory. The theoretical framework adopted to do the research study was streamlined to the literature review in order to answer the research questions. The critical structure of the literature review assisted in explaining how the literature review

study was carried out, the type of sources used and how they were related to the research questions.

In conclusion of this section on the critical structure of the literature review, it is important to comment on the “unconventional” sources used in this particular study. The peculiarity of these sources demands that a justification of their use in this study be given.

2.2.5 Primary sources

While primary sources are invaluable in obtaining research data, their pros and cons need to be highlighted. An apparent strength of primary sources is their originality as first-hand accounts. Quite a number of primary sources were used for this study. These included interviews, FDGs, informal conversations, observations made during break and sport activities. These sources provided first-hand accounts of FA provisioning in schools.

2.2.6 News broadcasts

Live national and provincial television broadcasts on incidents affecting learners in various schools with regard to education, health and safety issues provided contemporary conversations relevant to this research study. The main problem with these sources was that in many cases informal English was used that did not conform to the demands of academic writing. While all efforts were made not to distort the original meaning, it was necessary to use acceptable formal academic English. In many cases the gist and intent of the remarks and comments lost their contextual meaning owing to paraphrasing. It must be appreciated that there is always an unspoken meaning attached to the informal words that gives a particular contextual connotation, which cannot be deduced if formal English is used.

2.2.7 Newspaper articles

Literature reviewed included newspaper articles because many articles dealing with FA-provisioning incidents were reported in newspapers. Reports on school transport accidents, injuries and illnesses affecting learners and teachers appeared in many cases in the weekly and daily newspapers. The *Kempton Express and The Star*

newspapers carried most of the stories on injuries, illnesses and deaths occurring in schools. The nature of informal English used in the newspapers sometimes presented problems, as the reporters and the parents who were interviewed used informal words to describe incidents in schools. I had to paraphrase the excerpts to suit the formal version, trying as far as possible not to alter the meaning.

2.2.8 Acts of parliament

The literature also included relevant acts e.g. the SASA, the NEPA and the Constitution of the Republic of South Africa, Act 108 of 1996. By its very nature, the law has a specific terminology that defies paraphrasing because this may distort the meaning. It was necessary to quote the legal statutes verbatim in such cases. First aid provisioning had to be reviewed against the backdrop of the legal requirements as stipulated by the relevant sections of the South African law and Constitution.

After chronicling the critical structure of the literature review in the previous section, I will then go on to answer the questions: Where, how and why did FA come to schools?

2.3 The beginning of FA on the world scene

The previous section documented the critical structure of the literature review. It was necessary to provide the critical structure of the literature review and explain the justification for it. This section deals with what FA is, its history and importance in education and how FA fits into the broader picture of formal education school systems.

The history of FA differs from country to country. In most cases literature consulted indicated that FA as a discipline originated in the UK in the form of Saint John's Ambulance and later spread to other parts of the world. Saint John's Ambulance was largely responsible for this "missionary" work and today continues to operate in many countries in the field of FA provisioning. Working together with the Red Cross and the FA sister organisation, Saint Andrews First Aid in Scotland, Saint John's Ambulance has been the vanguard of FA provision the world over, schools included. I found it important that a detailed account of FA provisioning in the UK should be documented because of this country's position as a trendsetter in FA provisioning under the auspices of the Saint John's Ambulance Services.

According to Newton (1984) FA as a profession in its own right, has a history of only 120 years, i.e. from about 1984 when he wrote the book. First aid evolved from the teachings of the Royal Humane Society and Military Surgeons, who saw the wisdom of training in splinting and bandaging for battlefields wounds. This seems to conform to the development of FA specifically in the UK. A totally different historical development of FA in Scotland and Switzerland followed thereafter.

In 1878 two Aberdeenshire military officers, Surgeon-major Peter Shepherd of the Royal Hebert Military Hospital, Woolwich, London, and Colonel Francis Duncan, established the concept of teaching FA skills to civilians (Newton 1984). This radical new enterprise, under the aegis of the newly formed Saint John's Ambulance Association, was a natural evolution from the body's philanthropic and transport work. Surgeon-major Peter Shepherd conducted the first FA class in the hall of the Presbyterian school in Woolwich in 1878, using a comprehensive FA curriculum that he had developed. Within a month of the first class, local Woolwich civilians used their skills when the pleasure boat, Princess Alice, sank in the Thames at Woolwich, killing 600 people (Newton 1984). Within a decade, the new discipline of FA had spread rapidly throughout the world and by the end of the 19th century hundreds of thousands of Saint John's FA certificates had been awarded on four continents (Newton 1984). Shepherd's pioneering classes changed the world's concept of the need for the provision of skilled pre-hospital care (Ibid).

One perspective asserts that the history of FA varies depending on what part of the world one is referring to. This view asserts that FA started earlier than the Saint John's Ambulance Association, around the 11th century in Europe, when the Order of Saint John was created with the aim of training people to care medically for victims of battlefield injuries. These were laypeople formally trained in the administration of FA. Around this time the Knights Hospitaller provided care to pilgrims and knights in dealing with battlefield injuries. During the Middle Ages in Europe FA took a back seat and did not really resurface until the second half of the 19th century (Ibid). This period is the one that Newton (1984) writes about in the previous section.

In 1859 Henry Dunant, a Swiss businessman, trained and organised local village people to administer FA to battlefield victims of the Battle of Solferno, Italy. In 1863 four nations met in Geneva, Switzerland and formed an organisation that became the forerunner of

the modern Red Cross and Red Crescent societies (Ibid). It was during this meeting that the term FA was first used with its modern meaning. Since then, FA has been synonymous with the Red Cross. The initial aim of the Red Cross was to administer FA to sick and wounded soldiers. During the Industrial Revolution Great Britain had a number of civilian ambulance crews that would come to the emergency assistance of miners, railway workers and policemen.

Authors do not agree on the date when FA began. It must be borne in mind that when one makes an analysis of the beginning of FA, one needs to take into account the place and the definition ascribed to it. According to some authors, FA is not the assistance given to the injured and sick people of the pre-19th century era. It is a specialised profession requiring that one must first be trained and certified by an accredited institution before being allowed to administer FA.

In 1877 Saint John's Ambulance was formed in England. It was based on the principles of the Knights Hospitaller, i.e. to teach FA. Soon several organisations joined Saint John's Ambulance. Through Saint John's Ambulance, training spread throughout the British Empire. Notwithstanding the 11th century Knights Hospitaller account, it is a generally accepted fact that FA began in the UK under the auspices of Saint John's Ambulance and spread throughout the British Empire and other countries.

Soni (2012:233) introduces another dimension and argues that FA has been around since the appearance of humanity on earth. According to this view, FA is the philanthropic assistance rendered to one human being in distress by another. The old biblical story of the "Good Samaritan" taking care of the injured man who had been attacked by robbers on his way from Jerusalem to Jericho comes to mind. It is a natural reaction of people to help others in an emergency. If someone faints and collapses, for instance, the humane reaction would be to try to assist the casualty somehow. It may be by patting the person on the back, reassuring the patient, giving water to drink, untying tight clothes or fanning to increase airflow. According to Soni (2012:233) "... methods of first aid have been practised ever since one person desired to help another in sickness or after an injury." It is human nature to offer assistance when another person becomes ill or is injured. Used in this sense, FA can be viewed as synonymous with common sense, a natural instinctive response to another person's injury or illness. Let me be

quick to say that, in its modern sense, this is not FA! Soni's (2012) definition of this old FA is not the one used in the context of this study. Not everyone is qualified to administer FA. There is a need to go through a course of skills and knowledge acquisition that has to be proven by certification from an accredited body. One has to pass a theory test and a practical examination before becoming a qualified first aider.

Viewed from Soni's (2012) perspective, FA is as old as humanity and has evolved through the ages to encompass specialised skills and knowledge. Greeff (1994) gives a different view on South Africa asserting that FA started around the beginning of the twentieth century. An organised worldwide effort at recognising the importance of FA was only made in 1877 with the formation of the Saint John's Ambulance Association of England, named after the biblical apostle Saint John.

The Saint John's Ambulance Services seem to be the tipping point for the beginning of FA for most authors. First aid practices have gained great impetus since then. One can glean from the three accounts of the development of FA that they are not mutually exclusive. It is the geographical position and the definition of FA that tends to give seemingly different versions. The term "first aider" was used for the first time in 1894 and was intended to designate any person who had received a certificate from an authorised association stating that he was qualified to render FA (Soni 2012:233). This certification marked the difference between the traditional pre-1877 first aider from the post-1894 professional one. FA has since ceased to be 'common sense'. Literature generally agrees that the originator of FA was Esmarch, who lived between 1823 and 1908.

2.4 History of FA in South Africa

In South Africa, FA in its modern form came much later than in Europe. The turn of the 19th century coincided with the colonisation and partition of the African continent. FA came to South Africa through the auspices of the South African First Aid League (SAFAL). There are different accounts of the history of FA in South Africa. The geopolitical Africa as we know it today, with its national boundaries, only came about with European imperialism and colonisation towards the end of the 19th century. The partition of Africa came about after the 1884-5 Conference of Berlin, which divided Africa into

states that were the predecessors of the modern nation states we see today. The history of South Africa from the time of Jan van Riebeeck's refreshment station at the "Cape of Good Hope" in 1652 to the Union of South Africa in 1910 is an era that was fraught with wars and instability. FA may have taken place but was not documented and recognised as such. FA only came about as an organised feat from around the time of colonisation, i.e. late 1890s and early 1900s.

In the context of South Africa, according to Soni (2012:233), the legendary passive resistance leader, Mahatma Gandhi, was a patron of the cause of FA and in 1906 he led a band of dedicated Ambulance Corps volunteers during the time of the Zulu rebellion. Earlier on, he had led another band of first aiders during the Anglo-Boer War of 1899. The period of history preceding these two highlights is generally quiet as far as FA provisioning is concerned. FA then re-emerged with the formation of SAFAL in 1934. Soni (2012) posits that SAFAL was the brainchild of George Annandale Nezar, who in 1934 realised that his mother tongue, Afrikaans, should be recognised as a language medium in which basic FA skills could be taught to South Africans.

The Afrikaanse Taal- en Kultuurvereniging, at its sixth annual congress on 17 April 1935, decided to initiate its own FA movement. The first branch of the league was founded in the city of Bloemfontein on 9 August 1935. In 1954, the South African Railways recognised the organisation as an official FA training institution for its employees. Today SAFAL provides FA training in Afrikaans and English in the nine provinces throughout South Africa. Professor Ooppel Greeff is president and immediate past chief surgeon of SAFAL, Doctor Reynard Knoetze, together with the chief operations officer (COO), Jake Wandrag, ensure that the FA textbooks are written in line with international standards. Today quite a number of other organisations provide FA alongside SAFAL in South Africa. These include Saint John's Ambulance, ER24, etc.

The SAFAL was founded in April 1935 with the purpose of providing FA training to the community at large, specifically in the Afrikaans home language. The mission was extended to include the provision of FA assistance at sport and other community activities. The organisation is based on a constitution, making provision for an executive committee, senior management, branch management and members. The national organisation has a countrywide infrastructure that is controlled from its head office in the

town of Centurion near Pretoria, South Africa. Administrative control is exercised by the COO who reports to an executive committee. SAFAL is registered with the Department of Labour and is also fully accredited with the Department of Health and Social Development (DHSD) as a service provider for FA. SAFAL is very meticulous to comply with the minimum requirements as laid down by the DHSD, because it forms the cornerstone of quality training. SAFAL's mission includes the following:

- 1.To simplify FA.
- 2.To provide relevant and up-to-date FA information to the public.
- 3.To train first aiders according to the guidelines laid down by the Department of Labour, Health and Welfare and the Resuscitation Council of South Africa.
- 4.To train competent FA facilitators.
- 5.To provide regulation 7 FA kits (boxes and bags).
- 6.To provide FA at events and
- 7.to organise and facilitate FA competitions to ensure the FA skills are laid down and practised.

The qualification for a modern-day first aider in the South African context is the possession of a valid FA certificate and proof of registration of the first aider by SAFAL. The FA certificate can be issued at three South African Qualifications Authority (SAQA) framework levels. Level 1 is the lowest and levels may go up to level 8 for advanced life support. A copy of my level 3 FA certificate is included in the appendices (Appendix L). After level 3 one can enrol for a trainer's course. It is the trainer who works under the auspices of SAFAL to issue certificates after adequate training and theory sessions. To qualify for an FA certificate, one has to write a theory test and take a practical examination under the supervision of a trainer. The practical aspect tests FA skills in a mock injury, accident or illness. The certificate is issued by the SAFAL and is valid for three years from the date of issue. When the validity of the certificate expires after three years, the first aider has to undergo another theory and practical examination to keep knowledge and skills updated. A new three-year valid certificate is issued.

2.5 FA comes to schools

The general prevailing situation of FA is best described by the following statement: “Globally, millions of people die each year as a result of accidents or serious injury, unfortunately many of those deaths could have been prevented had FA been administered at the scene immediately, before the emergency services arrived” (Greeff 1995). This statement also applies to school situations.

2.5.1 The context of first aid in schools

The focus of health and safety in the school as a workplace is on the prevention of illness and injuries: *‘prevention is better than cure’*. Cure is also more expensive than prevention. The DBE’s FA procedures and support tools assist school managers in the implementation of FA in accordance with work, health and safety legislation. Where an injury or illness does occur, FA facilities that are adequate for the immediate treatment of injuries and illnesses that may arise in a school are provided (NEPA).

It is important to note that the school is not a hospital, although some affluent schools have a resident school nurse or clinic on site. The problem is that illnesses, injuries and deaths happen at schools without the requisite medical personnel to attend to these. Other schools utilise the services of visiting specialist doctors. According to Wagida and Hanan (2014) childhood injuries constitute a major public health problem worldwide and FA is an effective life-preservation tool at work, school, home and in public locations. In 1974, an influential document produced by the Scottish Education Department commented on the marginal status of health education as follows:

Health education occupies an indeterminate and ambivalent position; it has not yet been accepted as an essential part of the fabric of education. It tends to fall into the no-man’s land between the school and the home, or within the school to be everyone’s concern but no-one’s responsibility (SED 1974 in David and Williams 1987:1)

The above quotation is important in the context of this study because there is a worrying trend in the frequency and incidence of school injuries, deaths and illnesses being reported in newspapers and television news in South Africa. This trend calls for an

evaluation of the administrative efficacy of the FA provisioning in the South African education landscape.

Newton (1984) posits that current societal and economic changes have influenced more and more parents to rely substantially on the school and its employees to monitor their children. The schools are expected not only to communicate about students' educational and social progress, but also to identify and meet their health needs (Macdonough 1984:5, in Newton 1984:5). Many parents and guardians send their children to school to learn; this is indisputable, but quite a number have been called to school to attend to their child after sudden illness, a motor vehicle accident or injury.

That is how FA inadvertently found its way into schools. FA generally consists of some simple, often life-saving techniques that most people can be trained to perform with minimal equipment. The aim of FA is to prevent a deterioration of the patient's situation, to aid recovery and to preserve life (Greeff 1994). Technically, it is not classified as medical treatment and should not be compared to what a trained medical professional might do. FA is a combination of some simple procedures, plus the application of common sense. Common sense is vital, especially in improvising materials to suit the prevailing circumstances, since injuries, illnesses and accidents may happen far away from conventional hospital settings, without the requisite equipment and environment.

2.5.2 Emergency care in schools

The FA or emergency care programme for a school is part of the school health service. According to Soni (2012:64), the school has five distinct responsibilities in case of accidents or in case of sudden illness occurring in school or during school-related activities:

- 1 Immediate care and FA.
- 2 Notifying the child's parents.
- 3 Getting the child home or to some other place of safety or care, e.g. the sick room.
- 4 Guiding parents, where necessary, to further sources of treatment.
- 5 Completing the necessary records and reports.

Soni (2012) argues that each school should have a “health room” or “sick room” where children can be sent when they are sick or injured and where other school health activities can be conducted. The “sick room” or sick bay should contain a cabinet with the appropriate FA supplies. FA should be readily available when needed and because of that, all school personnel should be trained in FA (NEPA).

2.5.3 The need for FA in schools

The responsibilities of schools’ management in respect of health and safety date back to the day that the first school opened its doors (Stock 1991:25). Schools cannot absolve themselves of the responsibility to take care of the FA needs of the children placed under their care. The ethos of schools in the past was that many arrangements were *ad hoc*, relying on the goodwill and the commitment of staff, rather than formalised systems (Ibid). The introduction of the Health and Safety at Work Act 1974 (HASAWA) in the UK formulated explicit requirements that had previously been implicit. The issue of health and safety is not a separate entity. It is an integral part of the management of schools and its implications need to be considered to an appropriate degree whenever decisions are made (Stock 1991:25).

2.5.4 Importance of FA in schools

There is no doubt that FA can save lives and prevent minor injuries becoming major ones. Under health and safety legislation, employers and managers have to ensure that there are adequate and appropriate equipment and facilities for providing FA in the workplace (Stock 1991). In the UK it is the responsibility of schools and local education authorities (LEAs) to develop their own policies and procedures, based on an assessment of local needs. Most schools already have FA arrangements in place and the guidance draws on existing good practice that gives advice to schools on drawing up FA policies and ensuring that they are meeting their statutory duties (Ibid).

In South Africa, the labour laws give minimum FA requirements for different establishments under the auspices of the health and safety policy framework. The minimum FA provision for the UK is a suitably stocked FA container/kit, an appointed person to take charge of FA arrangements and information for employees on FA arrangements. This minimum provision must be supplemented with a risk assessment

to determine any additional provision (HASAWA 1974). First aid provision must be available at all times while people are on school premises, and also off the premises while on school visits. In the South African context FA in schools is governed by the statutory provisions of SASA and NEPA. This study evaluated the efficacy of administrators in meeting the provisions of these acts of parliament, especially NEPA.

First aid is based on proven techniques of treatment in the event of injury or sudden illness (Greeff 1994). It consists of two components: knowledge and skills (Ibid). First aid is the immediate and temporary care given to the victim of an accident or sudden illness (Soni 2012:233). The definition by Soni (2012) leaves out an important characteristic of FA, i.e. training and qualification. Gone are the days when FA was any assistance rendered to a patient. According to Greeff (1994), “the first aider is any person who arrives at the scene of an accident and is qualified to render the correct treatment with whatever materials are available at the time and endeavours to stabilise the victim until such time that medical help becomes available.” This definition differentiates FA from common sense and general philanthropic assistance. This was the definition adopted for this study, because not everyone has the requisite knowledge and skills to administer FA, only those who have been trained and certificated.

According to (Greeff 1994), FA is given to a casualty in an attempt to:

- 1 Protect life.
- 2 Relieve pain.
- 3 Promote recovery.
- 4 Promote health and
- 5 prevent any further injury.

FA applies to a broad range of medical situations; it is not just a set of skills, but also involves the ability to determine the appropriate response to a specific illness or injury. Sometimes it is enough to apply a bandage or cold compress with ice; in other cases FA means that all one can do is to get expert medical assistance for the patient as quickly as possible (Ibid). Literature alludes to the fact that people prefer calling medical assistance rather than administering FA themselves. This they do because they are afraid of making mistakes or getting involved in subsequent lawsuits. The NEPA

provisions used in this study to evaluate the administrative efficacy of FA provisioning are skewed heavily in favour of protecting learners and teachers from infection by HIV/AIDS. This is problematic because it defeats the purpose of FA provisioning as one is more concerned about getting infected by an injured person especially where blood and other body fluids are involved.

Greeff (1994) emphasises the point that although FA is not a substitute for medical care, those trained in FA are able to assess the nature and extent of an emergency and determine the best course of action to take until advanced medical help arrives.

Johnson (1993:44) asserts that the purpose of crisis intervention is to:

- 1 Restore the people to their previous level of functioning.
- 2 Assist the person in planning what to do to cope with the situation.
- 3 Mobilise whatever resources are necessary and available to meet the crisis and
- 4 assess the person's ability to function and refer the person to further assistance if necessary.

Soni (2012:233) concurs and argues that the purpose of FA is to preserve life, assist recovery, prevent aggravation of the condition and preserve the morale of the victim to fight the trouble, until the services of a doctor can be obtained, or during transport to the hospital or the casualty's home. According to Greeff (1994), "First Aid is based on proven techniques of treatment in the event of an injury or sudden illness". The knowledge required to save a life can be obtained by studying FA manual. Skills, however, can only be acquired by applying the learned knowledge in a practical manner (Ibid).

In South Africa, aspiring first aiders have to enrol for an FA course at SAFAL or some other accredited institution where a trained instructor can teach the skills required for the calm and effective management of an emergency situation (Greeff 1994). The first aider's responsibilities end as soon as medical personnel arrives, but the first aider should stand by after making a report to the medical personnel to give any further information or assistance required. I concur with Greeff (1994) that FA is definitely limited to the assistance rendered at the time of the emergency with such material as may be available. It is not intended that the first aider should take the place of the doctor

and it must be clearly understood that the treatment of injuries and other specialised after-treatments are outside the scope of a first aider's job description.

2.6 FA skills and knowledge

Soni (2012:234) asserts that "certain skills are considered essential to the provision of FA and are taught ubiquitously." A guiding key skill is given the alphabetic mnemonic "ABC". "A" stands for airway, "B" for breathing and "C" for circulation. First aiders need to follow specific procedures to check that the airway is not obstructed in any way, in other words breathing must not be inhibited. The air passage must be clear. After ensuring that the airway is clear, the first aider determines that the casualty is breathing. If the casualty is not breathing, then rescue breathing or CPR is administered. Circulation of blood, which translates into pulse, is not usually done for patients who are not breathing, as it is practically not possible for the heart to pump blood without a regular supply of oxygen brought about by breathing. Checking for circulation can be done for less serious casualties.

The ABC is necessary because it relies on critical life-saving interventions that put vital body functions in order of priority. Time is crucial, as a person may be brain dead within minutes of oxygen supply to the brain being interrupted. That is why breathing is important to the patient. Blood circulation is also crucial for vital body functions, without which all vital organs cease to work. All emergency health personnel need to be trained in the ABC of FA. Once the ABCs have been secured, first aiders can begin additional treatment and monitoring of the patient as required, this they do while waiting for emergency medical professionals to arrive (Greeff 1995).

2.6.1 Principles of FA

According to Soni (2012:234), there are certain basic steps and principles that guide FA provisioning:

- 1 The first step that a rescuer should take is to examine the victim to know the details of injuries and their nature. This constitutes the diagnosis section of FA.

2 The next step is to actually perform the FA measure or manoeuvre that is deemed appropriate. This constitutes the treatment section of FA.

3 The third step is to arrange for the casualty to be seen by a qualified doctor or have him/her transported to a nearby hospital. In the FA terminology this step is disparagingly known as disposal.

4. Respond quickly to any call for FA.

5. Give artificial respiration if breathing has stopped; no time should be allowed to pass.

6. Stop bleeding if, any.

7. Guard against or treat for shock by moving the victim as little as possible and by handling him/her gently.

8. Do not attempt too much; do the minimum that is essential to save life, prevent the condition from worsening and help the patient to survive for the time being.

9. Reassure the victim and those around and help to lessen anxiety.

10. Do not allow people to crowd around and allow the victim the full benefit of fresh air.

11. Do not remove clothes unnecessarily. Greeff (1994) concurs with this point and adds, "... it is of vital importance to treat every patient with the utmost dignity and respect."

12. Arrange the removal of the casualty to the nearest doctor or hospital as soon as possible.

Greeff (1994) gives a slightly different sequential emergency scene management procedure as:

1 Take charge; the first person to arrive should take charge of the situation until more highly qualified assistance arrives. If someone is already in charge, introduce yourself and ask if you can help.

2 Maintain safety; the watchword phrase is: "Your safety first!" A dead or seriously injured first aider cannot render assistance. The first aider also has to safeguard the safety of his/her assistants and patients. Patients may be moved to a safe locality to shield them from traffic, falling debris, fire, machinery, gases, water, live

electricity, etc. When moving injured patients care must be taken in terms of the possibility of a fracture, neck or spinal injury.

- 3 Personal safety: This involves protective clothes, a reflective jacket, disposable gloves, mouthpiece for CPR, etc. First aiders need to be aware of infections transmitted via body fluids, especially blood. HIV and Hepatitis B virus top the list.
- 4 History of the accident: Upon arrival at the accident scene, a first aider will start gathering and recording information about what happened and how it happened.
- 5 Identify yourself and assess responsiveness: It is imperative that a first aider identifies himself/herself and asks for the patient's consent before starting treatment. If the patient is fully conscious, he/she has a right to refuse treatment. In such a case, call the emergency services and stay with the patient. Assess the level of consciousness of the patient and act appropriately.
- 6 Call the emergency medical services immediately.
- 7 Control the crowd.
- 8 Treat the patient.
- 9 Separate seriously injured patients from slightly injured patients.
- 10 Hand over patients to emergency services when they arrive and answer any questions they may have.

If one compares Greeff's and Soni's steps and procedures, one is bound to see that they are not mutually exclusive.

2.6.2 FA ethics

Greeff (1994:209) lists the following as guidelines for the ethical conduct of first aiders. The first aider has to master knowledge and skills of a high degree to be able to act professionally within the spectrum of his/her training in order to:

- 1 Protect lives.
- 2 Relieve pain.
- 3 Promote health.

- 4 Not do any harm.
- 5 Not take part in harmful practices.
- 6 Not administer treatment for which he/she has not been trained.
- 7 Respect the dignity of all people at all times.
- 8 Always keep his/her knowledge and skills updated.
- 9 Always act within the framework of prescribed procedures.
- 10 Treat all personal information regarding a patient with discretion.
- 11 At all times act professionally in public with regard to appearance, use of language and skilful handling of emergencies.
- 12 Be responsible, punctual and honest in fulfilling tasks.
- 13 Be loyal towards co-workers and the public, and be able to work within a team together with co-first aiders and other health care personnel and
- 14 behave in a sympathetic and helpful way.

2.6.3 FA procedures and accessories

The FA manual documents the requisite procedures to follow for fractures, using bandages, using splints and spinal boards, sprains, dislocations, wounds, bleeding, bruises, insect stings or bites, unconsciousness, poisoning, sunstroke or heat stroke, foreign objects in eyes or ears, drowning, burns and scalds. It is not within the scope of this research study to document the procedures for the management of the above conditions. It goes without saying that one needs to be well versed in the management of the above conditions according to laid-down procedures. It is not guess-work. One needs skills and knowledge to administer FA without aggravating the situation.

2.6.4 FA box/container

Soni (2012:235) argues that “it is the duty of the school to keep a FA box under the charge of a teacher qualified in first aid.” This box should contain absorbent cotton, wool pads, gauze pieces, roller bandages, adhesive plaster, tincture iodine, tincture benzoic, spirit ammonia, scissors, forceps, Dettol, burnol, boric acid, soda bicarb, baking soda, antiseptic cream, a torch, medicine glass, etc. (Ibid).

2.6.5 School nurses/doctors versus FA trained teachers/learners

There is a raging debate on whether it will suffice for the FA needs in a school to summon the services of a resident nurse or doctor to administer FA. The argument suggests that in such a case then, there is no need for the teachers and learners to be trained in FA. Soni (2012) gives a hint:

Sometimes, accidents like fracture of bones, injuries, burns, sprains, etc occur in schools while the learners are playing, doing woodwork, doing exercise or performing experiments in laboratory. The teacher should possess knowledge of these every-day accidents and render immediate FA relief. The teacher should not only have knowledge of the above but should be efficient in this job of rendering FA. Students involved in serious accidents should be sent to a medical doctor for proper treatment.

Although Soni (2012) makes a valid point on the need for teachers to be trained in FA, he commits an oversight by thinking that accidents only occur to learners. In some cases it is the teacher who needs FA. Teachers have had epileptic seizures, fainted and died in front of their classes. The question then is who will administer FA to an injured first aider. People cannot give themselves FA when involved in an accident. The students equally need FA training to assist in an emergency involving fellow learners and teachers. To this end Greeff (1994) offers a more balanced account on the need for everyone who comes into contact with people to be trained in FA.

Soni (2012:254-255) goes on to argue that since teachers spend most of their time with children, teachers' knowledge of what actions to take in case of minor and major injuries is crucial to learners' safety. Although most schools have a nurse or other FA qualified personnel on site, injuries can happen at any time and in any place, and may require the teacher to act independently. All learners have the right to learn in a safe and protective school environment. Preventing unintentional injuries at school can help improve the learning environment. One of the duties of a school nurse is given as "... to administer FA in the school clinic." It may be too late for a bleeding teacher or learner to get to the clinic, taking into account the weight and mobility of the injured person.

Soni (2012) argues that although it is not mandatory by law for all teachers to have FA training, the fact remains that teachers are surrounded by children for a significant amount of time and some teachers may actually find themselves in a situation where some means of intervention is required. Newton (1984) also concurs and adds that preventing injuries by providing a safe educational environment is of prime concern to teachers. Teachers should be well prepared to act when learners are injured.

The focus of health and safety in the school as a workplace is on the prevention of illnesses and injuries. To this effect there is also the need for health education and promotion to be taught in schools. When an illness or injury does occur, FA facilities that are adequate for the immediate treatment of injuries and illnesses that may arise in a school are provided. In particular in an emergency, all members of staff have a duty of care to provide assistance if a person requires immediate attention and no staff member trained in FA is available. Staff members need to use common sense and realise that in an emergency, while they should not act beyond their capabilities and qualifications, they are expected to do what they can to prevent the condition worsening while waiting for medical services (Newton 1984). Schools are required to have a member of staff who is a holder of a current FA certificate issued after successful completion of an approved course (Ibid).

In the preface to the FA manual, the Surgeon-General of the South African Medical Services, Daniel Knobel (1994, in Greeff 1994) has this to say;

Industrial development over decades and population increase tendencies throughout the world has ensured that the need for first aid knowledge and the effective application thereof has become an essential part of our communities. Violence, road accidents, drownings and criminal offences also contribute to the fact that South Africans are daily being confronted with the handling of accidents. Notwithstanding these tendencies, the first aid knowledge of the man in the street is limited in general and now it has become of more importance than ever that this important aspect is emphasised amongst all South Africans. South Africa needs all people and we cannot allow that this essential asset is damaged by a lack of first aid knowledge. The effective

application of First Aid is an important link in the medical chain and determines the final success which will be achieved. First Aid organisations therefore play an important role in the education of the public and are instrumental in ensuring that the foundation is laid to future higher medical training.

The above citation cannot be overemphasised in the context of FA provisioning in a school environment. To use Surgeon-General Daniel Knobel's words, "it has become of more importance than ever that this important aspect is emphasised amongst all South Africans" (Greeff 1994). This obviously includes teachers and learners in schools.

2.6.6 Health education

The term health education is self-explanatory; it refers to the provision of education and knowledge on health issues so that people take informed health decisions in their daily lives. Health education is any combination of learning experiences designed to help individuals and communities improve their health, by increasing their knowledge or influencing their attitudes (Newton 1984). It involves awareness campaigns to educate people on salient health issues. In a school set-up, health education takes the form of personal hygiene, grooming, a balanced diet, exercise, fresh air, safe health behaviour, etc. Health education is closely related to FA provisioning.

2.6.7 Health promotion

Health promotion, on the other hand, refers to the advocacy of good health activities and practices. In a school, this includes a deliberate effort to teach health-promoting behaviours, injury and accident prevention measures. Efforts to enhance the well-being of people will be the main thrust of health promotion. Health promotion and education is a profession focusing on the behaviours, systems, environments and policies affecting health at a variety of levels. It is important to note that FA provisioning, health education and promotion are inextricably linked. The health education and promotion profession requires intensive, specialised training encompassing the biological, environmental, psychological, social, physical and medical sciences. It also involves the development of individual, group, institutional, community and systemic strategies to improve health

knowledge, attitudes, skills and behaviours that empower people to take more control of their personal, community and environmental health and well-being (Newton 1984).

Health promotion and education strategies include individual and group education, training and counselling, audio-visual and computerised educational materials development, social action and planning, advocacy and coalition building.

2.6.8 The place of FA in health education and promotion

An article entitled, “*School prank tragedy: teenager dies after chair pulled away*”, appeared in a South African newspaper called *The Star* on 19 February 2015. Although many of the statements are as they appear in the original text, some parts have been paraphrased to be relevant to the study and to protect the identity of the people involved. Some sections have been left out completely.

A grade 12 pupil at a secondary school was about to sit when her classmate allegedly pulled the chair from under her. The teenager fell, hitting the back of her head on the floor. Learners burst out laughing thinking their classmate was pulling a prank on them as she lay on the floor, shaking violently. As she trembled, battled to breathe and her eyes rolled back into their sockets, some of her classmates thought she was pretending to be hurt, and they laughed.

A learner who was in the classroom at the time said the girl who pulled the chair away also laughed, went to her desk and sat down. “She has always had fits,” was among the comments reported to have been made. However, when she remained on the floor, panic set in. The girl who had pulled the chair became scared. There was chaos in the classroom, as people tried to revive the girl. The injured girl was moved to the sickbay. Paramedics were called in and declared her dead. It has been alleged that the two schoolgirls had an argument earlier, which continued later in class when the teacher was not there. The girl pushed the other girl who said she was not in the mood to fight. She was about to sit down when the girl pulled the chair and she fell.

For a relative of the deceased girl, it was “déjà vu” when she received news that her niece had collapsed and died at school. She rushed to the school after being told that her niece had been involved in an accident. Apparently the dead girl’s mother died 15 years ago after she collapsed at Church and died leaving the relative to look after the then two-year old girl. She was told that the girl had collapsed in the classroom and died.

The relative went to the sickbay and found that a “NO ENTRY” sign had been placed on the door. The dead girl was lying on a bed, covered with a sheet. The back of her neck had turned black. She could not stop crying for two days. The principal said the girl “just fell”. The deceased girl’s family said they were in the dark about what happened as the principal, teachers and the police gave them different versions of what happened. The girl who pulled the chair was the deceased girl’s neighbour. Her family had moved her out of the neighbourhood without apologising. “She was my only child” said the dead girl’s father. The school did not come to offer condolences. The police and the Department of Education were investigating.

It is reasonable to assume that such incidents would not happen if learners were taught health education and promotion. Learners would not engage in actions that would put the health of other learners in jeopardy. Their safety conscience would inform their actions that pulling a chair away would result in injury to another learner. This lesson is too late for the dead girl and her family. This may be the last we will hear about the incident. Given the fact that this is the note on which many similar events end, the following are some of the facts from my personal experience on issues concerning such a case:

- 1.The bereaved family may not have answers, but worse still, may not know what course of action to take.
- 2.They may not open a case at the police station because that would keep reminding them of the loss of their daughter.

- 3.They may console themselves with the fact that whatever course of action they may take will not bring their daughter back.
- 4.They may join a church or prayer group and believe that it was God's will.
- 5.The girl who pulled out the chair is likely to be traumatised or haunted.
- 6.She may have to live with the fact that her actions resulted in the death of another learner.
- 7.She will have a stigma as that "*girl who killed ...*"

All these dire and far-reaching consequences need to be avoided and can be prevented from happening through proper health education and promotion.

During my observation at one particular school, a girl learner intentionally "injected" another with her father's insulin hypodermic syringe. She had apparently brought the syringe to school to "fix" the other girl because, according to her, she was "always on her case". The girl was not even aware of the risk of HIV and AIDS transmission. She only realised the gravity of the situation when the other girl was taken for hepatitis B and HIV tests and police officers were called in to 'open a case'.

2.7 The psychology of workplace safety

This section describes and explains the link between FA provisioning in a school set-up and psychology. At face value, there seems to be no direct relationship between FA and psychology. The theoretical and methodological traditions of psychology have much to offer to the understanding of causes and prevention of occupational injuries (Barling & Frone 2002:8). Although this study is not specifically about occupational safety, suffice it to realise that there are psychological aspects guiding health and safety issues that are applicable to workplaces in general, schools included. According to Barling and Frone (2002:7), the study of occupational safety is an interdisciplinary endeavour involving engineering, toxicology, epidemiology, medicine, sociology, economics and psychology.

It has been proven that perceptions of a safety climate can influence employees' attitudes to safety, the way employees perform their work and the way employees interact with regard to safety issues (Barling & Frone 2002). When applied to a school environment, the teachers' and learners' perceptions of safety at the school can influence their attitudes to FA provisioning. Literature alludes to the fact that the SMT

has to lead in health and safety issues so that learners and staff will buy into the FA programme, when they see the seriousness with which health and safety issues are regarded. Staff and learner perceptions can have a direct impact on safety outcomes such as accidents, health and safety.

Among the main contributing factors to unintentional occupational injuries identified by the WHO (Takala 2002 in Barling & Frone 2002:9) are poor worker-employer collaborative mechanisms, lack of safety management systems, a poor safety culture, poor training and lack of knowledge. All these fall within the scope of industrial/organisational psychology. Training is undoubtedly the intervention that has been used most frequently in organisations to improve occupational safety (Ibid). When applied to a school environment, training in FA for teachers and learners alike is a step in the right direction with regard to health and safety.

The field of psychology has come up with a framework for conceptualising a safety climate and safety behaviour, which can be applied to FA provisioning in schools. The framework, adopted from Barling and Frone (2002:205), is illustrated below (Figure 2.1).

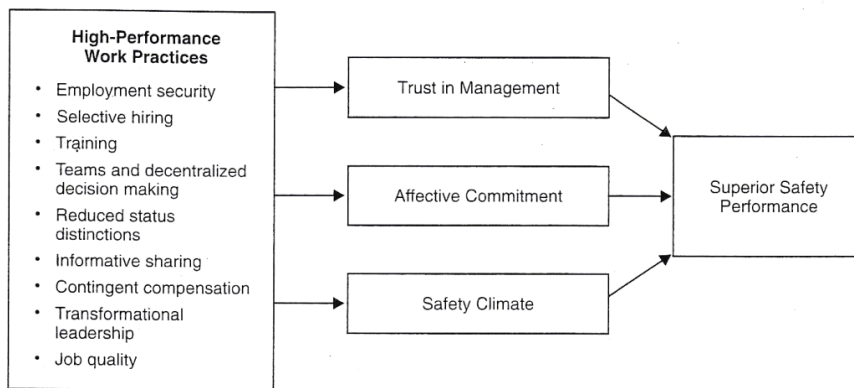


Figure 2.1 High-performance work practices and their impact on workplace safety (Barling & Frone 2002:205)

For high-performance work practices to occur, the factors in the box (employment security, training, decentralised decision-making, information-sharing, transformational leadership and job quality) must operate efficiently so that trust in management, effective commitment and the creation of a safety climate will consequently manifest as

superior safety performance. The term safety climate, more specifically, refers to perceptions of the policies, procedures and practices relating to safety (Barling, Loughlin & Kelloway 2002; Griffin & Neal, 2000; Zohar 2003, in Barling & Frone 2005).

At its broadest level, a safety climate describes employee perceptions about the value ascribed to safety in an organisation. According to Barling and Frone (2005), it is sometimes easy to judge the safety climate by the value that is placed on safety by overt statements and actions of managers and co-workers who promote safety or sanction unsafe behaviour. The implication of this for the school is that the school management needs to be exemplary in both word and action in their promotion of safety and FA provisioning. The SMT must all be of necessity qualified first aiders if teachers and learners are to follow suit. The framework (Figure 2.3) would help schools in designing a programme for FA provisioning. The management has to show the teachers and learners that they are really committed to FA provisioning.

According to Barling *et al* (2002, in Barling & Frone 2005), employees also perceive implicit messages about the relative status of safety when compared with other priorities such as productivity, the pace of work and team work. These perceptions about the importance of safety form the basis of the safety climate. A critical feature of the psychological climate is the degree to which these perceptions of the work environment are shared among individuals (Ibid). When individuals share similar perceptions of safety in a particular work environment, it is possible to define a group safety climate or an organisational safety climate (James & Ashe 1990, in Barling 2005). It is important to inculcate a shared school organisational safety climate among learners, teachers and the school management team. The framework indicates that the safety climate reflects a psychological environment that provides a motivational antecedent for safety behaviours (Ibid).

There needs to be a hierarchical organisation of the school's FA provisioning programme. Literature affirms that health and safety committees are the keystones of official workplace safety programmes in many organisations. Occupational health researchers in the USA, Canada and Europe have highlighted a consistent trend showing that the prevalence of non-fatal occupational injuries decreases with increasing age (Koop 2013; Castillo 1999; Centre for Disease Control and Prevention 2001; Dupre

2000; Human Resources Development Canada 2000; National Institute for Occupational Safety and Health 1995, in Barling & Frone 2005). What this means is that adolescent workers are at higher risk of experiencing an injury at work than adult workers. It follows logically from this conclusion that there will be more injuries and accidents at pre-schools than in high schools. The younger people are, the more vulnerable and prone they are to accidents and injuries. This factor underlines the importance of introducing FA in the early years of the school system because it is in the early years of life that it is needed most. Children at this age have not developed mentally enough to take care of themselves.

Having laid down the psychological framework underpinning workplace health and safety, it follows that the legal framework guiding FA provisioning in schools needs to be described and explained in the following section.

2.8 FA legal framework

In this section, the link between FA and the law is described and explained. The fact that FA deals with human beings, sometimes in a helpless and desperate state, introduces a legal dimension. It is important that the legal issues are described and explained in this research study in order to supply a framework guiding FA provisioning in a school set-up. Strasser, Aaron, Ralph and Eales (1964:232) argue that every teacher must be aware of the legal responsibilities he/she has for the welfare of his/her learners. If a learner is injured in school and parents or guardians believe that the school or its representatives were negligent in providing for the learner's safety, they have a right to seek a financial judgement to pay for damages arising from the accident (Ibid). This is further compounded in a school environment where the teachers have to act in "*loco parentis*" without being the real parents or guardians of the children under their jurisdiction. It initiates a complicated legal trajectory that can easily lead to costly lawsuits. An explanation of the legal implications of FA provisioning in a school is therefore necessary for this study.

In South Africa the DBE absolves itself from certain lawsuits against schools and negligent teachers can be sued in their personal capacity. Parents or disgruntled members can sue the DBE, the school governing body (SGB) or individual teachers.

Where the complainant sues the DBE for a teacher's negligence, the DBE may later charge the teacher for an act of misconduct. Every teacher must consider the fact that he/she may be sued in the aftermath of an accident (Strasser *et al* 1964:233). The person bringing the suit against a teacher must show that the teacher failed to take action that a prudent teacher would have taken to avoid the accident (Ibid).

The whole issue of the law casts new light on FA provisioning in a school set-up. Writing about the American system of education, Wartgow (2008:96) asserts that "fear of litigation and political reprisals for failing to comply with the detailed letter of a rapidly increasing number of laws, rules and regulations has effectively eliminated the ability of teachers to exercise professional judgement and retain control of their schools." This implies that before a teacher takes any action involving a learner under his/her custody, there is a need to take stock of the legal implications of that action. In a society with a "litigation and suing culture", one needs to tread carefully and maintain a delicate balance in all actions and endeavours for fear of being sued for doing something, even with good intentions.

The following description of the law of delict constitutes a legal nicety, hence much of the piece of legislation is quoted verbatim. In order to present a coherent flow of the description of the legislation, citations and quotations were omitted because of the need to paraphrase. The other feasible option was to include the law of delict at the end of this thesis as one of the appendices. This would obviously have affected the flow of the study, as the reader would need to go back and forth to refer to the relevant appendix. Describing the law of delict in the main text enabled me to include the legislative implications and comments in the study context. The law of delict cited in this section was obtained from Greeff (1994:210-214) and the SASA, concerning the issue of negligence.

The main legal entity that is directly applicable to FA provisioning in the school environment is the law of delict. According to Greeff (1994:210-214), a person is delictually responsible if harm is inflicted on someone else through wrongful and faulty action. The aggrieved party can then claim damages from the person who committed the delict. Damages are claimed in cases where the aggrieved person suffered material loss. Such disadvantage can exist for example when the aggrieved party becomes unfit

to continue working, be it temporarily or permanently, or when a breadwinner dies and the dependants suffer loss as a result. The same also applies when a person has to pay for medical care in order to recuperate from wrongful treatment. This has a direct implication for the first aider. The first aider needs to be careful in requesting consent from the patient to assist. This is not a very important issue in a school environment, as an injured learner would normally look for and expect to get assistance from the teachers without the necessity of consent first. Notwithstanding the teacher-learner relationship of in "*loco parentis*", permission needs to be requested and granted for legal purposes in both cases for compliance with the dictates of this law.

Non-pecuniary loss is claimed when the aggrieved person is infringed upon. Such cases exist, for instance where someone is examined without consent in such a way that privacy is invaded or when private particulars regarding a patient are made known to the outside world without the casualty's consent. If a specific action results in an aggrieved person suffering loss of money as well as experiencing personal degradation, both damages and indemnification may be claimed in one civil action. This paints a gloomy picture for the whole FA provisioning process. Teachers and learners need to be aware of this legal provision, as they cannot be immune from litigation if they contravene this piece of legislation.

Given the above scenario, it seems as if the best option to keep out of trouble in a school is not to render assistance, as this will lead to litigation if something goes wrong. On the other end of the continuum, one cannot leave a learner in distress to die or suffer without assistance, as this would constitute negligence on the part of the teacher in terms of the SASA. According to the SASA, the teacher is supposed and expected to act in *loco parentis* and as any "reasonable person" would act. A delicate balancing act needs to be maintained. This has to be done in the context of quick thinking and promptness.

2.8.1 Obligation to act in an emergency

According to Greeff (1994: 214), there is no simple answer to the question of whether a person (ordinary civilian, trained first aider or medical doctor) is obliged to render FA in a specific situation. At face value, this seems to absolve everyone from the responsibility

to administer FA in an emergency. The mere fact that a person declines or omits to render FA in a particular situation does not mean that he or she will automatically be liable if the patient should thereby be disadvantaged. Whether an obligation rests upon the person to undertake FA fully depends upon the circumstances in each case. This may not apply in a school environment for the learner. It may apply to a teacher who is injured or sick. A learner may not be expected to administer FA to a teacher and could evade the issue of negligence, but it may not work the other way round for the teacher in the event that a learner is injured or falls ill.

As a general rule no person has any obligation to protect anybody else's interests, even if it would take very little to prevent the damage being done. Teachers' situation in a school set-up is different, as the teacher acts in *loco parentis* i.e. in the place of a parent. If teachers leave learners in distress unattended and withhold help, it could constitute negligence and they can be charged for an act of misconduct. The whole issue behind ground and break duties is to ensure that teachers supervise learners in case they fight or are injured during break times. For the same reason teachers should not leave learners unattended in a class under any circumstances. If anything happens to the learners while the teacher is not in class, this constitutes negligence on the part of the particular teacher and an act of misconduct may be preferred against him/her.

The question that needs to be considered is not whether a teacher is obliged to assist a learner in distress or not. The central question is whether in a specific case requiring action, any legal obligation rests on a person who decides not to act. In this regard the courts of law follow the approach that negligence to act only elicits moral indignation, also where the legal belief of a community wishes that a person should act in a specific situation. It is a general rule that teachers at school or anyone who oversees the welfare of minors is expected to act in *loco parentis* i.e. in the place of a parent or guardian. This means that a teacher at school acts in place of the parents or guardians. Parents entrust the care of their children to teachers. This fact alone introduces a dimension where the actions of a teacher should match those of a parent faced with a similar predicament. The question that comes to the fore is whether there is any similar obligation for a learner to render FA to a teacher in distress, and in what capacity.

As far as rendering of FA is concerned, the question whether a person is bound to render FA will depend *inter alia* on whether the person is able to administer certain treatment, whether agreement has been reached between someone that treatment should be administered, or whether treatment had already begun but had been stopped later (Greeff 1994). It thus follows logically that a doctor who has operated on a patient cannot refrain from follow-up examinations, should the patient's condition deteriorate with resultant damage, therefore an action against the doctor doing this can be instituted because of the apparent neglect. Similarly, a teacher who has started administering FA to a learner cannot abandon the learner for any reason whatsoever, thereby aggravating the situation. This assertion alone makes it mandatory for teachers to be trained in FA.

Although no general duty rests on any person to render FA, it is important to keep in mind that should a person undertake it after all, one may not do anything to worsen the condition of the injured. Adequate training for first aiders is required so that they can acquire the requisite skills and knowledge to administer FA efficiently.

2.8.2 The basis of liability: Negligence

The basis of all delectable liability is the guilt of the culprit. In most cases concerning damages claims, the question is whether the perpetrator's conduct was negligent. In order to prove this, the so-called 'reasonable person test' is applied (Greeff 1994). The question is then asked if a reasonable person in the position of the culprit could reasonably have foreseen the possibility of damage, and if so, if the reasonable person would have been able to take steps to prevent such damage. As far as this is concerned, it is important to keep in mind that the courts of law do not expect the reasonable person to have extraordinary skills (Ibid). This works to the advantage of the teacher's actions. The teacher needs to be present and act reasonably like a parent.

It is sometimes difficult to determine whether a person could reasonably have foreseen the possibility that somebody else might experience damage. The courts accept that the reasonable person has certain basic knowledge at his/her disposal. The reasonable person is also required to use good sense. The main problem is that the definition of good sense is subjective. Jurisdiction accepts that the reasonable person, in an

emergency situation, may commit an error of judgement that would normally not occur. There should be no doubt, however, that the reasonable person may, in the same circumstances, have committed the same error of judgement. This clause may act in favour of teachers and learners when something goes wrong with regard to flouting procedures. It is the presence and the assistance that the teacher or learner gives that have to be questioned. In most cases the teacher just needs to be present and take reasonable action that any “reasonable” parent would take in similar circumstances to safeguard against blame. The burden of proof then rests on what constitutes this so-called reasonability. If his/her conduct can be proved reasonable, then the teacher has no case to answer and is absolved from a guilty verdict for negligence.

2.8.3 Negligence in case of trained people

It is required that a person who has certain qualifications should use those qualifications when faced with a particular situation. A trained person who does not have many years of experience may not rely on this lack of experience to evade possible liability. Teachers and learners need to perfect their skills after FA training to ensure that they give their best according to the level of training that they received.

2.8.4 Negligence in case of unqualified or untrained persons

It is important to keep in mind that as a general rule any untrained person who undertakes medical treatment is considered negligent if harm is done to the patient. This is very important for this study, because it underlines the need for training in FA. The FA certificate requirement is cast in stone and therefore mandatory. This clause does not give room for untrained teachers and learners to administer FA under any circumstances. If the treatment is, however, of a general nature, such as the cleansing and care of wounds, the untrained person is not negligent. If the untrained person undertakes the type of treatment that presupposes very specialised knowledge, it is an indication of negligence. There could be cases where the untrained person may resort to specialised treatment without being liable on the grounds of negligence. This will be the case where the patient has consented or where action was taken in a genuine emergency situation. This has direct implications for the school environment. FA training is crucial. Getting consent is invaluable in FA provisioning. The granting of consent may

be waived in the school environment because of the unwritten contract of trust between teachers and learners, a trust that the parents ceded to the teacher when they enrolled their child in the school. First aiders need to be aware of the following consent types and apply them where necessary to suit different situations.

Greeff (1994) asserts that consent can be expressed in one of the following ways:

1. Tacitly, the patient indicates by behaviour that approval of treatment is granted, e.g. burning, choking or holding a broken leg, screaming and writhing in pain, drowning, electrocution and heavy bleeding.
2. Informed; the patient must be fully aware of the nature of the treatment agreed to. Consent must be given prior to treatment. Only the patient can legally agree to treatment.
3. In the case of children (minors) the agreement of the parents or guardians must be obtained. This rule may be waived in the case of teachers and learners at school. It is not feasible to wait for a parent's permission before administering FA. The parent or guardian may be at work in another town and it may be feasible to inform him/her only after the learner has been stabilised. Sometimes FA and contacting parents or guardians may happen simultaneously by different people.
4. A deranged person and people who are not fully in control of their faculties cannot consent to treatment. When a patient's life is in danger or when health can be impaired, an individual may rightfully be treated without consent.
5. Before action is taken in an emergency situation, it has to be ascertained that the patient's consent could not be obtained. The patient's wishes should be respected at all times, except when it is apparent that the casualty, for instance, is in a state of shock and cannot think rationally.
6. Should emergency action be taken, it should be ascertained in the light of all circumstances whether specific treatment is justified. One cannot do something in an emergency situation that is not necessary to obviate the

situation of need. This may be difficult to discern, especially when faced with the urgent dictates of an emergent situation.

7. Should a patient decline treatment, even in an emergency situation, treatment cannot be continued rightfully. If a learner or teacher declines FA, his/her rights must be respected. This does not mean that the teacher can then abandon the learner who has refused FA, for the simple reason that a reasonable parent will not abandon a child in distress.

The above points may not apply to a school situation, as learners generally place unwritten trust and loyalty in their teachers. Teachers have authority over learners and the latter would most likely grant consent for FA help and vice versa (SASA). The situation would be different if a complete stranger offered to render FA to a learner.

2.8.5 General guidelines

In all circumstances a first aider must act as a reasonable person would do. Actions that are not required in the specific situation must be avoided. A first aider must be extremely careful when it becomes clear that a specific action may result in injuries to a person. The first aider may not aggravate the situation or condition of a learner or teacher. As a general guideline, a first aider may not refrain from action if circumstances require this. If a first aider cannot or does not want to render FA, it is always advisable to take reasonable steps to obtain the necessary medical services, for example by taking the patient to a hospital or by calling a doctor. This would not apply in a school set-up, as a professional code of ethics would not allow a teacher to decide not to render FA to a learner (SASA; SACE).

It is advisable not to undertake specialised treatment for which a first aider is not equipped or qualified, unless it is in a genuine emergency situation or unless the patient has agreed to it. A first aider must not undertake treatment that has been prohibited by the patient. Patients must be treated with the necessary respect and dignity. Care must be taken never to make statements to strangers about the nature of a learner or teacher's ailment or sickness. This is made easy for teachers who, as public servants, are not mandated to divulge confidential information of any kind.

If entrusted with the transport of a patient to hospital, the first aider always has to drive carefully, even if in charge of an ambulance. Persons or teachers involved in the transport of the injured must obey all traffic regulations. If a siren is used, the vehicle still has to be driven with the safety of others in mind (Greeff 1994). The driver of the emergency vehicle may not ignore stop-signs in the hope that other vehicles will stop, because they may not stop, with dire consequences. Teachers, who may find themselves transport learners to hospital for one reason or another need to take this into consideration (Ibid).

2.8.6 Legal liability for first aiders

The most important common law crimes of which FA personnel might be found guilty are culpable homicide and assault. In the case of culpable homicide, a person causes the death of somebody else in an unlawful or negligent way. Assault takes place when a person is unlawfully and intentionally assaulted violently. Violence includes actions such as administering harmful substances or the treatment of a patient without consent. It is, however, necessary that the perpetrator should have acted intentionally, in other words, there should have been the intent to apply violence to the victim. Mere negligence in this case is not sufficient.

Criminal liability may also be incurred if an injured person's body is displayed to other people in an improper manner, or if personal details regarding the illness of a patient are conveyed to someone else. Due regard should be taken, for instance, when a male first aider attends to female patients, or when a male teacher attends to female learners. Care must be taken not to violate the dignity and integrity of the learner or teacher. The male teacher may use his knowledge and skills to instruct female learners or teachers to administer CPR on an injured or ill female learner or teacher. By the same token the male teacher may make use of female learners or teachers to lift or support an injured female learner or teacher. The male teacher's duty would then be limited to giving expertise and guidance.

A first aider may not profess to be a medical doctor and therefore may not resort to treatment that only applies to the profession of a doctor. Ordinary emergency treatment such as the treatment of wounds is not regarded as exclusive to the profession of a

doctor. The diagnosis of an ailment is, however, regarded as a preserve for the professional doctor, hence a teacher may not diagnose a learner even if the condition or illness is familiar to the teacher.

2.8.7 The supply of medicines

Emergency helpers would like to administer medicine for treatment in certain circumstances. The fact, however, is that first aiders may not administer medicine! Teachers and learners may not administer medicine for the same reason. The possession, sale or use of medicine is controlled by the Control of Medicines and Related Substances Act number 101 of 1965. Seven different schedules are listed and control over each schedule increases as the number rises. Unscheduled substances can be supplied by any licenced trader to persons above the age of 16. First aiders may not prescribe or administer any substances to patients. Exemptions are voltaren, Panado and Disprin, which are unscheduled substances and may be in the possession of first aiders older than 16 years (Greeff 1994).

2.8.8 Acting in *loco parentis*

Over the years numerous cases involving injuries to learners at school have resulted in the establishment of common-law principles relating specifically to school life. In common law, teachers stand *in loco parentis* insofar as learners in their charge are concerned. Simply put, if the degree of care exercised by a teacher is at least as great as that which would be taken by the average, careful parent in the same circumstances, then this legal duty is discharged (Stock 1991:3). The implications for teachers is that they have to act like any reasonable parent would act, given similar circumstances.

2.9 The role and responsibility of the school nurse

Many schools have a resident nurse on site. Soni (2012:62) describes the role of a school nurse as direct care for children when they are ill or injured. Important functions are information-gathering through assessment of the children, record-keeping and routine assessment. The nurse should see that emergency procedures for injuries and illness are developed, because there are obvious legal concerns when undertaking FA in any of these situations. The nurse can help ensure that proper care will be given by

helping to develop guidelines and workshops for teachers and office personnel in emergency procedures (Ibid).

2.10 A case study of school health services and FA in the United Kingdom of Great Britain and Northern Ireland

In most countries, FA in schools is encapsulated under the department of school health services. It is sometimes difficult to extricate FA from the mainstream school health services in general. I chose to dwell at considerable length on the UK's health services because the health services and FA systems are apparently well-developed. The systems are also representative of the developed world. Literature points out unequivocally that FA as we know it today started in the UK with the Saint John's Ambulance. For the purpose of uniformity throughout my study, some UK terms in this section were given their South African equivalents. Head teacher, for instance was changed to principal; pupil was changed to learner. This was done in order to conform to the South African context. The following paraphrased information on FA provision and administration in the UK was obtained using the Google Scholar search engine on the website.

School health services in the UK are provided through the LEA with grants from the Ministry of Education. The National Health Service provides free medical care to all school children. In the UK, voluntary organisations such as the British Red Cross and Saint John's Ambulance have been advocating the compulsory inclusion of FA education in the school curricula as a way of improving the outcomes for casualties following accidents or emergencies occurring in non-hospital settings (Campbell 2012). A complete school health programme consists of two broad areas, i.e. health services and health education. For many years school health services have been provided by municipal health departments through the employment of city or county public health nurses. In the past 20 to 30 years, many school districts have created their own departments of health services, with school nurses, supervisors and consulting or full-time medical doctors (Ibid).

It is important for school administrators to recognise that the school nurse's expertise is not, nor should it be, in education. Health services in most public schools are

administered separately from health education. Below is a list of a school nurse's functions:

- 1 FA in the school clinic. It is important to realise and emphasise the fact that the nurse is stationed in the clinic and may not be in class or on school grounds with the learners all the time.
- 2 Screening tests for vision, hearing, height, weight, pulse and blood pressure.
- 3 Home visits and immunisations.
- 4 Evaluation of children with learning/behavioural problems

Below is a list of conditions frequently described in school health services protocols and standing orders:

- 1 Abrasions
- 2 Acne
- 3 Anaphylaxis
- 4 Asthma
- 5 Blunt injury, abdomen
- 6 Blunt injury, chest
- 7 Boils
- 8 Burns
- 9 Cellulitis and lymphangitis
- 10 Common colds vs. allergic rhinitis
- 11 Conjunctivitis
- 12 Contact dermatitis
- 13 Dog bite and human bite
- 14 Eczema
- 15 Enuresis, encopresis
- 16 Foreign bodies
- 17 Head trauma
- 18 Herpes simplex

- 19 Hives, urticarial, laryngeal oedema
- 20 Impetigo
- 21 Lacerations
- 22 Nose bleed
- 23 Ringworm, tinea
- 24 Scabies
- 25 Seizures, epilepsy
- 26 Sprain, ankle or knee
- 27 Sty

(Newton 1984).

2.10.1 Responsibility for FA in UK schools

The Employer Health and Safety legislation places duties on employers to protect the health and safety of their employees and anyone else on the premises. In schools this includes responsibility for the principal and teachers, non-teaching staff, learners and visitors, including contractors. This last part involving the safety of visitors is particularly relevant to my study. There was a law-suit going on at one of the schools in my sample where a parent was suing the school for seven million rands (R7 000 000). Apparently the parent was hit by a cricket ball when she visited the school to watch her son playing cricket. She lost the sight in one eye as a result and wanted the school to compensate her based on the argument that the school did not put up warnings for visitors to beware of flying cricket balls.

Who the employer is depends on the type of school, e.g. in the UK the LEA is the employer in county, controlled and special agreement schools, and in learner referral units; the governing body is the employer in city technology colleges, voluntary-aided, non-maintained special, grant-maintained and grant-maintained special schools; the owner or the trustees are the employers in some independent schools.

The employer is responsible, under the HASAWA, for making sure that a school has a health and safety policy. This should include arrangements for FA, based on a risk assessment of the school, and should cover the number of first aiders or appointed

persons, numbers and locations of FA containers, arrangements for off-site activities and trips, out-of-school hours arrangements, e.g. letting and parents' evenings. Employers should also make sure that their insurance arrangements provide full cover for claims arising from actions of staff acting within the scope of their employment.

It is the employer's responsibility to make sure that the statutory requirements for provision of first aiders are met, that appropriate training is provided and that correct procedures are followed. The employer should be satisfied that any training has given staff sufficient understanding, confidence and expertise. The South African context is different in that public schools are owned by the government through the DBE. Independent or private schools are owned by individuals or organisations. Public schools may employ extra teaching staff paid by the SGB. The employer in such a case is the SGB, not the DBE.

In the UK the LEA in county, controlled and special agreement schools, as the employer, is primarily responsible for health and safety matters, with managers and staff also having responsibilities. To comply with their health and safety obligations, the LEA should provide a policy statement and guidance on good practice to help county and controlled schools draw up their own health and safety arrangements, including FA. County and controlled schools should follow the LEA's policy and guidance.

The SGB, where the governing body is the employer, is responsible for health and safety matters within the school, with managers and staff also having responsibilities. The governing body is required to develop policies to cover its own school. This should be based on a suitable and sufficient risk assessment carried out by a competent person. The governing body has general responsibility for all the school's policies, even when it is not the employer. In county and controlled schools the governing body should follow the health and safety policies and procedures produced by the LEA as the employer. In practice, most of the day-to-day functions of managing health and safety are delegated to the principal.

2.10.2 School FA administration in the UK

The principal (head teacher) is responsible for putting the governing body's policy into practice and for developing detailed procedures. The principal should also make sure

that parents are aware of the school's health and safety policy, including arrangements for FA. Teachers' conditions of employment do not include giving FA, although any member of staff may volunteer to undertake these tasks. Teachers and other staff in charge of learners are expected to use their best endeavours at all times, particularly in emergencies, to secure the welfare of the learners at the school in the same way that parents might be expected to act towards their own children. This factor is the same for South African schools. In general, the consequences of taking no action are likely to be more serious than those of trying to assist in an emergency. The employer must arrange adequate and appropriate training and guidance for staff who volunteer to be first aiders or appointed persons. The employer must ensure that there is enough trained staff to meet the FA statutory requirements and assessed needs, allowing for staff on annual and sick leave. It is not however, obligatory to train everyone in FA in the UK.

2.10.3 The first aider's duties

First aiders must complete a training course approved by the Health and Safety Executive (HSE). At school, the main duties of a first aider are:

1. Give immediate help to casualties with common injuries or illnesses and those arising from specific hazards at school.
2. When necessary, ensure that an ambulance or other professional medical help is called.

2.10.4 The role of the appointed person

In the UK, in addition to first aiders, there is an appointed person. An appointed person is someone who:

1. Takes charge when someone is injured or becomes ill.
2. Looks after the FA equipment e.g. restocking the FA container/boxes and
3. ensures that an ambulance or other professional medical help is summoned where appropriate.

Appointed persons are not first aiders. They should not give FA treatment for which they have not been trained. However, it is good practice to ensure that appointed persons have emergency FA training or refresher training, as appropriate. These courses do not require HSE approval. They normally last four hours and cover the following topics:

- 1.What to do in an emergency.
- 2.Cardiopulmonary resuscitation.
- 3.FA for the unconscious casualty.
- 4.FA for the wounded or bleeding and
- 5.coping with an emergency and improving their competence and confidence.

2.10.5 First aid – what schools need to do (UK)

Safety FA regulations (1981) set out what employers are expected to do. Employers must provide adequate and appropriate equipment, facilities and qualified FA personnel. The regulations do not oblige employers to provide FA to anyone other than their own staff, but employers do have health and safety responsibilities towards non-employees. The HSC guidance recommends that organisations, such as schools, which provide a service to others should include them in their risk assessments and provide for them. In the light of their legal responsibilities for those in their care, schools should consider carefully the likely risks to learners and visitors, and make allowance for them when drawing up policies and deciding on the numbers of FA personnel.

Where FA is provided for staff and learners, schools should ensure that the following:

- 1.Provision for employees does not fall below the required standard.
- 2.Provision for learners and others complies with other relevant legislation and guidance.
- 3.An assessment of need is made. The Management of Health and Safety at Work Regulations (1992) require employers to make a suitable and sufficient assessment of the risks to the health and safety of their employees at work and others who may be affected by their activities.
- 4.The measures they need to take to prevent or control these risks are identified.
- 5.The governing body or principal should regularly review the school's FA needs, particularly after any changes, to ensure the provision is adequate.
- 6.Where minimum numbers of trained first aiders are set, these should be monitored to ensure that these standards are being met.

2.10.6 Information

The employer or the manager with the delegated function must inform all staff, including those with reading and language difficulties, of the FA arrangements. This should include the location of equipment, facilities and FA personnel, and the procedures for monitoring and reviewing the school's FA needs. A simple method of keeping staff and learners informed is by displaying FA notices in staff or common rooms. The information should be clear and easily understood. Notices must be displayed in a prominent place, preferably at least one in each building if the school is on several sites. The inclusion of FA information in induction programmes will help ensure that new staff members and learners are told about the FA arrangements. It is good practice to include such information in a staff handbook.

2.10.7 Insurance

In the event of a claim alleging negligence by a member of the school staff, action is likely to be taken against the employer rather than the employee. This is the case in South Africa. The DBE has now absolved itself from lawsuits involving negligence and individual teachers or schools can be sued in their juristic '*personal*' capacity. Employers should make sure that their insurance arrangements provide full cover for claims arising from actions of staff acting within the scope of their employment. Some LEAs provide explicit reassurance to staff that those in county and controlled schools who volunteer to assist with any form of medical procedure are acting within the scope of their employment and are indemnified. County and controlled schools consult their LEA about insurance arrangements.

2.10.8 Risk assessment of FA needs

Schools normally include staff, learners and visitors for the purpose of risk assessments for FA needs. County and controlled schools check their LEAs' procedures considering the size of the school and whether it is on split levels or not. The SGB or principal considers additional FA provision if there is more than one building. They consider how many FA personnel would be needed to provide adequate cover on each floor on a split-level site and in outlying buildings and on each site of a split-site school. Another consideration is the location of the school, especially if it is in a remote area far from emergency services. It is good practice to inform the local emergency services, in

writing, of the school's location, including giving Ordnance Survey grid references, if necessary, and any particular circumstances that may affect access to the school. If the school has more than one entrance, emergency services are given clear instructions on where or to whom they should report. Temporary hazards, such as building or maintenance work, should also be considered and suitable short-term measures should be put in place. Different FA procedures apply to learners in primary and secondary schools. The age of learners may affect the type of FA procedures required, such as resuscitation techniques. First aid training organisations provide advice on training for FA personnel in schools.

2.10.9 Accident statistics

Accident statistics indicate the most common injuries, times, locations and activities at a particular site. These can be a useful tool in risk assessment, highlighting areas to concentrate on and tailor FA provision to. There are no rules on exact numbers of first aiders required, but employers have to make a judgement based on their own circumstances and a suitable and sufficient risk assessment. The HSC provides guidance on numbers of FA personnel based on employee numbers. As a general guide, they recommend:

1.A lower risk place of work, e.g. shops, offices, libraries, with 50 to 100 employees, should consider having at least one first aider. Schools fall in this category.

2.A medium risk place of work, e.g. light engineering and assembly work, food processing with 20 to 100 employees, should consider having at least one first aider for every 50 employees or part thereof.

Schools will generally fall into the lower risk category, but some schools or areas of activity may fall into the medium risk category. Schools should base their provision on the results of their risk assessment. If there are parts of the school where different levels of risk can be identified, the employer should consider the need to make different levels of provision in different areas/departments. When considering how many FA personnel are required, the SGB or principal should also consider adequate provision for lunchtimes and breaks. In the South African context, teachers are obliged to do ground

duties and monitor learners during breaks. It is good practice to encourage lunchtime supervisors to have:

1.FA training.

2.Adequate provision for leave and in case of absence and

3.FA provision for off-site activities e.g. school camps and trips.

If a first-aider accompanies learners off-site, contingency measures need to be put in place to ensure that there will be adequate FA provision left in the school. There must be adequate FA provision for practical departments such as science, technology, home economics and physical education. There should be adequate provision for extra-curricular activities, e.g. sport activities and clubs. There should be provision for any agreements with contractors on joint provision of FA for their employees and adequate provision for trainees working on site.

2.10.10 Selection of first aiders

Unless FA cover is part of a member of staff's contract of employment, people who agree to become first aiders do so on a voluntary basis. This is also the case in South Africa. FA training is not mandatory for either teachers or learners. When selecting first aiders, governing bodies or principals consider the individual's reliability and communication skills, aptitude and ability to absorb new knowledge and learn new skills and ability to cope with stressful and physically demanding emergency procedures. A first aider must be able to leave and go to an emergency immediately.

2.10.11 Communication and contacting FA personnel

All school staff must know how to contact a first aider. There are agreed procedures in place if an emergency occurs in an isolated area, e.g. on the playing field. Governing bodies or principals consider how best to let everyone know the school's FA arrangements. Procedures are in place that are known, understood and accepted by all. Information is given about the location of FA equipment, facilities and personnel. First aid notices that are clear and easily understood by all are displayed. The SGB or principal may decide on the basis of the risk assessment of their FA needs that a first aider is not necessary, although this is unusual. The minimum requirement is that an

appointed person must take charge of the FA arrangements. The school's assessment should identify the number of appointed persons needed. Arrangements should be made to ensure that this cover is available at all times while people are on school premises. County and controlled schools observe their LEA's minimum requirements.

2.10.12 Qualifications and training of first aiders

A first aider must hold a valid certificate of competence, issued by an organisation whose training and qualifications are approved by the HSE. Information on local organisations offering training is available from HSE offices and from some other approved organisations. Local colleges may also offer FA training. Training courses cover a range of FA competences. Standard FA-at-work training courses do not include resuscitation procedures for children. Employers arrange appropriate training for their FA personnel. Training organisations often tailor-make courses specifically to the schools' needs. It is helpful to let the training organisation know in advance of any particular areas that need to be covered. First aid-at-work certificates are valid for three years, just as in South Africa. Employers arrange refresher training and retesting of competence levels before certificates expire. If a certificate expires, the individual will have to undertake another full course of training to become a first aider. However, employers can arrange for first aiders to attend a refresher course up to three months before the expiry date of their certificate. The new certificate takes effect from the date of expiry. Schools keep records of first aiders and certification dates. The HSE also produces guidance on the standards and requirements for approval of training, including a list of standard FA competences.

2.10.13 FA materials and equipment

Employers must provide the proper materials, equipment and facilities at all times. First aid equipment must be clearly labelled and easily accessible. Every employer should provide at least one fully stocked FA container or box for each site. The assessment of a school's FA needs includes the number of FA containers. Additional FA containers will be needed for split sites or levels, distant sports fields or playgrounds, any other high-risk areas and any off-site activities. All FA containers are marked with a white cross on a green background. The siting of FA boxes is a crucial element in the school's policy

and should be given careful consideration. If possible, FA containers are kept near hand washing facilities.

2.10.14 Contents of a first aid box/container

There is no mandatory list of items for an FA container. The HSE recommends that, where no special risk has been identified, a minimum provision of FA items would be:

1. A leaflet giving general advice on FA.
2. Individually wrapped sterile adhesive dressings (assorted sizes).
3. Two sterile eye pads.
4. Four individually wrapped triangular bandages (preferably sterilised).
5. Six safety pins.
6. Six medium sized (approximately 12cm x 12cm) individually wrapped sterile unmedicated wound dressings.
7. Two large (approximately 18cm x 18cm) sterile individually wrapped un-medicated wound dressings.
8. One pair of disposable gloves.

Equivalent or additional items are acceptable. A school's FA procedures should identify the person responsible for examining and replenishing the contents of FA containers. These should be checked frequently and restocked as soon as possible after use. There should be extra stock in the school. Items should be discarded safely after the expiry date has passed.

2.10.15 Travelling FA boxes/containers

Before undertaking any off-site activities, the principal should assess what level of FA provision is needed. The HSE recommends that, where no special risk has been identified, a minimum stock of FA items for travelling FA containers is:

1. A leaflet giving general advice on FA Six individually wrapped sterile adhesive dressings.
2. One large sterile unmedicated wound dressing approximately 18 cm x 18 cm.
3. Two triangular bandages.

4. Two safety pins.
5. Individually wrapped moist cleansing wipes.
6. One pair of disposable gloves.

Equivalent or additional items are acceptable. Additional items may be necessary for specialised activities.

2.10.16 FA administration on public service vehicles in the UK

Transport regulations in the UK require that all minibuses and public service vehicles used either as an express carriages or contract carriages have an FA container on board with the following items:

1. Ten antiseptic wipes, foil-packaged.
2. One conforming disposable bandage (not less than 7.5 cm wide).
3. Two triangular bandages.
4. One packet of 24 assorted adhesive dressings.
5. Three large sterile unmedicated ambulance dressings (not less than 15 cm x 20 cm).
6. Two sterile eye pads, with attachments.
7. Twelve assorted safety pins.
8. One pair of rustproof blunt-ended scissors.

This FA box or container must be maintained in a good condition, suitable for the purpose of keeping the items referred to above in good condition, readily available for use and prominently marked as an FA container. The school bus driver must be trained in FA. In South Africa public service vehicles are mainly mini-bus taxis ferrying learners to and from school. Some affluent schools possess buses used to transport learners on school trips, educational tours and sport activities.

2.10.17 First aid bay/room

Employers must provide suitable and sufficient accommodation for FA according to the assessment of FA needs identified. The Education (School Premises) Regulations 1996 require every school to have a suitable room that can be used for medical or dental treatment when required and for the care of learners during school hours. The area,

which must contain a washbasin and be reasonably near a water closet, need not be used solely for medical purposes, but it should be appropriate for that purpose and readily available for use when needed. Schools should consider using this room for FA. FA facilities may need to be made available quickly. Organisations such as HSE provide detailed advice on FA rooms.

2.10.18 Hygiene and infection control

All staff should take precautions to avoid infection and must follow basic hygiene procedures. Staff should have access to single-use disposable gloves and hand-washing facilities, and should take care when dealing with blood or other body fluids and disposing of dressings or equipment. LEAs produce guidance on this issue, which county and controlled schools should follow.

2.10.19 Keeping records and reporting accidents

Statutory requirements, under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR), state that some accidents must be reported to the HSE. These regulations apply to different organisations, schools included. The employer must keep a record of any reportable injury, disease or dangerous occurrence. This must include:

- 1.The date and method of reporting.
- 2.The date, time and place of the event and
- 3.personal details of those involved and a brief description of the nature of the event or disease.

This record can be combined with other accident records. County and controlled schools follow their LEA's procedures. Some LEAs may require serious accidents to be reported centrally for insurance and statistical purposes or as part of their RIDDOR arrangements. The following accidents must be reported to HSE if they injure either the school's employees during an activity connected with work, or self-employed people while working on the premises:

- 1.Accidents resulting in death or major injury (including as a result of physical violence).

2.Accidents that prevent the injured person from doing his/her normal work for more than three days (including acts of physical violence).

The HSE must be notified of fatal and major injuries and dangerous occurrences without delay (e.g. by telephone). This must be followed up within ten days with a written report on Form 2508.

Other reportable accidents do not need immediate notification, but they must be reported to the HSE within ten days on Form 2508. An accident that happens to learners or visitors must be reported to the HSE on Form 2508 if:

- 1.The person involved is killed or is taken from the site of the accident to hospital, or
- 2.The accident arises out of or in connection with work.

In the HSE's view an accident must be reported if it relates to:

- 1.Any school activity both on or off the premises.
- 2.The way a school activity has been organised and managed (e.g. the supervision of a field trip).
- 3.Equipment, machinery or substances or
- 4.the design or condition of the premises.

County and controlled schools follow their LEA's procedures. Employers with 10 or more employees keep readily accessible accident records in either written or electronic form. These records are kept for a minimum of three years. This record is not the same as the Department of Social Security BI510 statutory accident book. Schools keep a record of any FA treatment given by first aiders and appointed persons. This includes:

- 1 The date, time and place of the incident.
- 2 The name and class of the injured or ill person.
- 3 Details of the injury/illness and what FA was given.
- 4 What happened to the person immediately afterwards (for example went home, resumed normal duties, went back to class, went to hospital) and
- 5 name and signature of the first aider or person dealing with the incident.

The information in the record book can:

- 1 Help the school identify accident trends and possible areas for improvement in the control of health and safety risks.
- 2 Be used for reference in future FA needs assessments and
- 3 Be helpful for insurance and investigative purposes.

In an emergency, the principal or teacher-in-charge should have procedures for contacting the child's parent or guardian or named contact as soon as possible. It is also good practice to report all serious or significant incidents to the parents e.g. by sending a letter home with the child, or telephoning the parents.

2.11 School health services and first aid in France and Japan

France and Japan have elaborate and comprehensive school health services. First aid is not regarded as a separate entity but is encapsulated within the comprehensive school health programme. Almost all schools with more than 800 children have full-time doctors and nurses. Since the nurses and doctors reside at schools, it is taken for granted that the urgency concerning the period between injury/illness and medical care is shortened. In France there is a comprehensive programme for providing school health services until university level with the required complement of staff. Japan regards school health services as an integral part of school education. The school health programme includes regular medical check-ups, school lunch programmes and health education inputs.

2.12 First aid in South African schools

According to Cooks (2002) injuries are considered part of everyday life as children run, play and climb on or over everything they come across. Folk wisdom has it that 'every sport has its own injuries'. To reduce the risk of a child being scarred for life, there is a need for quality training and equipment to treat these injuries properly. To prevent a tragedy, quick and effective care should be available at all times. Educational institutions approach this issue from different directions. Some ignore it others obtain the services of FA providers while still others take the healthcare of their students to

heart and provide well-trained personnel and fully-equipped FA rooms for this purpose. Granted, the size of the institution is generally prescriptive in the motivation for such facilities. Larger institutions such as technikons and universities have a much greater need for a proper clinic than a farm school with maybe 20 students would have (Ibid). There is little information on the provisioning of FA in South African schools.

2.12.1 The case for first aid in South African schools

Contrary to popular belief, small amounts of money are required to outsource emergency care. Having just one or two facilitators qualified in FA reduces the risk of an incident leaving a child scarred for life. First aid is a life skill, not just a stepping-stone in the road of development. Writing about South Africa, Cooks (2002) notes that, in violent times everyone has the ability to take a life, but few take the time to learn to save a life, or to bring relief at the very least. Maluleke (2015) concurs with this idea. There are schools and colleges that give recognition to students who involve themselves in the emergency teams because these students become part of the solution, not the problem. They are safety-conscious and are genuine assets to their communities by being of value in case of an emergency at any time. Cooks (2002) ends by asking pertinent questions, requiring pertinent answers: Should not FA be a compulsory part of the educational curricula? Is FA not for everyone? Is it not time to dig in and be involved? This is one of few opportunities that can and will make a lifelong difference.

There are thousands of fatalities annually involving pre-school and school-aged children (Strasser, Aaron, Ralph & Eales 1964:7). The accidental death of a child means the loss of well over 50 years of productive life (Ibid). There should be some means of evaluating various aspects of safety programmes to determine if they are yielding the desired results (Strasser *et al* 1964:112). The evaluation of FA provisioning will offer independent information and insight which can be used for a number of purposes (Black 1990:15). Evaluations provide information that can measure success in achieving goals, in meeting performance criteria and in providing value for money (Ibid). Marx, Wooley and Northrup (1998 in Walsh and Murphy 2003) purport that there is an inextricable link between students' health and their ability to learn. Teachers,

parents and researchers no longer believe that a child's success in school depends exclusively on knowledge and academic skills that the student brings to the classroom (West, Germino-Hausken & Collins 1993) in Walsh and Murphy (2003). The primary responsibilities of the school are to provide adequate instruction in safe living and a safe school environment for students (Strasser *et al* 1964:115). School safety is a management function (Ibid). There is therefore a need to evaluate the administrative efficacy of FA provisioning in schools.

Greeff (1994) stresses the point that although FA is not a substitute for medical care, those trained in FA are able to assess the nature and extent of an emergency and determine the best course of action to take until advanced medical help arrives.

2.13 Summary

Chapter one introduced the study, Chapter two set the stage for the study by reviewing literature on FA provisioning in the context of schools. The history and introduction of FA into the school system were documented. The third chapter will describe and explain research findings on FA provisioning in schools in different parts of the world. Previous research studies reflect findings about FA in schools and its relevance to this study. FA provisioning in the South African context is benchmarked against a global narrative.

CHAPTER 3

PREVIOUS RESEARCH STUDIES ON FIRST AID PROVISIONING IN SCHOOLS

3.1 Introduction

Chapter two highlighted the critical structure of the literature review, the history, psychological and legal frameworks of FA provisioning in the school context. A detailed account of the provision of FA in UK schools was given as a precedent for the ideal FA provisioning policy structure in schools. First aid provisioning in other parts of the world was also documented for comparison. Chapter three chronicled the *status quo* of FA today and previous studies done on FA in schools.

To get a glimpse of what is happening in schools today with regard to FA provisioning, there was a need to unravel what had been studied so far concerning FA provisioning in schools. It was necessary therefore, to review literature on previous research studies on FA in schools in different countries across the world. There was also a need to know what previous research findings say about FA in schools to identify any gaps in what had been studied and what still needed to be done in the context of this research study. After chronicling previous research studies on FA in schools, the chapter then wound up by turning to the identified gap in the literature.

Quite a number of research studies have been undertaken on FA provisioning in the school context, covering a plethora of disciplines within the broad sphere of FA. I selected a few of these studies to give coverage to essential attributes of the research topic. Although some of the research studies cited do not deal specifically with the evaluation of the administrative efficacy of FA provisioning in schools, their findings reflect FA provisioning in a school set-up as explained in this research study. I have singled out research studies done in schools in France, Norway, Sweden, India, Egypt and China. The variety of studies gave enough coverage of the different attributes of the FA provisioning debates in schools.

First aid provisioning in schools varies from school to school, from place to place and from country to country. Literature generally alludes to the fact that FA provisioning levels are positively correlated to advancement in development and technology of the particular school or country (WHO 2010). To give a value to the FA level in Gauteng, I had to benchmark it against international trends and practices. Previous research studies from both developed and developing countries were cited to compare them with South Africa.

3.1.1 Background

Before documenting studies that had been done on FA provisioning in schools, it was vital that a general overview of FA in schools be given to set the stage for the case for FA in schools. Literature alludes to the fact every person who comes into contact with human beings should be trained in FA. This factor cannot be over-emphasised in the context of the formal school system. This is important, especially in the lower grades, where it has been found that susceptibility to childhood injuries and accidents is rampant owing to the active and adventurous lifestyle of this age group. If laypeople are an important factor for saving lives in emergency situations, it becomes more important for teachers and learners in the school system to possess FA skills and knowledge.

According to Eisenburger and Safar (1999), life-supporting FA (LSFA) should be part of basic health education and all people from the age of 10 should learn LSFA skills, including basic life-support (BLS) and cardiopulmonary resuscitation (CPR). Studies also show that it is possible and desirable to teach FA skills and knowledge to children in pre-school to cement the aspect of empathy, which is an invaluable catalyst to inspire them to assist in an emergency. The following study, undertaken in Norway, helps to illustrate this point.

3.2 FA can be taught to minors: Research study in Bergen (Norway)

Bollig, Myklebust and Ostringen (2011) carried out a study in Norway aimed at evaluating the effects of an FA course for four-to-five-year-old pre-school children given by an FA instructor and pre-school teachers. The study was done in the pre-school "Hellemyren barnehage" in Bergen, Norway. There were 22 children in the pre-school,

divided into two groups according to their age. All children aged four to five years from this pre-school were included in the study group after their parents had given written informed consent. This age group constitutes children who are in pre-school in the South African context. According to SASA, the age requirements for admission to an ordinary public school is calculated using the formula: grade number plus 6, e.g. A grade 1 learner must be seven years old, i.e. Grade 1+6= age 7; Grade 9+6=15 years. A learner must be admitted to grade 1 if he or she turns seven in the course of that calendar year. A learner who is younger than this age may not be admitted to grade 1. A learner may be admitted to grade R or O only if he or she turns six in the course of that calendar year. Attendance of grade R is not compulsory. R stands for “reception” and O stands for grade “zero”.

The study by Bollig *et al* (2011) illustrates the importance of FA training in schools and one thing that is evident from this study is that it is possible to teach skills and knowledge to young children. This is important, because children may be the only people present in an emergency situation (Bollig *et al* 2011). The term *kindergarten*, used in Norway, was replaced with a more convenient South African equivalent, *pre-school*. Given that this study proved that it is possible to teach FA to pre-school children, there is no justification for the exclusion of FA from pre-schools anywhere, South Africa included.

A brief description of the study is given below. The researchers used a mixed-methods approach for this study. Ten pre-school children aged four to five years were included in a pilot study, five girls and five boys. Three of them were four years and seven were five years old. Two months after completion of the FA course the children were tested in a scenario where they had to provide FA to an unconscious victim after a mock bicycle accident. The researchers then spent the next seven months doing participant observation.

The findings suggest that four-to-five-year-old children were able to learn and apply basic FA. This is crucial in the South African context. FA training can start in pre-schools.

When tested two months after completion of the course, 70% of the children assessed consciousness correctly and knew the correct emergency telephone number. Sixty percent of the children showed correct assessment of breathing and 40% of the participants accomplished other tasks such as giving correct emergency call information and displaying knowledge of correct recovery position and correct airway management. Many of the children showed their capabilities to do so in an FA scenario, although some participants showed fear of failure in the test scenario. The fact that pre-school children can be taught FA is invaluable for the current research. There is no reason to exclude FA from pre-schools on the basis that the children are too young to acquire the requisite FA skills and knowledge. The following section documents in detail what the children were able to do after the FA training.

In an informal group test, most of the children in the study could perform FA measures. It was discovered from the study that teaching FA also led to more active helping behaviour and increased empathy in the children. Empathy is crucial to stimulate the drive to FA provisioning.

Since this study proved that it is possible for pre-school children aged between four and five years to learn basic FA, training should start as early as pre-school to inculcate the feeling of empathy in children from an early age. Field notes, taken during and after the course, showed that FA became an important topic for the children and was spontaneously included in playing activities. Course participants taught FA to the other children in the pre-school in simulated situations. The children checked breathing and placed the 'injured' victim in the correct recovery position, working as a team without adult assistance. They tilted the head backwards and discussed in the team that the reason for this was that vomit could block the throat.

First aid also became an everyday issue in this pre-school and revision of FA knowledge was done on a regular basis using a poster, which was developed during the course with the help of the participating children.

The following were the noted observations from this study by Bollig *et al* (2011):

1. Some of the three-year-old children in the pre-school who were not part of the study but had witnessed parts of the FA training through a window started to include FA scenarios in their everyday play. FA became part and parcel of daily life for the children.

2. By imitating the older four-to-five-year-old children in the study, the three-year-olds also learned some basic FA measures. One three-year-old child observed the older children administering FA and the recovery position. One child lay down and pretended to be an unconscious person without being asked to do so. Another three-year-old came to help her. The pre-school teacher asked what one should do in such a case and the three-year-old said that one should check if she was breathing and that she should be placed in "this position" (searching for the correct term "recovery position"). When asked about the importance of tilting the head backwards the child said that "vomit might run out of the mouth in this position."

3. When a famous Norwegian artist died, the children spontaneously asked if someone administered FA to him. Who had put him into the recovery position? Who had informed the emergency medical service and who had comforted him before he died? This illustrated the fact that children had a natural proficiency for empathy. Even though somebody had already died, they were interested in how people tried to help and to comfort him while he was dying.

4. The children who attended the course were proud to have learned FA and to be able to save lives. Some taught their knowledge and skills to other children or members of their families.. One girl told her grandfather at home that he should lie on the ground. Apparently the grandfather did not know about the FA training in the pre-school. The girl checked his breathing and placed him in the recovery position. After that she told him about the importance of this FA measure.

Many of the children showed their capabilities to administer FA in an emergent scenario. Although the participants were familiar with the persons testing them, many were reluctant to perform FA in the scenario, whereas they showed both FA knowledge and skills when observed in play situations in everyday life. This confirmed the fact that starting FA training in the pre-school is important, can probably lead to a more positive attitude to giving FA and increase the rate of helping. This research study in Norway by

Bollig *et al* (2011) acknowledged that these assumptions were inconclusive. They had to be investigated and proved in other future studies. The reliability, trustworthiness and validity of the findings are open to academic scrutiny. The following section deals with some of the concerns.

Different researchers have documented that FA training of school children leads to increased knowledge and FA skills and several authors have recommended that FA training should start early in life and stated that primary school children can learn to provide FA (Wagida & Hanan 2014, Li, Sheng, Zhang, Jiang and Shen 2014). Not all people, however, support the teaching of FA in schools. The main concerns they raise about the negative consequences of FA training cited by Bollig *et al* (2011) include:

1. Anxiety among the children as a result of being exposed to an emergency situation, which may be traumatic.
2. Contact with emergency medical services without being in a real emergency.

These are concerns that opponents to FA education for children give as an excuse for not introducing FA to learners in schools.

The results from the study by Bollig *et al* (2011) also showed that many children had feared failure in the test situation and this could certainly have influenced the results. The test situation was unknown to the children and the individualistic testing might have led to a raised stress level. When the children were tested again using an FA scenario in an everyday play situation, interestingly most of them knew what to do and were able to perform FA measures, e.g. the recovery position.

The researchers suggested that it would be interesting to do a follow-up-study in order to investigate whether the children used their FA knowledge in real life. The test scenario used in this study could only measure practical skills. It is unclear whether the skills and knowledge displayed in the test led to enhanced ability and motivation to provide FA in a real emergency situation. The study proved that it is possible to teach learners in pre-school FA skills. The next study was selected to demonstrate the fact that FA can be made compulsory for all learners and teachers.

3.3 Feasibility of compulsory FA for learners and teachers: Research study in France

A study was carried out in the Somme department, France, which had 560 000 inhabitants. The research study was supervised by the University Hospital Emergency Medicine Department, National Education Teachers and a university research unit specialising in health education. The study started in 2002 and took place in 'real life'. In this study, the terms *pre-school* and *learners* were used instead of *nursery* and *pupils* respectively, for convenience and to maintain uniformity.

It is vital to provide a background to this study so that the findings can be interpreted in context. In France, it is compulsory for all teachers-in-training to learn basic FA to be applied in the classroom and FA must be taught to learners. About 10 million children between four and 15 years of age receive this FA training called *apprendre a porter secours*, which is French for "learn how to help". Learners can obtain a basic life-saving diploma at the end of secondary school. French education authorities realised that in an emergency it is necessary for a first aider to raise the alarm and provide FA. It has been noted that all people should be trained in FA at some point in their lives, especially at school. Children can provide FA and save lives in life-threatening situations by making an emergency call.

In the study the age and weight of children was an important factor in the administration of CPR, as the depth of chest compression is related to weight, body mass index and height. CPR presents particular age-specific problems in view of the compressions required. The rest of FA skills and training presented no problems of administration, because they are not age- or weight-related.

The results for CPR do not, however, preclude the training of young children in CPR on the basis of the child's weight. Published research studies on FA training at school in France have focused on children above the age of six. There is no evidence in the studies that age has an influence on the ability of the child to acquire FA training and skills. This makes sense to me personally because children under the age of five may not have the necessary weight to exert compressional thrusts to 'jump-start' a heartbeat. This French study also put forward arguments in favour of training in FA being

undertaken by the children's own teachers, as they are acquainted with them, as opposed to the use of unfamiliar FA trainers.

A brief description of the study follows. Firstly, a programme was initially developed to train teachers in basic FA to deal with an emergency situation first before administering the programme to learners. The most common emergency situations occurring in elementary schools were used to design the teachers' FA training programme. In the Somme department, 2 200 of 3 300 elementary schoolteachers have been trained by emergency medical teams and education specialists, assisted by the Ministry of Education health professionals, since 2002. During a six-hour training session, the teachers learnt when to alert the medical call centre and how to act when faced with trauma, burns, bleeding, a choking victim or an unconscious person. Teachers received FA training to improve their prior knowledge and then worked on educational applications in the context of pre-schools.

After training, the teachers had to integrate specific skills into various subjects of the curriculum, depending on the learning pace of the class. The children's psychological, cognitive and moral development was taken into account when setting up the course. The principle of the course was to plan a yearly increase in complexity, allowing the revision of acquired skills and the learning of new skills. The programme's FA skills development was structured in such a way that it became progressively more complex. Young children in pre-schools were supposed to recognise an unusual situation and alert the correct medical emergency call centre and number. To do so, they needed to dial the emergency medical number, describe what they had observed and name the various affected parts of the human body.

The assumption was that children aged between six and eight years were able to alert the Somme Academic and Medical University (SAMU) by precisely locating the event. They were supposed to be able to describe injuries and perform simple tasks to deal with a burn, a bleeding wound or trauma. The assumption for children aged between nine and 11 years was that they would be able to recognise an unconscious patient, determine the presence of breathing and place the unconscious person on his or her

side in what is called the 'recovery position' in FA. The assumption in the secondary school was that they were able to learn how to assist a person who was choking and perform chest compression and defibrillation, i.e. providing an electric 'shock' to the chest to 'jump-start' the heart to start beating again, using an instrument called a defibrillator. This procedure is necessary in the event of cardiac arrest. The progression of the child's abilities during the curriculum was assessed by the Somme department of education.

In this study teachers introduced FA knowledge and skills into the curriculum, suitable to the child's stage of psychological, cognitive and emotional development, as recommended by experts in the education of young children. When teaching basic anatomy, teachers addressed the issue of how to deal with trauma. The number of hours of training therefore could not be assessed in the context of this educational approach adapted to young children. Owing to the requirements of the national education system, some children in pre-schools in this area were trained by their teachers, while others were not, either because their teachers did not wish to train them or had not been trained themselves. The untrained learners had never received any FA education. The children's ability to observe pictures and then to use a telephone to raise an alert was assessed. Three pictures illustrated three different situations, one of which did not require alerting the SAMU, but was used as a "placebo". The three situations were:

1. A boy who had fallen off a stepladder and who was holding his leg (FA required)
2. A young girl crying because she had broken her doll (no need for FA).
3. A young boy who had injured his hand while peeling an apple (FA called for).

Assessment of each child was based on nine criteria and was performed by the teacher two months after completion of FA training. These nine criteria required answers to the following questions, testing the child's ability to observe each picture and to decide whether or not to raise the alert and what to do in the meantime:

1. What is happening?

2. You are alone with him/her, nobody is here to help you, what would you do?

The answers were classified into two categories: 'expected answer' (with keywords or synonyms) or 'other answer'. The following were the expected answers for the three scenes:

1. The expected answer in relation to the first picture was: "He has fallen, his leg hurts."

2. The expected answer in relation to the second picture was: "She has broken her doll and is crying."

3. The expected answer in relation to the third photograph was "He has cut himself, he is bleeding."

The child was required to alert the SAMU in the first and third situations. The teacher then tested the learner's ability to alert the SAMU in relation to the first and third pictures. The teacher gave the children access to a standard landline telephone, playing the role of the SAMU emergency doctor and responding to their distress calls. When the child did not use the telephone spontaneously, the teacher encouraged the child to do so. The teacher's instructions were: "You see, he has cut himself, he is bleeding. You are alone at home with him, the SAMU must be alerted, do it!" The assessment of the child's reaction was based on whether he/she did it or not. The three criteria were:

- 1 Using the telephone,
- 2 Introducing himself/herself, explaining where he/she was, and
- 3 Describing the situation.

The national education system required each child to be assessed by his/her own teacher because children of this age are not usually assessed by an unknown adult who is not part of the classroom situation. In order to obtain the most objective results possible, written instructions were given and discussed individually with each teacher approximately two months after completion of FA training.

The nature of the data required a quantitative research tradition to carry out the study. Data were presented as percentages. Statistical analysis of the results was performed using a chi-square test. Analyses were performed using the Statistical Package for the Social Sciences (V.11.0, SPSS, Inc). The method used has little relevance to the present study, hence I will not describe it in detail. My study was different in that it assumed a qualitative research tradition. These statistics are relevant to my study in that the trained group performed better than the untrained group, underlining the importance of FA training. In my research study I used questions on what learners in Gauteng schools would do when faced with an emergency to test their knowledge and skills in the FDGs.

The majority of trained learners in the study were able to describe the three pictures and give the expected responses. When the SAMU had to be alerted, the majority of trained learners were willing to raise the alert. In respect of all criteria, the majority of trained learners gave the expected answers and displayed an appropriate reaction to the situation by recognising the medical problem and appropriately raising the alert. Comparison of the two cohorts of trained and untrained learners revealed significant differences in terms of the ability of learners to describe an emergency situation and raise the alert.

The vast majority of trained learners spontaneously gave expected answers without prompting from their teacher, making this result even more relevant. The results related to the non-emergency situation (young girl with a broken doll) showed that the observation capacity of trained pupils was significantly better than that of untrained learners. The teachers of the trained cohort had more generally emphasised observation capacities, as an emergency call to the SAMU (or to an adult) required an oral description of the situation.

The researchers noted that it would be interesting to test these capacities with other assessments of less obvious situations. The situations described in the pictures focused on trauma and injuries, which correspond to common situations encountered by children. Many emergencies in western countries deal with acute emergencies in the field of internal medicine, such as heart attack or stroke. Education experts from the

Ministry of Education thought that it would be too emotionally disturbing for a young child to be faced with an adult in a life-threatening situation and therefore proposed that young children should act out situations involving injured children, not adults.

A highly significant difference was observed between the two cohorts in the two situations in which the SAMU had to be alerted. This study can be compared with the study done by Bollig *et al* (2011) in Norway in which the same ability was assessed. Despite the obvious willingness of untrained children to help, they did not know which number to dial or what role the SAMU played. It is noteworthy that trained learners did not associate the picture of a broken doll with the need to alert emergency services, as they were able to differentiate the various situations. This indicated that learners were able to distinguish situations according to severity.

Trained learners felt more confident than their untrained counterparts. Although two thirds of trained learners intended to call the SAMU in a medical emergency situation, only about one half of them really knew how to call the SAMU on a landline. As a result of age-related psychological and cognitive maturity, the child's comprehension and the intention to take a particular action may not be automatically linked.

In a pilot study of 10 children in Norway by Bollig *et al* (2011), research findings showed that pre-school children aged between four and five years could learn basic FA, with training provided by an FA instructor and pre-school teachers. The results of the French study confirmed these results and supported training by teachers themselves. It was considered important for teachers to learn FA in order to be able to teach FA to their learners at school as part of daily life education. In contrast with FA training provided by external instructors, teachers already knew their learners. They could plan and link emergency FA training along with other topics and assessed the children in different ways. Teachers' active participation in 'role-playing games', placing the child in a situation in which he/she was responsible for somebody else's health, appeared to be a more efficient method of imparting complex skills, according to this concept of "situated learning". Teachers had an added advantage that they had satisfactory prior FA knowledge and were trained in science education, which could be used aptly in subject-integrated learning.

The teacher training in the French study lasted six hours. The researchers' experience and an unpublished evaluation suggested that a six-hour training course was sufficient. The six-hour training upgraded their knowledge and helped them to integrate FA training into the curriculum. The researchers noted that the effectiveness of this training needed to be evaluated and further studies were required to define the optimal design in terms of duration. This factor proves that FA basic training does not take a lot of teachers' and learners' time. The research study in France, however, put more emphasis on calling emergency services rather than providing FA. This was my own observation.

The study in France had several limitations that need to be highlighted. Random sampling was not performed before setting up the study, for ethical reasons. The Ministry of Education rejected the idea of pre-defining two groups with and without FA training. Assessment of the children's performance by their own teachers could constitute bias in favour of the trained group. It would be interesting to investigate differences between schoolteacher and FA instructor interventions during a limited training period, as teachers integrated specific skills into various subjects of the curriculum, depending on the learning pace of the class. Some teachers decided not to perform this assessment, which they considered time-consuming and fastidious.

The study was conducted under real-life conditions. The researchers had to adapt their research methodology to the educational, legal and ethical requirements of the French national education system. This is important in all research studies. Research has to meet certain ethical standards to protect those taking part in the research. My research study addressed serious research ethics concerns for the minor children, especially in pre-schools. I could not involve them in my research study for ethical reasons. UNISA has a Research Ethics Clearance Committee that issues certificates to master's and doctoral students who have complied with the requirements, as specified in its guidelines. It is a requirement that the clearance certificate be attached as an appendix at the end of the dissertation or thesis as proof that the research study was cleared by the committee. A copy of the certificate is provided as Appendix H at the end of this thesis.

The French study presented a number of biases, such as the use of the telephone, which was tested in only 48% of untrained children. The main bias was that some teachers failed to comply with the study protocol. This led to incomplete data collection for certain aspects of the study, highlighting the difficulties of working with teachers who were sometimes unwilling to comply with study protocols. This bias favoured the trained group. The follow-up rates differed markedly between trained and untrained learners. This reduced the strength of the results. Although the instructions were explained to all teachers, evaluation and interpretation of the instructions may have differed between teachers. The pictures had previously been tested on two classes, but interpretation of the pictures may nevertheless have been biased. As this study was based exclusively on pictures, it would be interesting to include the observation of videos or role-playing games.

As this was the first assessment of its kind, researchers confined themselves to a global assessment and did not take into account variables such as gender, class atmosphere or family background. The child's knowledge and ability to analyse a situation from photographs were assessed by the teacher, although it may have been preferable to assess the acquired skills in a role-play situation, as was done by several authors. It could be difficult to ensure similar and reproducible scenarios in each school. Photographs were designed by teachers themselves and had previously been tested on a sample of 50 children not included in the current study. Another possibility would be to evaluate children in the context of a video or serious game. Simulations present a number of limitations, e.g. there is no established correlation between the simulation used in this study and the way in which children would react in a real-life emergency situation.

The researchers realised that assessment of learners at the end of elementary school and in secondary school was to be the subject of other future studies in the research unit. To adapt this training to the children's psychological and physical development, learners at the end of elementary school were taught which behaviour to adopt when faced with an unconscious person who was still breathing. Cardiac arrest (CPR) was not addressed until children attained the age of 10 years, in line with Bollig *et al's* (2011)

propositions. In order to meet public health requirements, emergency FA training is now a compulsory part of the national curriculum in France. This is a good lesson for every country, South Africa included. Currently early childhood development (ECD) teachers are trained in health, safety and nutrition as part of their Bachelor of Education in ECD university training. The course includes a lot of FA for children. Since the qualification for a first aider is the possession of an FA certificate, this course is not adequate.

3.4 First aid knowledge and skills training should start early in life: Research study in Sweden

A study was done in Sweden, using questionnaires administered to 2 800 randomly selected people. The study showed that 30% of respondents had used their FA skills in practice after initial FA training. Although experts and instructors on FA agree that doing nothing is more dangerous than doing something that might be incorrect, many people are afraid of providing FA because they fear doing something wrong. Learning FA should therefore include both knowledge transfer and motivation to give FA. To start FA education in the pre-school could probably lead to FA as a normal activity of daily life, which everybody will apply. The results from this study suggest that learning FA in the pre-school leads to the inclusion of FA as an everyday life activity and increases the rate of empathy. This fact concurs with the study done in Norway by Bollig *et al* (2011).

The qualitative descriptions of everyday situations showed the children's natural proficiency for empathy. It has been stated that empathy is one of the most important qualities that children have from birth and it must be developed in childhood, adolescence and further throughout life. The surrounding adults' behaviour can either strengthen or weaken the development of an empathetic attitude in the children. In this study it was observed that more active behaviour of the children, attempting to help and to comfort others in daily life, sprung from a feeling of empathy. Teaching FA has led to positive changes in social responsibility and empathetic behaviour in the children in addition to acquiring FA knowledge and skills.

In a previous study, it was shown that skills retention tested six months after the course was significantly better for five out of six tested tasks compared to children with no

training. There is definitely a need for constant upgrading of FA knowledge and skills in a continuous process of learning, unlearning and re-learning.

A simple measure introduced in the Hellemyren kindergarten in Bergen, Norway was an FA poster on the wall (Bollig *et al* 2011). The poster helped learners to remember in repetition sessions as well as in an acute situation. Used once a month, it helped to raise awareness about the importance of giving FA and the needed algorithm of applying FA. The poster served the same purpose as FA and CPR posters displayed in hospitals, schools or public places. As people walk through the corridors, they are “bombarded” by posters that remind them of the FA and CPR procedures. What is needed in future is focus on FA and motivation to apply FA knowledge. To this end common European or international working groups could help to increase scientific research in this field and to establish consensus and guidelines for teaching FA. These efforts should include teaching FA to pre-school children (Ibid).

This Swedish study recommended that further research projects should focus on whether FA training starting in pre-school increased the helping rate in emergency situations. Longitudinal studies with follow-up over many years could show whether FA training early in pre-schools and primary schools changed the helping rate in real emergency situations. It is unclear in this study whether FA should be taught by teachers who are not certified FA instructors or by certified instructors. The study in France in the previous section advocated for teachers to teach FA to their learners. It would be interesting to investigate the effect of both approaches on the children's motivation to help in a real emergency situation. This study corroborated the findings of Bollig *et al* (2011).

3.5 First aid is crucial in curbing morbidity and mortality: Research study in India

Pallavisarji, Gururaj and Girish (2013) carried out a study in India on FA in general, covering various professions, such as drivers, the police and teachers. The studies in India were prompted by the fact that injury ranked among the leading causes of morbidity and mortality worldwide, and is steadily increasing in developing countries such as India. It is often possible to minimise injury and the consequences of crashes

by providing effective pre-hospital services promptly. The study was conducted to understand the current practice and perception of FA among lay first responders in a rural southern district of India. The cross-sectional descriptive study was conducted in the southern district of Tumkur in India over three months from January to March 2011. It covered the population including all police, ambulance personnel, taxi drivers, bus and automobile drivers, primary and middle school teachers in the study area.

Nearly 60% of the participants had witnessed more than two emergencies in the previous six months and 55% had actively participated in helping the injured person. The nature of the help was mainly calling for an ambulance, transporting the injured and consoling the victim.

Strictly speaking, the calling of an ambulance alone does not constitute FA, as people may die while waiting for an ambulance that may or may not come in time. It is the assistance (aid) that is given while waiting for the emergency services that is crucial. In the study by Pallavisarji *et al* (2013) the majority of the responders said that they had run to the victim or had called for an ambulance. There was little FA thereafter. The predominant reason for not providing help was often the fear of legal complications that would follow. A significant number (81.4%) of respondents reported that they did not have adequate FA skills to manage an emergency and were willing to acquire knowledge and skills in FA to help victims. This factor was important for this study; especially teachers and learners were willing to acquire FA skills and knowledge. This would expedite FA training for teachers and learners.

In India it was realised that regular and periodical community-based FA training programmes for first care responders helped to provide care and improved outcomes for injured persons. Pre-hospital services were a continuum of activities at the site until the injured person had been adequately transported and managed by hospital staff. The study was done on the assumption that first care responders, the ones who are first at the site, could take the necessary steps to ensure safety and smooth management, especially where transportation systems could develop. In Gauteng province of South Africa, on which this study focused, the major problem was traffic congestion, with vehicles blocking the road, including emergency lanes, especially during traffic peak times in the morning and late afternoon.

In most low and middle income countries such as India, transportation of road traffic victims is usually provided by relatives, drivers of private vehicles, three-wheeled auto-rickshaws, taxis and other local vehicles, police officers, and other motorists, who are usually untrained. Ambulances, if available, usually exist only in urban areas and take a long time to arrive in rural areas. Studies have shown that the inadequacy of public health infrastructure and poor access to health services are important reasons for the high burden of road traffic injuries or their severity. The transport situation in South Africa is similar to that in India and is further compounded by traffic congestion, especially during the early morning and late afternoon rush hours. One of the most common observations in this Indian study in relation to pre-hospital care was the interaction of untrained laypeople, their lack of knowledge and skills in handling the situation in general and the victims in particular.

The study aimed to understand the current practice and perception of FA among such laypeople and provided a basis for strengthening the pre-hospital care system. The present study sought to evaluate the administrative efficacy of FA provisioning with a view to strengthening FA provisioning in schools in the wake of rampant injuries and illnesses in Gauteng schools revealed in the print and electronic media.

The Indian study was done in Tumkur, which is one of the 29 districts of Karnataka state, in the southern part of India, situated a distance of about 70 kilometres to the north-west of Bengaluru. The subjects under study included:

1. 186 drivers (local three-wheeler vehicles).
2. 215 primary and middle school teachers.
3. 167 bus drivers and
4. 91 police and 61 ambulance personnel drawn from the entire district.

All participating members were contacted individually and agreed to participate in the study. Verbal consent was obtained from all participants after explaining the purpose, objectives and nature of the study. A preliminary survey was done to collect relevant details on the number and locations of all the primary and secondary schools, along with the number of auto rickshaw, bus, taxi and ambulance stations in the study area. Teachers of primary and secondary schools were contacted in their schools during the

monthly meeting of teachers, and ambulance personnel were contacted at hospitals. A cross-sectional study was undertaken by interviewing selected participants on a one-to-one basis after obtaining informed consent.

Data collection was done by a team of trained medical interns proficient in local languages. A semi-structured pilot tested questionnaire was used to collect the data. Information on types and frequencies of emergencies witnessed and type of help provided was collected from all study subjects except ambulance personnel. Information on barriers to FA provision, history of training in FA and current availability of FA supplies and perceptions on core areas of scene safety, bleeding control, airway evaluation, recovery position for unconscious patients and safe transportation was collected from all study participants.

A total of 720 subjects participated in the study, of which 76% were men. The study population included teachers and drivers. Nearly 52% had witnessed more than two emergencies during the last six months. The most common emergencies witnessed were road traffic injuries; others were burns, poisoning, cardiac emergencies and pregnancy-related incidents. Nearly 44.6% had been called more than once to provide help in emergencies and more than half reported providing some assistance. The most common assistance provided was calling an ambulance and nearly 90% of the participants were aware of the number of the local public ambulance systems, 108. Ambulances and cars were commonly used to transfer casualties to hospitals. Cases were usually transferred to a nearby government hospital or private nursing homes. Nearly 50% reported that they took more than an hour to reach a hospital in the last emergency they handled.

All ambulance personnel and nearly 26% of other study participants had undergone some type of FA training previously, but only 13% had undergone training in the last two years. Most drivers had training before issuance of their licences and 58% of them felt confident enough to provide FA without any hesitance.

Nearly 37% of the participants had refrained from helping once and 35% more than once when called during an emergency in the past six months. Several reasons were given:

1. Not knowing precisely what to do and fear of the scene was the common reason cited by 30% of the respondents.

2. Fear of medical-legal reasons and non-availability of any FA supplies was also a reason cited by 20 respondents.

Knowledge of participants in the areas of scene safety, bleeding control, airway maintenance, recovery position for unconscious patients and safe transportation was cited. Rushing to the victim and calling 108 (emergency number) was perceived as the first step to be taken at the scene of emergency. Nearly 55% felt that assessing the consciousness of the victim was the first thing to be done in casualty evaluation. Tying a cloth or bandage at the bleeding site and down the victim's back was perceived as the best way to control bleeding and to transport the unconscious. Nearly 61% felt driving at a faster speed to a nearby hospital would help in ensuring survival. Drivers had better knowledge of pre-hospital care and they were more willing to attend training programmes on FA compared to teachers and police.

It was acknowledged that emergency care systems were generally poor in developing countries and more of an urban phenomenon in countries such as India. Pre-hospital care is the care provided in the community and at the site, at home, school, work, or a recreation area or even during transportation until the patient arrives at a formal health care facility capable of providing definitive care. One of the most common issues raised in relation to pre-hospital care was the interaction and participation of untrained local laypeople and their lack of knowledge and skills in handling the situation in general and the victims in particular. According to the WHO (2010), the role of laypeople who are present at a crash scene should be to:

1. Contact the emergency services and

2. help to put out fires and take action to secure the crash scene, e.g. preventing further crashes, preventing harm to rescuers and bystanders, controlling the crowd of onlookers and applying FA.

There was no coordinated, comprehensive programme to meet this requirement in Tumkur district of India, as revealed in the study by Pallavisarji *et al* (2013). The study emphasised the importance for FA training for everyone in saving lives. The next

research study illustrates the significance of a comprehensive FA programme for knowledge and skills retention.

3.6 Continuing and professional development of first aid is essential for skills and knowledge retention: Research study in China

In China an FA study was undertaken by Li, Sheng, Zhang, Jiang and Shen (2014). This FA provisioning study in China was adopted from the USA, where it was initiated, for its schools. The terms *kindergarten* and *nursery* were replaced by *pre-schools* in the context of this study. The study in China was prompted by the fact that childhood injuries remained among the leading causes of childhood morbidity and mortality (Li *et al* 2014). The programme was started in the USA, because injuries were the leading cause of death, disability and health care utilisation for children. According to the American Academy of Pediatrics (2005), injury alone accounted for almost half of all deaths in pre-school-aged children in the USA. Non-fatal injuries also caused a tremendous socio-economic burden, as nearly one in four children was injured each year seriously enough to require medical attention, resulting in \$17 billion dollars in medical costs. The leading causes of non-fatal injuries in children between the ages of one and 14 included falls, being struck by or against something, being cut or pierced, drowning, burns and suffocation (Ibid).

In China, injury accounted for one-third of all deaths in children aged one to four years and half of all deaths in children between five and nine years of age (Li *et al* 2014). Pre-schools were important locations in which to focus on the prevention of injuries and diseases in children because situations requiring FA are often encountered there (Ibid). The response time in emergency situations is critical, but the FA provided must be performed properly to prevent further complications and to potentially save lives. The correct FA approach in childhood emergencies can be life-saving.

In 2005, the American Academy of Pediatrics introduced its national paediatric FA course, called Pediatric FA training for Caregivers and Teachers (PedFACTs). The PedFACTs course was designed to give caregivers and teachers the education and confidence that they needed to care effectively for sick or injured children. China adopted this American PedFACTs programme, hence the research findings were

applicable to both countries and could be discussed in juxtaposition. The PedFACTs programme was developed in the USA, China adopted it and Li *et al* (2014) did a research study on it, in China. In 2007, the PedFACTs programme started in pre-schools in Shanghai, China. The programme was aimed at equipping teachers with the appropriate FA knowledge and skills to care for children.

It was necessary to give a brief background of the study. The American Academy of Pediatrics (2007) introduced a programme in schools to take care of the FA needs in the USA. The same programme was also introduced in China in 2007. The programme was introduced because in schools, the person closest to the child and the first to apply FA is often a pre-school teacher (American Academy of Pediatrics 2007). The level of FA knowledge among pre-school staff in Shanghai, China was also low (Li *et al* 2012). It was vital that pre-school teachers were provided with FA knowledge and practical training, and there was a need for compulsory basic FA in schools. This was done with the view that FA training for regulated day care providers could contribute to children's health and safety in the day care setting (American Academy of Pediatrics 2005).

According to Li *et al* (2014), the purpose of this research was to evaluate the effectiveness of the PedFACTs programme in equipping teachers with appropriate FA knowledge so that they could skilfully care for children. While several studies investigated the retention of knowledge and skills about FA, a decline in resuscitation knowledge over time has been shown in many reports, and there is limited research evaluating these issues in PedFACTs. In addition to the assessment of FA knowledge, evaluation of attitudes and behaviour in respect of FA provisioning is also very important. There have been few documented studies on pre-school teachers' emotions in FA situations. The long-term knowledge level and emotions associated with FA after PedFACTs have not been investigated. A further aim, therefore, was to establish to what extent knowledge levels and emotions were retained six months, nine months and four years after the PedFACTs course. This is important for the renewal of the validity of FA certificates, which expire every three years in the context of South Africa.

Li, Jiang, Jin, Qiu and Shen (2014) carried out the research study in China designed as a longitudinal study from 2008 to 2013. A pre-test was conducted, followed by an intervention and an immediate post-test evaluation of learning outcomes in 2008. This

process was followed by six-month, nine-month and four-year post-test evaluations to assess the retention of learning outcomes. A stratified random sampling method was first used to identify 1 067 subjects in Shanghai. The selected teachers were trained in paediatric FA in a children's hospital. The PedFACTs course focused on what to do if a child suddenly became ill or got injured. The curriculum was derived from the USA PedFACTs courses and the American textbook entitled, *Pediatric first aid for caregivers and teachers*, which was translated into Chinese and modified. All subjects took a four-hour classroom course and all content was presented by a PedFACTs instructor. To ascertain the effectiveness of the PedFACTs, the participants' knowledge was assessed at five stages:

Stage1. Before the candidates received their PedFACTs certificate.

Stage2. Immediately upon completion of the PedFACTs course.

Stage3. Six months after the completion of the PedFACTs course.

Stage4. Nine months after the completion of the PedFACTs course.

Stage5. Four years after the completion of the PedFACTs course.

At all stages, all participants in the study sat for an invigilated examination. The brief surveys assessed knowledge retention and emotions connected to FA situations. The purpose of the invigilated examination was to ensure that access to course material was denied and that the test was completed in half an hour. The survey was completed by 1 067 participants at stages 1 and 2. At stages 3, 4 and 5, 300 subjects were independently drawn from the same 1 067 sampling frame. The statistical software package SPSS (version 17.0, SPSS Inc., Chicago, IL, USA) was used to analyse the data. The study used a quantitative approach. The findings were important for my study because they emphasised the importance of FA training among teachers and learners. The findings also revealed some attributes that were invaluable in FA, e.g. retention of FA knowledge over time and the role of empathy and feelings in FA provisioning. My observation is that the study could have tested FA skills retention as well rather than only knowledge retention. Participants should have taken part in a practical test in addition to their invigilated theory examination.

Before and after the training, a descriptive questionnaire was administered, which was divided into three sections. Section A focused on demographic information of the participants. Section B comprised 37 simple-choice questions on knowledge of the treatment of common children's emergencies. A score of 80% or higher was required to pass, in accordance with examination guidelines from the American Academy of Pediatrics. Section C addressed emotions in FA situations. Emotions connected with FA situations were calculated on the basis of seven questions, and responses ranged from the most favourable alternative (100 points) to the least (0 points), which were taken from another FA training study. The index measured negative emotions (afraid, anxious, stressed, passive, weak, puzzled, helpless) versus positive (safe, calm, relaxed, active, strong, engaged, confident). A high score was equivalent to a high degree of positive (low degree of negative) emotions. At stage 5, subjects were asked if they had ever witnessed childhood injuries in their work four years after the PedFACTs course and how they dealt with the injury. All data were entered into SPSS 17.0 for Windows (version 17.0, SPSS Inc., Chicago, IL, USA) for statistical analysis. The technicalities of data analysis for this study fall outside the scope of my qualitative research study.

The 1 067 subjects were fully followed up. In total, 62% were health care teachers, and 38% performed other jobs. A total of 30.8% of the group had previously taken an FA training course. At stage 3, 208 selected from the 1 067 participants were re-tested six months after the training. At stage 4, 278 selected from the 1 067 subjects participated in the examination nine months after the training. At stage 5, 274 selected from the same 1 067 subjects reported for retesting four years after the training. Ninety-two participants (at stage 3), 22 participants (at stage 4) and 26 participants (at stage 5) dropped out because of lost contact.

Results indicated that there was no statistically significant difference in demographic characteristics and pre-test scores among subjects in the five stages. Scores on knowledge in the five stages were significantly higher in pre-school staff members who were health care providers, younger staff and those from a rural district.

At the four-year mark post-PedFACTs (stage 5), over half of the 274 respondents said that they had witnessed children with nosebleeds, bleeding and swelling. The respondents had witnessed injuries such as a foreign object in the eye, bone injury,

asthma, heatstroke and other injuries. The majority of the pre-school staff (more than those who had witnessed injuries in children) had administered correct FA for nosebleeds, bleeding, swelling, etc. Correct responses regarding FA for choking, coughing and bites to the tongue were low.

This was the first study to evaluate the impact of paediatric FA training on caregivers and teachers (PedFACTs) and long-term knowledge retention after PedFACTs. Results showed excellent retention among teachers at four months, 12 months and four years post-training. Although knowledge and emotions tended to decline with time, improvements above the pre-test were maintained at both nine months and four years post-training. The results of this study demonstrated that the PedFACTs course significantly improved knowledge levels and positive emotions toward FA among pre-school staff who attended the course. This correlated with previous research investigating the effectiveness of the Advanced Trauma Life Support (ATLS) programme, the Advanced Trauma Nursing Council (ATNC) course and the American University of Armenia FA training course for primary health care providers (Li *et al* 2014).

The learning that resulted from exposure to the course was likely to be a contributory factor to the improvement of outcomes. The principles of adult learning were purposively incorporated into the PedFACTs course so that learning could be optimally effective. The study suggested that the acquisition of knowledge was a result of attendance of the PedFACTs. Only 39 participants achieved the pass mark prior to commencement of the course, compared to an 82.8% pass rate immediately after the training. Following the training programme, there was a significant improvement in the pre-school staff's cognitive knowledge, and this study was also consistent with CPR training studies (Li *et al* 2014).

When scores in the long-term changes (six months, nine months and four years) were evaluated during the post-test, knowledge levels were found to have decreased over time. However, despite the decline, the post-training mark was above the baseline score. The finding showed that the positive effect of education, although showing a trend of reduction, continued even after four years.

A large amount of literature in recent years has analysed the efficacy of resuscitation training and highlighted the fact that skills and knowledge decline over time. This fact calls for periodic re-testing to keep knowledge and skills for first aiders up to date. The attrition of knowledge after BLS and advanced life support courses has been well-documented. Several studies have demonstrated limited retention of FA knowledge and rapid deterioration of knowledge after initial training. Madden (2009) reported that students experienced a significant deterioration in CPR cognitive knowledge 10 weeks after CPR training. Tippett (2004:34-46) found significant deterioration in knowledge levels three months after completing the ATNC, and Ali *et al* (2001) found significant deterioration in knowledge levels six months after completing the ATLS. Most studies have also tested a combination of knowledge and skills, and skills were reported to decline faster than knowledge. Skills retention was not tested in this study. First aiders need to upgrade and renew their FA knowledge and skills constantly for the given reasons.

In the study by Li *et al* (2014), correct responses regarding FA for choking, coughing and bites to the tongue were low. To maintain knowledge retention, refresher training is invariably required. Although recurrent training is recommended, the ideal time interval between refresher courses has not been established in the literature. The SAFAL's certificate is valid for three years in South Africa. Research suggests that resuscitation training should be carried out at least every three to six months to prevent deterioration of skills and knowledge. Another study suggests that refresher training should be performed at least annually. It is important, therefore, to evaluate the possible effects of teaching methods on knowledge retention and to explore new methodologies that promote long-term knowledge and skills retention.

Berden, Willems, Hendrick, Pijls and Knape (1993) suggested that the acquisition and retention of CPR knowledge and skills was largely dependent on training and the frequency of CPR instruction. Overtraining has been claimed to be of particular value in the retention of skills where the individual has no chance to warm up and previous reports on the positive effects of overtraining have also been published. Wik *et al* (1993 in Berden *et al* 1993) reported that an over-trained group, which had 10 additional three-minute training sessions shortly after the initial training, had significantly better skill

retention than a control group. Some studies have also reported that even simple retesting after four or six months improves retention several months later, as do short refresher courses.

The study by Li, Jiang, Jin, Qiu and Shen (2014) suggested that PedFACTs could improve staff members' emotion levels. Scores on the emotions connected with FA situations remained significantly changed after the training and during the long-term follow-up period compared to baseline. One important barrier and a main concern of laypeople about administering FA to acutely ill or injured people was the fear of making mistakes. In the study, four years after the PedFACTs course, most respondents who had witnessed injured children had administered correct FA for some injuries.

In Austria, 68% of the participants in a study stated that they would not provide FA because they feared doing something wrong (Li *et al* 2014). Experts and instructors on FA agree that doing nothing is more dangerous than doing something that might be incorrect. Many people are afraid of providing FA because they fear doing something wrong. The results for emotions about FA indicated that pre-school staff members were prone to positive emotions (Li *et al* 2014). The study suggested that the intervention was effective in changing emotions about FA immediately after the training. The score of emotions at six months after training was lower than that of baseline, but it was not statistically different. The score recovered to a more expected level at subsequent assessments at nine months and four years. This may be because the teachers had witnessed some childhood injuries in the long term period and had experience in dealing with the injuries, demonstrating a positive attitude to emergencies.

In the long-term follow-up period, pre-school staff continued to express positive attitudes to injured children and help in emergencies; they could assess the condition of the injuries and administer FA to the injured children. This may be because most of the teachers felt they were responsible for the management of the injuries in pre-school and they believed that they could improve the prognosis by early and correct intervention (Li *et al* 2014).

In the case of the Chinese PedFACTs study by Li, Jiang, Jin, Qiu and Shen (2014), the acquisition of knowledge did not necessarily equate with improved care for the following reasons:

- 1.The influential factors of knowledge retention between post-testing and re-testing were outside the control of the study.
- 2.The researchers investigated the level of knowledge through a written questionnaire and no practical skills could be tested in the setting.
- 3.The same standardised tool was used at each data collection point and it is possible that participants could remember previous answers.
- 4.Some teachers dropped out later. Although the researchers telephoned them or their pre-schools, they did not respond to these efforts.
- 5.At stages 3, 4 and 5, most of the selected teachers (more than two thirds of the selected 300 teachers in each stage) participated in the examination at each stage.
- 6.There was no significant difference in demographic characteristics between those who came for the examination and those who dropped out at each stage.
- 7.Selection was random and selection bias may have been small.
- 8.This local cross-sectional study could not be generalised to the whole country. Further studies investigating the retention of knowledge immediately after the course and strategies employed to enhance the retention of knowledge should be welcomed so that these findings may influence the professional development of staff in child-care settings.

The study demonstrated that the acquisition of knowledge in the short and long term improved significantly as a result of attending the PedFACTs course. Research findings suggest that despite appreciable decreases in knowledge in the long term, knowledge retention was modest, but stable; attitudes toward injured children remained positive. To retain knowledge levels after the completion of the PedFACTs course, local initiatives aimed at improving retention of knowledge should be implemented. It is recommended that the provision of an ongoing structured programme of PedFACTs should be implemented (Li *et al* 2014). The next research study, conducted in Egypt, was used to

corroborate the findings by Li, Jiang, Jin, Qiu and Shen (2014). The research study tested both skills and knowledge acquisition.

3.7 First aid training is necessary to increase knowledge and skills: Research findings in Egypt

Wagida and Hanan (2014) carried out a study on the effectiveness of an FA intervention programme applied by undergraduate nursing students preparatory school children in Egypt. The background to the study was that childhood injuries constitute a major public health problem worldwide. In this regard it was similar to the interventions in India, China and the USA documented in previous sections. The guiding assumption for the study was that FA is an effective life preservation tool at work, school, home and in public locations. In the study, the effectiveness of an FA programme delivered by undergraduate nursing students to preparatory school children was examined. It was a quasi-experimental study carried out on 100 school children in governmental preparatory schools in Egypt. The researchers designed a programme for FA training and this was implemented by trained nursing students. The evaluation involved immediate post-test and follow-up assessment after two months. The results showed generally low levels of satisfactory knowledge and inadequate situational practice among the learners before the intervention. Statistically significant improvements were shown at the tests immediately after the programme and follow-up tests. The study concluded that an FA training programme delivered by nursing students to preparatory school children was effective in improving their knowledge and practice. Using simplified content in teaching FA in primary schools showed success independent of age, sex or education (Howard & Houghton 2012 in Wagida & Hanan 2014).

In Egypt, the Egyptian Red Crescent recently launched a training programme for school children focusing on the age group of nine to 12 years. The programme consisted of four components:

1. First aid.
2. Disaster preparedness.
3. Road safety.
4. Hygiene and a healthy lifestyle.

The programme covered 100 primary schools over three years starting in the academic year 2010/2011 and trained 3 200 children (Egyptian Red Crescent, 2011). Among children and young adults, injuries remained the leading cause of death. It was suggested that the extent of an injury could be minimised if children were equipped with appropriate FA skills and knowledge (Bas,er *et al* 2007,in Wagida & Hanan 2014). Schools might be an ideal environment for learning about how to prevent injuries or provide FA skills. This study was conducted in a preparatory school, which is defined as a school for children aged 11 to 15 years, where they are preparing to enter secondary level (Sanusy *et al* 2012, in Wagida & Hanan 2014). The aim of the study was to examine the effectiveness of an LSFA programme delivered by undergraduate nursing students to preparatory school children. The effectiveness of this intervention programme was measured in terms of improved learners' knowledge and practice regarding FA. The research question was: To what extent is the FA training programme delivered by nursing students to preparatory school children effective in improving their knowledge and practice?

The sample size was calculated to detect any improvement in learners' knowledge or practice from an expected level of 30% or less before the intervention, to 60% or higher after the intervention. Using the Epi Info software package (Center for Disease Control and Prevention, Atlanta, GA, USA), the required sample was determined to be 48 school students, which was increased to 100 to compensate for the expected 5% dropout. The preparatory schools in the district were stratified according to the educational regions. Two strata were randomly selected (east and west regions). In the first stage, one school was randomly selected from each stratum. In the second stage, two classrooms were selected from each of the two schools, one from the first grade and the other from the second grade. The sample size was filled from these four classes by systematic random sampling.

An interview questionnaire form consisting of three parts was designed by the researchers to collect the required data. The first part covered the students' sociodemographic data such as age, birth order, parents' education, residence and school grade. The second part involved students' knowledge regarding FA. It included

32 questions, 12 open and 20 closed, covering various aspects of FA, such as definition, wounds, poisoning, chemicals, electrocution, haemorrhage, burns, fractures and choking, as well as BLS. For each knowledge question, a correct response scored one, and an incorrect response zero. For each area of knowledge, the scores of the items were added up and the total divided by the number of the items, giving a mean score for the part. These scores were converted to a percentage score.

The students' knowledge was arbitrarily considered satisfactory if the score was 60% or more, based on the panel of experts and similar studies (Martin & Jolly 2002; Contreras *et al* 2006, in Wagida & Hanan 2014), and unsatisfactory if less than 60%. The third part was for the assessment for the practice of FA. It consisted of five situations representing problems, such as choking, burns, poisoning and fractures, and the FA required for each problem. For each situation, a correct complete response was scored two, correct and incomplete one, and incorrect zero. The scores of the five items were added up and converted to a percentage score. The students' practice was considered adequate if the score was 60% or more (corresponding to complete correct answers to three or more of the five situations) and inadequate if less.

The study protocol was approved by the Zagazig University ethics committee, as well as by the Research Centre of the Faculty of Nursing. After obtaining permission to undertake the study, the researchers started with a pilot test and then validated the tool through the opinions of experts in nursing and medical emergencies and primary care. The experts in this study were graduate nurses and physicians, with a minimum of three years' experience in paediatric care.

The Delphi process consisted of two rounds and agreement of 92% was obtained, which indicated good consensus. Modifications were necessary to simplify some terms, so that they were understandable to school learners and the order of questions was changed according to the pilot findings. After that, official permission was obtained from the directors of the two selected schools to collect the data. The researcher provided a training programme to undergraduate nursing students in groups of five. The programme involved teaching nursing students teaching methods used to deliver the

intervention programme information and skills to preparatory school children. Intervention was carried out in four phases.

The assessment phase consisted of the pre-test for needs identification. The researchers started by introducing themselves to the school learners and asked for their participation after obtaining their oral consent. The data collection was then done using the same questionnaire as a pre-test. Each school learner took approximately 15 minutes to complete the form. Analysis of the obtained pre-test data was then done to help with the design of the educational intervention. The planning phase involved designing the programme based on the gaps and needs identified from the pre-intervention assessment, in addition to the literature. The content included FA topics, such as definition, wounds, poisoning, chemicals, electrocution, haemorrhage, burns, fractures and choking, as well as BLS.

The programme topics were organised according to the priority of educational needs among the study participants. The programme consisted of six sessions, including theoretical and applied parts. The school learners were divided into two groups and each group was then divided into three sub-groups. The programme was delivered in six sessions, one hour each, including a lecture, question time and a discussion of the lecture content with the learners. The researchers found that the most suitable time for the sessions was 10 hours at school on Mondays and Wednesdays. The evaluation phase involved immediate post-testing after the programme and a follow-up assessment after two months. The fieldwork lasted from 1 January to 30 April 2012. The forms were filled in again after a follow-up period of two months. Total confidentiality of any information was assured.

Data entry and statistical analysis were done using the SPSS statistical software package (version 16.0; SPSS, Chicago, IL, USA). The generally low levels of satisfactory knowledge among school learners before the intervention were noted. This was most evident regarding choking and BLS, where none of the learners were found to have had satisfactory knowledge. At the other extreme, slightly less than half of the learners had satisfactory knowledge about wounds. At the post-test, statistically

significant improvements were shown in all areas, reaching 100% for definition and choking. At the two-month follow up, slight declines were noticed in almost all areas, with the exception of poisoning and burns, which continued to improve. All areas of knowledge, however, remained significantly higher compared with the pre-intervention level. With regard to the school learners' situational practice, it was noted that none of the learners could correctly describe the proper FA management of any of the situations tested at the pre-intervention phase.

The responses demonstrated statistically significant improvements in all situations at the post-test. Although the percentages of school students with adequate situational practice declined in the follow-up phase, especially for poisoning, the levels remained significantly higher compared with the pre-intervention phase. In total, 99% of the school students had adequate situational practice at the post-test and 88% at the follow-up test, compared to none at the pre-test. The lack of correlation between school students' scores of knowledge and situational practice at any of the three intervention phases was demonstrated. Students' pre-intervention knowledge scores were positively correlated to their fathers' and mothers' educational levels and were positively correlated to a higher job category of the fathers. None of the other knowledge or practice scores correlated with any of the tested demographic characteristics. The model indicates that attendance of the intervention had a positive influence, while being in a union school was a negative predictor.

The FA intervention programme for preparatory school children led to improvement in their related knowledge and practice. The findings suggested the success of this programme, as it demonstrated that attendance of the programme was an independent predictor of improvement in school learners' knowledge. Moreover, the improvement in their knowledge was an independent predictor of their practice scores.

The study was carried out on preparatory school children in two different schools. This early adolescence age group was selected because of their eagerness to learn and acquire knowledge and skills in general, and in particular for information related to their health. The significant changes associated with puberty raised many questions among

children at this age concerning health. In congruence with this, studies recommended 11-year-old children as an appropriate target population for FA training (Bollig *et al*, 2009; Fleischhackl *et al*, 2009, in Wagida & Hanan 2014), or even kindergarten children aged four to five years (Bollig *et al*, 2011). Others have even suggested that FA training should become part of the school curriculum (Lubrano *et al* 2005; Campbell 2012 in Wagida & Hanan 2014).

The majority of the children in this study sample were living in rural areas. This might explain their low pre-intervention knowledge, given the expected lower opportunities to learn FA. Nonetheless, a high number of their parents were educated, which might have had a positive impact on their knowledge and awareness. The correlation analysis showed a positive influence of parents' education on students' pre-intervention knowledge. The relationship between parents' education and children's health awareness and behaviour has been documented in many studies (Choi *et al* 2012; Kherkheulidze *et al* 2012, in Wagida & Hanan 2014). School learners' knowledge was very low at baseline. This was noticed particularly in the areas of BLS and choking, where knowledge was non-existent. The low knowledge level was quite alarming, as these two areas of FA were related to life-threatening and life-saving issues. These results contradicted those of Kanstad *et al* (2011 in Wagida & Hanan 2014), who found very high levels of awareness and knowledge about BLS measures among school children in Norway.

The difference was certainly attributed to the inclusion of this FA information and skills in their schools, and indicated the importance of introducing these issues in schools' curricula, South Africa included. The lack of knowledge about FA among school children was not unexpected, given the low levels of awareness reported among teachers in previous studies (Al-Obaida 2010; Karande *et al* 2012, in Wagida & Hanan 2014). Learners' knowledge about wounds was better, with approximately half of them having satisfactory related knowledge. This was expected, as wounds were the most common types of injuries, especially at this age. Most probably many or all of them had previous experience with wounds and their management and consequences. Open wounds were

the most commonly reported injuries among school children (Ray *et al* 2012, in Wagida & Hanan 2014).

The implementation of the current study intervention led to significant improvements in school learners' knowledge. The acquired knowledge was even retained, as shown by the two-month follow-up results, despite the expected slight declines. The findings indicated success of the FA educational intervention. This success might be attributed to its content and process. The delivery of the programme by undergraduate nursing students might be an important factor in the success of the programme, because of the closeness in age between them and the students receiving instruction. This might have led to better interaction and communication between receivers and senders, which is essential in any educational endeavour. The nursing students could assume the role of authentic competent teachers, because no academic teacher was present during the school sessions; this should be of value in their future career as educators.

Many European countries are using this approach of training medical/nursing students to teach and train school children (Breckwoldt *et al* 2007; Connolly *et al* 2007 in Wagida & Hanan 2014). In the South African context the Department of Health assists the DBE by making nurses available to train learners in schools. School learners' situational practice also demonstrated significant improvements after the intervention. None of the school learners in the pre-intervention phase had reported correct FA management in any of the five situations assessed, compared to almost all of them giving correct responses after the intervention. This points to the success of the intervention and its positive impact on school learners' practice.

The decline in school learners' practice noticed in the study at the two-month follow-up was higher than the decline in their knowledge, although their practice remained significantly better than at baseline. This decline in practice was expected, as skills are more easily lost over time when not practised. This is why any CPR or BLS training course provides a timed-licence, usually one year, or three years in the case of South Africa, which needs to be renewed through a refresher course. In agreement with this,

studies have highlighted this problem of skills falling after a period of six months (Wik *et al* 2005; Einspruch *et al* 2007, in Wagida & Hanan 2014).

The study revealed a difference between the two schools regarding their improvement following programme attendance. While learners in the union school improved less than the other school regarding their knowledge, they experienced more benefit in practice. The researchers hinted that the difference needed to be investigated, as it might be related to the type of school or differences in the delivery of the programme.

The study results led to the conclusion that an FA training programme delivered by nursing students to preparatory school children was effective in improving their knowledge and practice. This conclusion took into account the study limitation of measuring practice through applied knowledge, rather than through skills assessment. The researchers recommended application of this programme in other preparatory schools for confirmation and improvement of its procedures and content, with inclusion of some practical skills to be tested after the programme. Further research is needed to assess the impact of such programmes on the incidence and consequences of school-age child injuries (Wagida & Hanan 2014). The next research study introduces a different aspect of FA provisioning in schools, where nurses and doctors are employed on the schools' staff complement to provide health care services and FA.

3.8 Doctors and nurses may or may not possess the requisite FA skills and knowledge: Research study in India

It is common practice that quite a number of affluent schools employ a resident school nurse or doctor(s). Some schools have a clinic on the school premises. The following study was used to settle this matter in the context of FA provisioning in a school environment. Many schools employ resident school nurses or doctors on their staff. Some schools receive routine visits by specialist doctors on particular days whom learners may consult on various ailments. At the centre of this debate are the following questions:

- 1.Are nurses and doctors trained to administer FA?
- 2.Do doctors and nursing professionals possess the requisite FA skills or not?

3. Is it part of student doctors' and nurses' curriculum at university or nursing college to study FA skills and knowledge?

Joseph, Kumar, Babu, Nelliyanil and Bhaskaran (2014) confirm that research studies indicate that knowledge required for handling an emergency outside a hospital setting at the site of the accident, school or emergency may not be sufficient, as most medical universities do not have formal FA training in their teaching curriculum. The key phrase in this assertion is "outside a hospital setting". Simply put, medical doctors may not have adequate FA skills required outside the confines of a hospital. It would be foolhardy to conclude that nurses and doctors do not have skills to administer procedures such as CPR or apply a bandage. After reading this in literature, I held informal conversations with qualified nurses and doctors in three hospitals, Gauteng province, South Africa. Two nurses confirmed that they had done FA as part of their training. One nurse in private practice said her training did not include FA but she knew procedures such as CPR and BLS. There is a need to clarify the issue further.

First aid is applied to injured or ill persons in any health-threatening setting in order to save life, prevent degradation of the situation or contribute to a treatment process before professional medical care is available. This refers to assessments and interventions that can be performed by a bystander or by the victim with minimal or no medical equipment.

The issue of FA training for nurses and doctors may be different from institution to institution and country to country. According to Pallavisarji *et al* (2014), at some point in a university medical curriculum, students are taught how to handle emergencies in a hospital emergency setting where drugs and other necessities are available. The knowledge they require for handling an emergency outside a hospital setting at the site of an accident or emergency may not be sufficient (Pallavisarji *et al* 2014). This is compounded by lack of the requisite equipment to use at the accident site. Studies have found that knowledge of FA among medical students has always been a neglected subject, hence it should not be surprising to note that even junior doctors at certain hospitals cannot perform FA skills satisfactorily (Ibid). A study needs to be done in the South African context to prove or disprove this assertion. This was outside the scope of this research study.

As the incidence of medical emergencies has been on the rise in recent years, it is important to ensure that health personnel are adequately trained to deal with such events. Very few studies have been performed about knowledge of FA skills among medical students in India (Pallavisarji *et al* 2014).

The objectives of the study by Pallavisarji, Gururaj and Girish (2014) were:

- 1.To assess the level of knowledge of undergraduate students in providing FA care,
- 2.To identify emergencies where lack of knowledge of FA has been demonstrated, and
- 3.To assess students' opinion regarding the need for FA training at medical colleges.

The situation in South Africa may be different and in need of research to find out if medical universities and nursing colleges teach FA in their curriculum.

Pallavisarji, Gururaj and Girish (2014) conducted a study to find out if medical students in India possessed FA skills and knowledge. The cross-sectional study was performed in May 2011 in a private medical college in Mangalore city of south India. The students were briefed about the objective of the study and their informed consent was obtained for participation. A self-administered anonymous multiple-choice questionnaire was used for data collection to assess the knowledge of students regarding the administration of FA in different situations. The questionnaire was pre-tested earlier on a group of 10 house surgeons posted in the department of community medicine and based on their responses, questions were modified before they were distributed in the final form to the participants.

Questions were asked on the management of common FA emergencies such as unconsciousness, heat burns, external bleeding, epistaxis, heat stroke, drowning, shock, choking, electrocution, seizures, poisoning, animal bites, frost bite, foreign bodies in ears and eyes, anginal pain, heartburn, fractures and dislocations. A few questions that were developed in the form of scenarios depicting real-life situations covered all the essential aspects of FA. The face validity of the questionnaire was determined by experts in clinical specialties such as ear, nose and throat, ophthalmology, surgery and internal medicine. Each FA management option was given weighted marks, based on the appropriateness of that intervention for that particular

condition. This was to establish the preferred responses of the students to various emergency situations.

The maximum possible score that could be obtained was 207 and the minimum was 7. Summation of the scores allocated to the most essential FA management options for each medical emergency formed the basis of categorisation of overall knowledge of students about FA. The accumulation of points allocated to “must know” responses was used for deciding the cut-off score for poor performance. Similarly, the cut-off value for moderate performance was based on the cumulative points allotted to “nice to know” responses made less from the maximum score of 207. A score between 147 and 207 was considered good, 67-146 moderate and 7-66 poor knowledge about FA. Incompletely filled in questionnaires were excluded from the analysis.

The data entry and analysis were performed using the SPSS software package (SPSS Inc., Chicago, IL, USA) version 17. A Chi-square test was used to determine the association of socio-demographic variables with the level of knowledge regarding FA. With respect to awareness of FA measures in various conditions, 21% had poor knowledge of FA procedures in shock and gastro-oesophageal reflux disease (GERD). This was followed by poor knowledge of FA procedures in management of epistaxis and foreign bodies in eyes, at 20.4%. All students felt that they had to be competent in FA skills and said that they would not hesitate in applying these in various emergencies in real-life situations. All students felt that these skills needed to be taught from school level onwards and all of them were willing to enrol for any formal FA training sessions at the medical college.

In the study very few students had good knowledge of FA and this was not influenced by whether the student had previously been trained in FA procedures or not. A similar Peruvian study reported that in spite of 52.5% medical students having had prior training in management of medical emergencies, 60.4% had poor knowledge of FA (Joseph *et al* 2013, in Pallavisarji *et al* 2014). A similar Dutch study reported 81% of junior doctors having poor knowledge of FA. A study conducted in Lucknow, India showed that there were less than adequate knowledge and practices in all groups of participants: resident doctors, hospital consultants and private practitioners (Ibid). This meant that FA training is not only required at medical colleges, but that it has to be

reinforced periodically with refresher training workshops in FA. Only a Karachi-based study found that 63.2% of medical students had good knowledge, 28.3% moderate knowledge and 8.3% poor knowledge of FA, which was better than observations in this study (Joseph *et al* 2013, Pallavisarji *et al* 2014). It remains to be seen if students who had FA training in their secondary schools were still competent in FA even if they did not do it at university when they studied medicine.

In the study in India, females had slightly better knowledge about FA than males, which was similar to the findings of a study performed in Karachi (Pallavisarji *et al* 2014). The Peruvian study found a significant association between knowledge about FA and female gender. Senior students in this study had significantly better knowledge about FA compared to juniors, which was similar to the findings of other studies. Most students in this study had poor knowledge of FA management in shock, GERD, epistaxis and foreign body removal from the eyes (Joseph *et al* 2013, Pallavisarji *et al* 2014).

In the study in India, only 14.5% students knew the correct steps of CPR as part of FA management in drowning cases, which was similar to the findings of a study performed in Salem, Tamil Nadu, where the same result was found among 17.1% of medical students. In the Dutch study only 6% of the students knew and performed correct CPR. Two Karachi-based studies reported that 32.2% and 38.8% of participants knew how to perform CPR correctly, which was better than observations in the Indian study. Knowledge of FA management in suspected fractures by immobilisation and in bleeding by part-elevation and pressure bandage in road traffic accidents was good in about 44% students in two studies done at Karachi and 82.7% in the Peruvian study. Only 13.8% students knew the correct FA management of burns, as against 23.2% in an Irish study (Pallavisarji *et al* 2014).

First aid knowledge about what to do in accidental choking by a foreign body was good in only 13.2% of cases, as against 43.6% in the Karachi-based study and 53.4% in the Peruvian study, where students knew of measures such as striking the person between the shoulder blades or performing the Heimlich manoeuvre by hitting the chest. With respect to correct management of convulsions, 24.8% of medical students in the Karachi study knew of the recovery position to avoid asphyxiation and tongue-rolling, as against 13.8% of students in the Indian study. The Karachi study also reported that

30.4% of medical students had good knowledge of FA management in cases of accidental ingestion of poisons, as against 15.8% in the Indian study.

Overall knowledge of FA among students in the Indian study was poor in comparison to student's awareness level in other studies. If a formal FA session is introduced into the medical curriculum then this would provide students with sound knowledge and practical skills, as proven by a United Arab Emirates-based study (Pallavisarji *et al* 2014). This should be complemented by hands-on experience or activities in order to increase students' experiences in practical procedures during medical training, followed by evaluation, as there is a problem with assessment of practical competence.

The willingness of students to be trained in FA skills and their agreement in favour of introduction of such training from school level onwards was similar to findings in the Karachi study where 94.4% of medical students wanted FA training to be part of their curriculum, with 84% suggesting that it should be part of the pre-university curriculum. These measures would ensure that an increased number of FA trainers would be available at the time of any calamity faced by people.

Use of modern techniques, such as simulation with the aid of computerised mannequins as an educational and assessment tool, has been done before and found to be very effective in a few studies. Students in a New Zealand study, for example, felt that the simulations were a reasonable measure of their abilities and 91% felt that such simulations should be included in their end-of-year assessment. As current medical undergraduate training does not ensure that new graduates will be able to intervene effectively in an emergency, these simulation-based workshops should be incorporated into the undergraduate curriculum, both for education and assessment of competence in emergency management. Simulation has in fact been described as an ethical imperative, but has not yet been widely incorporated into the medical undergraduate curriculum as it should have been. No similar studies on awareness of FA measures among medical students have been done in India before. The study revealed that awareness of FA measures needs to be improved among students. This is possible by introducing formal FA training in the medical curriculum.

The level of knowledge about FA was not good among most students. The study thus identified the need for introducing formal FA training classes for medical students so that the trained students would be competent enough to provide FA independently and spontaneously in real-life situations. The study also emphasised the need for FA training perceived by medical students, as there is no formal FA training in the medical curriculum. This should be backed up with periodic refresher training, as the level of knowledge of FA skills did not differ significantly between students with previous training in FA and those without such training. The study also identified key areas in which FA knowledge was lacking. Such studies could be conducted to evaluate the knowledge and skills of FA among doctors and medical students in South Africa. In the next section I will focus on South Africa.

3.10 FA research studies in South Africa and Gauteng province

FA provisioning in the South African context is governed by the Constitution of the Republic of South Africa, the NEPA and the SASA. NEPA vests all power in respect of FA administration in the MEC for the Gauteng provincial government. The MEC, through the district health, safety facilitators and school principals, has to ensure that the mandate to administer FA in schools is carried out.

Other pieces of legislation also specify the standards and procedures to ensure health and safety at the workplace in general, schools included. The South African Labour Guide (Boshoff 2015) and the draft General and Safety Regulations gazetted on 28 October 2005 (Government Gazette, No. 28162), Regulation 7, provides the specifications relating to FA, emergency equipment and procedures. The regulation states that “an employer shall take all reasonable steps that are necessary under the circumstances, to ensure that persons at work receive prompt FA treatment in the case of an emergency”. This regulation also applies to schools. For 10 employees the employer needs one first aider. This is a compulsory legal appointment and the first aider should be readily available during normal working hours. According to the regulations, the ratio of first aiders should be:

1. For shops and offices, one first aider for every 100 employees.

2. Other workplaces including schools; one first aider for every 50 employees.

3. The regulations stipulate that the first aider should possess a valid FA certificate, issued by a person or organisation approved by the chief inspector for this purpose.

Currently there are no previous studies specifically evaluating schools' administrative efficacy in FA provisioning in South Africa or Gauteng province.

The GDE, in collaboration with the DHSD, is responsible for immunisation and vaccinations of all South African children. This includes immunisation and vaccination in all schools. The DHSD also runs a programme for schools in general to cater for HIV/Aids transmission, drug abuse, violence, safety and staff wellness. There has not been a deliberate drive towards FA provisioning specifically. FA provisioning in schools falls under the auspices of the school health and safety programme. Cases cited in the first chapter on injuries and accidents in schools requiring FA provisioning revealed a gap on the level of FA provisioning research in the South African school context.

One academy providing FA courses for schools in South Africa asserts that its FA course is designed for the school environment and is ideal for teachers and teachers' assistants who work in pre-schools, day care centres or pre-primary, junior and senior secondary schools. The academy focuses on CPR and FA techniques. This shows that there is a realisation of the need for FA in schools in South Africa and organisations exist to train teachers. It seems as if the need to train teachers, learners and pre-school children has not dawned on the DBE and the MEC. It remains to be determined in my study if schools are utilising these facilities.

A separate organisation running a CPR course for South Africans provides hands-on practice in CPR skills, choking in infants and the use of resuscitation masks, using life-size child and baby dolls. A workbook and certificate are provided to each participant during the course. The certificate is valid for two years. All trainees are registered with the Resuscitation Council of South Africa

3.11 Summary of first aid findings in previous research studies

Previous research studies have proffered the following findings:

1. Important differences between children and adults and the stage of childhood should be taken into account during emergency care and FA administration.
2. The differences between these groups exist not only in anatomical, physiological, and psychological development, but also in exposure to various injuries and illnesses. Children are more prone to injuries than adults. FA provisioning is needed more in pre-schools than high schools.
3. The mental and physical abilities of children are not developed enough to allow them to protect and defend themselves; they sustain accidents and injuries more frequently and therefore require FA more often than adults (Çavus, oğlu 2002, in Wagida & Hanan 2014). There is a need for health education and promotion.
4. Once injury or sudden illness has occurred, providing effective FA can make the difference between life and death, rapid versus prolonged recovery and temporary versus permanent disability (American Safety & Health Institute 2008 in Wagida & Hanan 2014).
5. Knowledge of FA, which constitutes life-saving treatment for injuries or unexpected illnesses, is important for every individual at every age.
6. First aid and BLS are so important that teaching basic FA should be compulsory in all schools (Bas,er *et al* 2007, in Wagida & Hanan 2014).
7. Childhood injuries are a growing global public health problem (WHO 2010).
8. Although children are admitted to emergency departments every day with injuries sustained at home, school and elsewhere, few receive FA before arrival (Rogovik & Goldman 2006, Ali *et al* 2010, in Wagida & Hanan 2014).
9. According to the International Federation of Red Cross and Red Crescent Societies (2009, in Wagida & Hanan 2014), in the UK there are three million attendances at emergency departments per year for injuries that FA can treat.
10. FA can be taught and should be taught early to pre-school children to inculcate empathy.
11. There is a general feeling of reluctance to administer FA in an emergency for fear of making mistakes and possible lawsuits.
12. First aid is defined as the assessments and interventions performed by a bystander or by the victim with minimal or no medical equipment (Markenson *et al* 2012 in Wagida & Hanan 2014).

13. First aid can save lives and limit damage until professional help has arrived (Van de Velde *et al* 2007, in Wagida & Hanan 2014).
14. First aid is an effective life-preservation tool at work, school, home and in public locations (International Federation of Red Cross and Red Crescent Societies 2009).
15. First aid can make the injured child feel more comfortable, because it can reduce bleeding or pain (Graham *et al* 2009, in Wagida & Hanan 2014).
16. The consequences of injury can be minimised by the administration of FA, and in some self-limiting or minor injuries, only FA is required (Difazio & Atkinson 2005, in Wagida & Hanan 2014). In some cases there may be no need to refer the injured learner or teacher to a clinic or hospital after the administration of FA.
17. The potential value of FA training for laypeople has recently assumed heightened importance in the context of both man-made and natural mass casualty incidents and correspondence.
18. Starting FA education early might strengthen interest, empathy, motivation and the ability to administer it. Bollig *et al* (2011) recommended that all fit laypeople above the age of ten years should learn LSFA skills, including BLS and CPR. This was supported by Baser *et al* (2007, in Wagida & Hanan 2014), who emphasised that teaching FA should be compulsory in schools.
19. There is need for further research into the provisioning of FA in schools.

3.12 Implications of previous research findings for this study

An important finding in the literature was that a significant barrier and main concern of laypeople giving FA to acutely ill or injured people is the fear of making mistakes. It was discovered that in Austria, 68% of the 597 participants in a study stated that they would not provide FA because they feared doing something wrong (Pallavisarji *et al* 2014). Several studies have also shown a clear relationship between the level of FA training and the quality of FA measures provided (Li *et al* 2011, Wagida & Hanan 2014). This underlines the importance of FA training for the public in general and schools in particular. The degeneration of FA skills and knowledge over time also illustrates the importance of periodic testing to keep FA up to date.

Many people faced with an accident, illness or injury would call an ambulance or emergency services rather than administer FA themselves. This is not the essence of

FA. Literature alludes to this “buck-passing” gimmick. It was crucial that I took this fact into consideration in school FA administration. It has also been noted, unfortunately, that FA training does not increase the rate of helping because of inhibitions caused by fear of making mistakes and lawsuits. Training on its own does not help much, if it is not tied up with the removal of hindrances to FA assistance. Inculcating values of empathy are invaluable in jogging the interest to help in an emergency, especially in pre-schools. This empathy has to be developed from a very early age in order for it to develop long-lasting roots. Research studies emphasised the need for empathy to be part and parcel of the child’s growing up. The motivation to help others is paramount and the helping rate can probably be increased by FA courses that include strategies to overcome inhibitors of emergency helping behaviour. This factor is invaluable for my study because an understanding of factors that influence FA provisioning helps to get a better grasp of the administrative efficacy of FA provisioning in a school set-up.

There are many examples in literature of children who have provided FA measures or saved lives by recognising life-threatening emergency situations in the media. In a number of cases small children have saved the life of a parent at home just by making an emergency call and informing the emergency medical service or the fire department (Bollig *et al* 2011). In one cited case from Germany, a four-year-old girl saved the life of her 31-year-old mother who suffered from hypoglycaemia by calling for help at night. This case illustrates that a young child may be the only person present in case of an emergency and that FA education should therefore start as early as possible (Bollig *et al* 2011). In a school environment, such help from learners may assist not only fellow learners, but also teachers and other school personnel.

Several researchers have documented that school children can learn and provide FA and life-supporting FA measures and have advocated that primary school children should learn FA in school. In one study of primary school children, it was demonstrated that six-to-seven-year-old children could give basic FA to an unconscious patient and that an FA course with five lessons led to a significant increase in both FA knowledge and skills (Li *et al* 2011). This course included airway management and application of the recovery position. The conclusion from this study was that primary school children should receive FA training, starting in the first grade.

The study of the level of FA knowledge and skills among Indian undergraduate doctors illustrates that FA is a skill that needs adequate training (Pallavisarji, Gururaj & Girish 2014). The fact that medical students could not administer FA adequately goes to show that even medical doctors and nurses need to be trained in FA. It does not help much to summon a school nurse who is always in the clinic and not in the classroom or on the playground or sports field where injuries and illnesses occur most of the time. Incidents that happen on the playground or in the classroom need to be attended to because time may be the deciding factor in saving a life.

Research has indicated that early training in FA can lead to children pursuing it as a way of life. In one testing scenario, children had to assist an unconscious child involved in a mock bicycle accident without any help from others. The instructor told the tested children, "A friend of yours has fallen from the bicycle and hurt his head. He is lying still on the ground and does not move. What are you going to do?" Questions from the children were not answered and no other help was given in order to accomplish the FA measures. The children had to decide and to act on their own. One child played an unconscious victim. Children from the study group were tested two months after course participation. The children's performance in an FA scenario was registered as tasks accomplished or not. The study illustrated that FA training was invaluable in the lower echelons of the school system; "train a tree while it is young" goes the popular English adage and you "cannot teach an old dog new tricks" affirms the other.

Having indicated what studies say about FA in schools in different parts of the world, and in South Africa, the next section will briefly chronicle what should be done in the light of the research findings to reflect the need for a review of each individual schools' emergency plan, FA kits and the school's preparation for any emergency. This is done to set a precedent and provide a check-list that can be used to benchmark FA provisioning for this study. The ideal is based on the premise that prevention is better than cure, hence the school's emergency plan should concentrate on the following:

- 1.How to prevent an emergency by making the school as safe as possible.
- 2.How to prepare for an emergency so that it is handled effectively and quickly and everyone in the school is aware of the emergency plan, e.g. knows where the FA kits are, emergency numbers, school protocol regarding parents, etc.

3. Review emergency numbers for cell-phone and landline.

4. Provide a list for the FA kits with someone to check the contents frequently and replenish stock if necessary.

5. Train teachers and learners in FA skills and knowledge.

From the literature it is paramount that a school FA course should cover *inter alia* the following:

1. CPR in babies

2. CPR in young children and adults

3. Choking in babies

4. Choking in young children

5. Allergies and asthma

6. Fits and fevers

7. Shock

8. Bleeding

9. Concussions

10. Broken bones, sprains and bruises

11. Burns

12. Bites and stings

13. Poison emergencies

14. Vomiting and diarrhoea

15. Constipation

16. Fever management.

These are the ailments that tend to affect learners and teachers in schools to a greater extent.

3.13 The identified “gap” in the studies

There is overwhelming agreement in the studies on the need for FA in schools. What has apparently not been studied is the administrative efficacy of FA provisioning in the school context. In the South African context both NEPA and SASA are explicit on what

should be done in schools as far as FA provisioning in schools is concerned. A poster that has been made widely available to all Gauteng schools calls these “non-negotiables!” Among these school “non-negotiables” is a school health and safety policy that encompasses FA kits in every school. No study has been conducted to find out to what extent the school managers are implementing the provisions of the relevant sections of the acts of parliament to ameliorate injuries and illnesses happening in Gauteng schools. All the previous research approaches took on a quantitative tradition to study FA. There is no qualitative research tradition on the subject of the values and interpretation of human experiences with regard to FA provisioning in schools. This is the gap that this study sought to fill.

3.14 Summary

Chapter one introduced the study, Chapter two set the stage for the study by reviewing literature on FA provisioning in the context of schools. The third chapter described previous research studies done in the field of FA provisioning in schools the world over. The studies offered a glimpse into the gaps and knowledge gained about FA. This information was invaluable for this study, as they provided me with the springboard to launch the research study. The previous chapters provided the ‘birthing room’ for my research study: a cartoonist’s caricature that shaped the research design and methodology for my research topic. The next chapter will describe and explain the research design and methodology used to study FA provisioning in Gauteng schools. The research design and methodology made incessant reference to the global narrative in the literature with regard to FA provisioning in schools.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

Previous research studies in Chapter three indicated a gap in the literature that gave me the impetus and rationale to embark on this study. This was accomplished by documenting previous research studies with reference to FA provisioning in different parts of the world. Chapter four proceeded to describe the research design and methodology used to carry out this study. In research there is no need to “reinvent the wheel” (Gelderblom 2010). It was necessary to find out what previous researchers had discovered about the FA topic under study so that the findings could form a bedrock on which this current study could be built. According to Gelderblom (2010), “if a gap is identified in the literature, it gives the researcher justification to go ahead with the protracted study”. Previous research studies uncovered a number of attributes of FA provisioning in a school set-up that gave me the justification for my research study.

Research has proven that it is possible to teach FA to children from as young as four years (pre-school) to high school. Research has also confirmed that a trained first aider administers FA better than an unskilled one, underscoring the importance of FA training. It was also uncovered by research that FA knowledge and skills decrease over time, hence there is a need to limit the validity of FA certificates to about three years. It is necessary thereafter to retest first aiders in order to keep their knowledge and skills up to date.

Gelderblom (2010:4) further argues that in research we accept what other people know and tell us, so that “we are spared the enormous task of starting from scratch.” The previous chapter documented research findings on FA provisioning in schools in different places throughout the world. Although the research traditions used in the studies assumed quantitative approaches, the findings were invaluable in providing the basis for my research.

The following section describes the research design adopted for this study. Social science needs a design or a structure before data collection or analysis can commence

and the work plan will flow from the project's research design (Gelderblom 2010). The purpose of a research design is to ensure that the evidence obtained enables the researcher to answer the initial question as unambiguously as is humanly possible by obtaining relevant evidence needed to answer the research question, to test a theory, to evaluate a programme or to describe some phenomenon accurately (Ibid).

When designing research we need to ask: given this research question or theory, what type of evidence is needed to answer the question or test the theory in a convincing way? (Gelderblom 2010). According to Yin (1989:29, in Gelderblom 2010), the research design deals with a logical problem and not a logistical one. In social research the issues of sampling, method of data collection, document analysis and the design of questions are all subsidiary to the matter of "what evidence do I need to collect?" (Ibid). Design is different from methods by which data are collected, hence this section will be on research design and methodology. According to Yin (1989, in Gelderblom 2010), failing to distinguish between design and method leads to poor evaluation of design. Design, in layman's terms, is a pattern. Method is how the researcher will do what he/she planned to do in the design. The purpose of a design is to reduce the ambiguity of much research evidence (Ibid).

Qualitative health research is a research approach to exploring health and illness as they are perceived by people themselves, rather than from the researcher's perspective (Morse 2012:21). The data informed the findings. Denzin and Lincoln (2002:3, in Morse 2012) define qualitative research as a "situated activity that locates the observer in the world." Researchers use qualitative research methods to elicit emotions and perspectives, beliefs and values, actions and behaviours and to understand participants' responses to health and illness and meanings that they construct about the experience (Morse 2012). The administrative efficacy in FA provisioning in Gauteng schools was one such subject of research that sought to elicit emotions, perspectives, beliefs, values and behaviours of teachers and school managers in response to illnesses and injuries experienced in schools.

Morse (2012) purports that qualitative health research is defined by two parameters, viz focus and methods. The focus is on the health-illness continuum and the methods are primarily inductive, i.e. they are primarily designed to gain information about the

person's or groups' perspective or behaviour (Ibid). The ideal situation every school would wish to attain is one devoid of illness, injury and disease, but that can only exist in utopia. To re-align FA provisioning in schools, I had to reconsider the research questions that defined the parameters of this study.

4.2 Restatement of the research questions

The investigation was guided by the following two main research questions:

- 1 What are the literacy and competency levels among school managers, educators and learners in Gauteng schools of the National Education policy Act 27 of 1996 on FA provisioning in schools in South Africa?
- 2 How do these literacy and competency levels affect FA provisioning practices in schools?

4.2.1 Sub-questions

- 1 What are the levels of FA literacy and competency among learners, educators and school managers in Gauteng schools?
- 2 What medical conditions in the form of injuries and illnesses are experienced at schools in Gauteng province?
- 3 How does the school management deal with medical emergencies?
- 4 What role does the school management team play in the provisioning of FA knowledge and skills to learners and educators in schools?

4.3 Theoretical framework

This section will expand on the theoretical framework that underpinned this study. It was necessary to foreground the theoretical/philosophical paradigm used for this study in this section in order to link it with the subsequent research design in the next section. According to Hammond, Howarth and Keat (1991) health, health care and health services delivery are subjective phenomena that are understood, enacted and experienced by human beings. This is very relevant to my study that looks at FA

provisioning in schools. Illnesses, injuries and deaths are all experienced by teachers and learners in schools. Phenomenology is the search for meaning or understanding of phenomena that is anything that appears or presents itself, as one experiences it (Ibid). Phenomenology shifts our focus from things and nature to human beings and their lived worlds; from explaining to clarifying (Giorgi 2005). There is a need to shift focus to the health issues impacting on learners and teachers in a school set-up. Babbie and Mouton (2001:28) “the phenomenologist emphasises that all human beings are engaged in the process of making sense of their (life) worlds.”

This study on FA provisioning is important in informing education authorities about the status-quo in schools. Phenomenology allows researchers to gain insights that inform practice strategies. Of all methodologies for qualitative health research, phenomenology may be the most confusing (Tymieniecka 2002) The questions that need answers are: Is phenomenology social or philosophical research? Is it a method or a paradigm? The answer is, it depends! Phenomenology can be either transcendental/descriptive, interpretive/hermeneutic/existential or social (Ibid).

For this study, I adopted the interpretive, hermeneutic, existential phenomenology. This is a developed and extended methodological approach which emanates from questions of epistemology, how we know something, to questions of ontology, the nature of existence (Giorgi 2005). When related to FA, the ontological connotations imply that there is a body of knowledge “out there” that is called FA, what is it? Epistemological connotations imply that “how do we know?” this body of knowledge. Existential phenomenologists do not consider that we can suspend our preconceptions. Rather, they believe that even the researcher's presence shapes the lived experience that is being investigated (Leonard 1999; Golomb 2002 & Raynova 2002). Phenomenology arises from everyday life world where practices and meaning shared between human beings become intermingled and merged (Darbyshire 1999). This important aspect shaped my research study.

To understand FA and its efficacy in schools required a multi-dimensional approach. Human nature and experience is complex and multi-dimensional (Leonard 1999; Golomb 2002 & Raynova 2002). Human inquiry stands to be advanced by holistically exploring the philosophical, social, psychological, emotional, physical and spiritual

dimensions that are inextricably intertwined components. In the current context, health, health care and health services delivery are socially constructed and presented in ways that are all but devoid of subjective human elements (Ibid). As a theoretical foundation and methodological approach for human inquiry, phenomenology is at one and the same time, both social science and philosophy, overarching research paradigm and research methodology, description and interpretation (Ibid).

Phenomenological research holds exciting possibilities for researchers choosing to undertake more creative scholarly work in the field of health (Leonard 1999; Golomb 2002 & Raynova 2002). Clarification of meaning through careful considered execution of the art of phenomenology holds potential to create deeper understanding of possibilities of how human beings feel, experience and act in the world, in given circumstances and in relation to one another (Ibid). This study sought to understand and evaluate the administrative efficacy of the FA provisioning with the school setting. The evaluation of the FA provisioning will expose discrepancies between perceptions and reality. This is supported by Gorgi (2005) who asserts that such understanding often exposes discrepancies between actual lived experiences and what that experience is thought to be.

Given commonly held and enacted understandings of health issues, now perhaps as never before, demand scholarly phenomenological investigation (Leonard 1999; Golomb 2002 & Raynova 2002). This is not to deny the importance of scientific research in this field. It is simply to ensure that the human component inherent in all health issues are retained, addressed and forever evolving (Ibid). The next section deals with the research design that was adopted to do this study. Due to the ever-evolving nature of health issues, the research design adopted assumed an emergent approach. We continuously interpret, create, give meaning to, define, justify and rationalise our actions (Babbie and Mouton 2001:28). According to the phenomenological position, the fact that people are continuously constructing , developing and changing the everyday (common-sense) interpretations of their worlds, should be taken into account in any conception of social science research (Ibid).

4.4 Research design

The research design is a framework that shows which individuals will be studied, when, where and under what circumstances (McMillan & Schumacher 1997:162). The research design selected was closely linked to the research aim and objectives. The deliberate selection of a particular design is supported by McMillan and Schumacher (1989:8), who assert that “the deliberate choice of a design increases the likelihood that the data will yield information on the research question.” According to Cohen and Manion (1995), in qualitative research the researcher typically uses an emergent design and makes decisions about the data collection strategies as the study progresses. This was the approach that was adopted for this study.

4.4.1 The emergent research design

In qualitative research, emergent design involves data collection and analysis that can evolve over the course of a research project in response to what is learned in earlier parts of the study (Canadian Institute for Health Research 2005). The emergent research design requires flexibility and the ability to adapt in the light of changing circumstances. For this study I had to shape and mould the research according to the demands that emerged. Earlier experiences informed subsequent approaches to the study. The emergent model assumes that the research design is shaped as the study progresses in order to suit circumstances as they emerge. The fact that the researcher may not know what lies in store requires flexibility and agility in adapting to changing situations as the research journey unfolds. The emergent nature of problem definition in ethnographic research is encapsulated in a statement made by Agar (1980:70 in Cohen and Manion 1995) who purports that “you cannot specify the questions you are going to ask when you move into a community; you do not know how to ask questions yet. You cannot define a sample ...”

Flexibility of the emergent research design should not, however, be taken to imply lack of rigour (Allen 2004:12). The emergent research design takes its form as dictated by the requirements of the study and because of that, it was the most suitable for this study.

Another facet of the qualitative emergent research design is that in field research, data generation and analysis are undertaken concurrently in an iterative process (Allen 2004:12). My study was a good example of data collection and analysis occurring at the same time. At the beginning of a study, data are collected on a wide range of issues, the focus of the work subsequently narrowing as strategic decisions are made about what to observe, who to speak to and what questions to ask (Ibid). For this study, initial interviews and FDGs exposed inadequacies and shortcomings that were corrected in subsequent interviews and FDGs. Subsequent interviews and observations were tailor-made to suit changing circumstances and situations. Both feedback and feedforward shaped the research design.

Recrafting of the data-gathering instruments ceased when all loopholes had been closed and mistakes that had previously been made had been corrected in subsequent interviews. In the sampling, decisions were driven by the requirement to answer the research questions. Data generation ceased when no new cases could be identified that modified the emerging analysis. This is referred to as 'theoretical saturation' or data saturation and in practice is reflected in a growing feeling of boredom on the part of the researcher (Allen 2004:13). When the desire is to make empirical generalisations, decisions about data generation are driven by the need to establish that the cases being studied are sufficiently similar to other cases of the same type to permit case-to-case transfer (Ibid).

The use of the emergent research design brings in ethical implications. Specific questions or other elements of data collection may be difficult to anticipate, identify and articulate fully in the research proposal in advance of the project's implementation (National Health and Medical Research Council Australia 2007).

This research study had to get approval from the UNISA ethics committee before data gathering commenced. Anticipated experiences had to be catered for in the ethics application. It implied that it was not feasible to alter research methodology to suit emerging requirements which could deviate from what had been approved initially by the research ethics committee. This is supported by the statement that says researchers shall consult when, during the conduct of the research, changes to the data collection procedures may present ethical implications and associated risks to the

participants (National Health and Medical Research Council Australia 2007). This is in contrast to the argument by the Canadian Institute of Health Research (2005) which asserts that in emergent design, some changes to the research design will not merit requiring additional research ethics committee review, as they are not necessarily significant changes to the approved research.

As the research study progressed it was necessary to keep in mind the fact that ethical considerations needed attention where methods were at variance with approved standards. I was cognisant of the fact that consistent with changes of data collection procedures, was a change in the level of risk that may have affected the welfare of the participants, it was necessary to seek approval from the research committee prior to implementing such changes ((National Health and Medical Research Council Australia 2007). It was incumbent upon me to realise the fact that although initial research questions may be outlined in the formalised research proposal, the ethics committee should be aware that it is quite common for specific questions as well as shifts in data sources or discovery of data sources to emerge only during the research project (Ibid).

Due to the inductive nature of qualitative research and the emergent design approach of the research, some new aspects may evolve as the project progresses. Researchers using emergent design should provide all the available information to allow for a proportionate approach to research ethics review of the research project (Canadian Institute of Health Research 2005). In cases where final versions of an interview schedule have not been developed at the time of the ethics review of the research project, researchers should submit a draft set of sample questions, thematic categories or other outlines of the procedures to be followed in data collection (Ibid). Research ethics committees should ensure that the data collection is conducted according to methodological requirements, and acknowledge that interview guides may change to adapt to emerging data or circumstances in the field (Social Sciences and Humanities Research Council of Canada 2007).

Having described and explained the research design, the following section continues to describe the methodology used to carry out this study. The section also proves that the unexpected and new circumstances that emerged during the study helped to shape and mould the research design.

4.4.2 The researcher as a data-gathering tool

It was typical of this research study that I assumed a data-gathering role because in qualitative research, the researcher becomes the data-gathering instrument. In field studies, data are generated through the researcher's participation in a social setting (Allen 2004:7). In quantitative research, questionnaire surveys are the preferred methodological tool, whereas in observational studies, the field worker becomes the research instrument (Ibid). Information on FA provisioning in schools was gathered by me as the data-gathering instrument through interviews, observation and FDGs.

4.4.3 Data collection methods and tools

According to Jenne and Green (1976:33), data for evaluation are collected from existing records or by use of a wide variety of instruments. For this study, data were basically gathered through observation, face-to-face interviews with school managers and FDGs with learners and teachers.

Face-to-face structured interviews were held with selected school principals, FA appointed persons, pre-school managers and education officials responsible for health and safety at the provincial offices of the GDE. Babbie and Mouton (2001) argue that FDGs and interviews have high face value, as one can observe body language. I preferred to use interviews and group discussions instead of questionnaires for the reason that the former allowed me to observe gestures, body language and facial expressions that I could not get from questionnaires. I could also follow up on answers immediately, something that would not have been possible with questionnaires. If I needed further clarification on a point, I could ask the participants to elaborate. In interviews I could also observe non-verbal cues and gestures. The research questions demanded that I had to take the qualitative route because the evaluation of the administrative efficacy of the FA provisioning according to NEPA provisions could not be quantified, but only described using words.

According to Polkinghorne (2005), data sources for qualitative research are interviews, observations and documents. Interviews sought to elicit information that was subsequently analysed in the light of the research topic. Focus group interviews with learners were carried out in a classroom and a gymnasium hall after school hours so as

not to interfere with teaching and learning. Focus group discussions with teachers were held in the staff room after school hours. Permission from parents was sought by means of assent letters in the case of minors. Deviations from the interview schedule were allowed to accommodate individual situations and circumstances. Probing questions were used to dig for detailed information.

The primary sources of data were audio-recordings of interview transcripts, FDGs and observations. It was crucial that the data should be in a form that enabled me to understand and interpret it for subsequent coding.

4.4.4 Population and sampling procedures

It was not feasible to include all schools, learners, teachers, school managers and principals in Gauteng province. The researcher purposefully selected six different schools for study. The sampled schools ranged from Grade R to high school. The study population comprised all pre-schools, primary and high schools in Gauteng province. Two pre-schools, two primary schools and two high schools were selected for study, using the purposive, or judgemental sampling method. Schools that were information-rich were selected for study.

Two pre-schools were selected for this study. There are different types of pre-school ownership models in Gauteng province. I selected one privately owned pre-school for my study because many of the deaths and injuries reported in the printed and electronic media in Gauteng province occurred in privately owned pre-schools. The other pre-school I selected was well-resourced. This pre-school belonged to a well-established public institution of higher learning and was established for the sole purpose of providing day-care for the children of the institution's workforce. The pre-school was run by a principal who was accountable to a board of governors. Pre-school ownership in Gauteng province falls into one of these two categories. The GDE does not own pre-schools *per se* but regulates and provides space for pre-schools in public schools.

Two primary schools were selected for this study. The first primary school was a former model "C" public school catering for middle-class and affluent learners. It is important to note that the post-1994 migration of learners from township schools to the former model "C" schools for better education has resulted in these schools enrolling learners from

poor backgrounds as well. Historically, public schools in the South African landscape were grouped into quintiles, depending on location and how well-resourced they were. During the apartheid era there were five quintiles, with quintile one being the poorest schools and quintile five being the affluent schools. Former model “C” schools catered for white children during apartheid and were generally better resourced than the township schools. According to Govender (2015:4), “prior to the new dispensation in 1994, the term ‘Model C’ was coined to describe former semi-private and mostly white schools that fell under the control of the House of Assembly.” These schools received less funding from the government but had greater autonomy. Although the term was scrapped, it continues to be used to describe wealthy schools (Ibid).

I selected the former model “C” school to serve as a model case of FA provisioning level because of its relative affluence when compared to township schools. The second primary school selected was from a township. The township primary school was purposively selected as an extreme example at the other end of a continuum to provide a comparison with the relatively well-resourced former model “C” primary school. This township school was given the label “D”.

Two high schools were selected for this study. One school was an exclusive “top-notch” private school and the other one was a former model “C” high school. The former model “C” school was identified as school “E”, while the affluent school was labelled “F”. The different schools were selected for the sake of comparison and to ensure adequate coverage of the different types of school in the GDE’s landscape. Gauteng province is a relatively “urbanised” province with fewer rural or farming community schools. The province is the economic and commercial hub of South Africa and I did not select a far-flung rural or farming community school for this reason.

4.4.5 Observations

According to Smith, Sinclair, Raine and Reeves (2005:165), there are two main types of qualitative methods that may be useful in health care evaluation: observation and in-depth interviews. Observation techniques seek to examine what people do as well as what they say. Qualitative observation may be non-participant or participant; it may also be covert or overt. I did not opt to do participant observation because it raises “important

ethical considerations as the participants are usually unaware that they are being observed” (Smith *et al* 2005:165). For this study, I used non-participant observation. Non-participant observation describes the process of visiting one or more places where health care is occurring and observing what patients and staff do and say (Smith *et al* 2005:165). It was covert non-participant observation “where the people being observed were unaware of the observer” (Ibid). This refers to a situation where the researcher simply watches without being noticed. I did not opt for overt observation where the subjects are aware that they are being observed because “if the subjects are aware that they are being observed they may alter their behaviour, perhaps from increased self-consciousness, or to present themselves in a favourable light; or to adhere to official rules of comportment” (Ziebland & Wright 1997, in Smith *et al* 2005:166). I observed learners during break and during sport activities in the afternoon at the particular school where I was teaching. I could not do the same observation at the other schools for the reason that I had to be on duty during working hours. I could only observe the provisioning of FA by learners and teachers during tea-breaks and sport events. I had obtained permission to observe learners from the principal and the chairperson of the SGB. All the observation parameters were set out in the observation protocol (Appendix G).

I happened to be involved with the school’s football team as a manager and occasionally travelled to other schools on soccer tournaments. This gave me an opportunity to observe FA provisioning during such tournament matches as well. After obtaining permission from the school authorities and the SGB I observed FA activities over four months using an observation record sheet. I included a specimen of one month’s observation record findings in the next chapter on research findings. A copy of the observation sheet is also included in this thesis (Table 5.5). During the single tea break in the school, learners were restricted to the school area between classrooms and the school soccer fields, netball and basketball courts. It was part of teachers’ responsibilities to take turns to monitor learners during the tea breaks in what was called ‘ground’ or ‘break’ duty. I had to move around this area recording the provisioning of FA.

Sport activities took place after school hours. The sport disciplines that I observed at the school included football, netball, hockey, basketball and cricket. Observation as a research tool entails consideration of a range of factors (Allen 2004). I chose to assume a detached role rather than an ethnographic one. Established on the relative merits of familiarity and detachment in observational research, the 'insider' position is founded on the case for developing an affiliation with research subjects in order to ensure an authentic account while the 'outsider' position is built on the claim that a detached stance can ensure freedom from bias arising from too deep an immersion in the field (Bonner & Tolhurst 2002, Gerrish 1995, Reed 1995, in Allen 2004). This was necessary to avoid bias because I was a member of the school's teaching staff. An insider participant observer can sometimes be desensitised to those features of the setting that would be interesting to others with no prior association. This insight is encapsulated in the notion of researcher reflexivity, which recognises that rather than devising strategies to limit 'bias' it is more productive to work towards a better understanding of the fieldwork role and its impact on the research findings (Allen 2004).

Evidence of careful attention to the fieldwork role and analytic sensitivity to how study data were generated was an important quality indicator in my observations. There was a need to separate what I knew from what actually played out on the playground. My own background is in teaching and relationships in the field therefore required careful management in order to avoid the pitfall that I was more closely aligned with what I knew as opposed to what had actually happened in the field. Managing such 'closeness' or 'detachment' was consciously attended to and accomplished by the way I talked and acted (Hunt & Bedford 1994, in Allen 2004:10). There were incidents of FA that had happened before I embarked on my study that I excluded from my observation simply because they happened outside the timeframe of my research study. In analysing the data, I did not allow my prejudices to influence data findings in other schools. The research findings moulded and informed the study.

During observations I did not suggest or influence FA provisioning actions. Another issue that warranted attention in planning the observation role was the extent of participation in the setting. In my observation protocol, I had stipulated the parameters

of what I was going to do during the observation. No camera or video recorder was to be used during observation for ethical reasons. My observation was limited to transcription and recordings on a sheet of paper (Table 5.5). In this study I wanted to assume a complete observer role by not taking part in the FA provisioning except where the situation demanded that I intervene to act in an emergency as demanded by my duties and responsibilities as a teacher acting in *loco parentis*. I was also careful not to “cherry-pick” FA incidents that validated or confirmed reviewed literature findings.

Methodology textbooks often describe different modes of participation in terms of Gold's (1958) continuum, which extends from complete observer to complete participant (Allen 2004). In actual practice, however, within any one study, a researcher may adopt a number of positions along this spectrum, depending on the aims of the research and circumstances in the field. I sometimes participated in the work, but on other occasions I adopted more of an observer role, positioning myself in a strategic spot to observe the ebb and flow of playground life, observing discrete activities, such as FA administration or patient processing (Allen 2004). It became problematic where I was expected to let the incident play out without my interference for the sake of my research on the one hand, and the need to give FA in fulfilment of my obligatory duties as a teacher acting in *loco parentis* on the other. The observer's level of participation in a setting or social group has important implications for the type of field data it is possible to generate and consequently the analytic possibilities of the research (Ibid). To achieve this, it was necessary to generate detailed field notes of naturally occurring interaction. The findings on the observations were illustrated by Figure 5.1 in the next chapter on the analysis of findings.

According to Allen (2004:11), observation, which he prefers to call fieldwork, is labour-intensive, demanding of resources, and requires a degree of flexibility and responsiveness on the part of the researcher. Doing observation ‘at a distance’ presents some interesting personal and intellectual challenges that are rarely discussed in the methodological literature and that need to be built into all aspects of the research design (Ibid). Field researchers, however, are often especially reluctant to impose prior assumptions on the people or settings being studied, particularly when researching issues or social groups that are poorly understood and/or relatively unexplored,

preferring instead to allow phenomena of interest to be uncovered (Allen 2004:11). This important factor formed the hallmark of my study.

4.4.6 The record sheet

Literature alludes to the fact that data generated through observation are typically recorded in the form of field notes (Allen 2004:17). Writing field notes is the process through which scenes, actions, dialogues and experiences are turned into written text. In general, researchers make notes, jottings or audio-recordings of their observations and experiences in the field, which are later transcribed and expanded upon in order to preserve as much as possible of what was noticed (Ibid). Given the centrality of field notes to the craft of observation, relatively little explicit instruction is available to guide their production (Emerson, Fretz & Shaw 1995 in Allen 2004:17). The lack of specific guidelines on the production of field notes gave me the leeway to record FA provisioning on a form without much description of incidents.

Fieldwork is demanding and requires the fieldworker to attend to presentation of self, while simultaneously observing and participating in the study setting to gain understanding. It was necessary to achieve a balanced approach to participation in the field and recording. The duration of tea break for teachers and learners was about 40 minutes. Observations of sport events took place from 14:30 to 17:00. In the case of cricket, observation continued to 18:00. Cricket matches are determined by how many “overs” are played rather than prescribed timeframes. Tempting as it was to remain in the research setting for prolonged periods in case something of interest was missed, literature stipulates that it is advisable to limit field observations to a maximum of four hours unless there are good strategic reasons for extending this. This is because after that period the quality of field notes tends to deteriorate.

On average my observations were about an hour long. Some fieldworkers develop their own private systems of shorthand in order to record observations quickly in flight. I used a record sheet to observe FA activities, injuries and accidents happening during break and sport events. FA incidents were immediately recorded on the *pro forma* recording

sheet (Table 5.5). There was no need for a detailed description of incidents, as the dialogue and actions were not part of the research aim and objectives.

The interval between making an observation and creating a record of an incident varies, depending on one's fieldwork strategy. In some instances, it is possible to record almost verbatim examples of interaction as they occur. In others, it will be necessary to compile a record after an event has occurred. This should happen at the earliest opportunity to ensure that pertinent details are captured. For my study, all the relevant sections of the form were filled in immediately after an incident so as not to miss out on the details of the incident. The record sheet allowed me to use shortened columns that I had to fill in as the incident unfolded. As with the recording of observations in the research setting, the writing up of field notes should be done as soon as possible after each observational episode, because with the passage of time, it becomes increasingly difficult to recall details of an event for even the most astute observer (Allen 2004:18). For this study the terms of reference were provided on the form and I just filled in the requisite columns immediately as the incidents unfolded.

Allen (2004) argues that observations are important because field methods are powerful tools for rendering hidden, but visible practices. In a given social setting, there will always be things that are not evident to the subjects themselves and which interviews and focus groups struggle to reveal (Ibid). Preliminary interviews and FDGs gave me some questions about the authenticity of the responses. This was important, for instance, where teachers, learners and principals from the same school gave different responses about the number of FA boxes and the number of members of personnel trained in FA. The only way to prove these aspects was to get out into the field and check the practical side of the assertions to confirm or refute findings. Field studies are also a valuable means of evaluating policies and service interventions because they reveal how policies are put into action and facilitate understanding of the relationships between processes and outcomes and organisations in action (Griffiths, 2003 in Allen 2004).

A further value of the fieldwork method is that it circumvents some of the methodological limitations associated with interview data when one attempts to treat participant responses as proxies for actual behaviour (Allen 2004). For this reason observations were used in triangulating and authenticating data that had been obtained through interviews and FDGs. Observational methods frequently highlight differences between what people do and what they say they do and get behind public accounts to what actually happens in practice, not in some ironic way, but in order to illuminate an issue of concern further. Focus group discussions and interviews may not portray the truth about FA provisioning in a school. Observations were then used to confirm or disprove what was revealed by FGDs and interviews. Interviews and FGDs revealed what learners, teachers and school managers did with regard to FA provisioning. Observations either confirmed or contradicted the interviews and FDGs. In this way observations were used as a way of triangulation where the use of more than one method is employed to increase the trustworthiness of research. While there is no reason why participant observation cannot be used exclusively as a method of data generation, it is more typical for researchers to combine fieldwork with other qualitative techniques, such as audiotape-recorded interviews and analysis of documents, in order to develop understanding of social phenomena (Ibid).

4.4.7 Focus group discussions

Krueger (1994:6 in Smith *et al* 2005:169) defines a focus group as “a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment.” This section describes and justifies the use of FGDs for this study. According to Barbour (2010), the researcher must be prepared to accept the fact that other methods may be more suitable for addressing the topic at hand and must be willing to use rigorous piloting of topic guides and exercises to ensure the generation of quality data. Careful planning is essential for eliciting relevant and rich data that transcend the purely descriptive and allow ample scope for comparative analysis (Ibid).

Attention to research design enables researchers to move beyond the descriptive to furnishing potential explanations. It is important to note that there is considerable confusion as to what constitutes a focus group, with the terms ‘group discussion’, ‘group

interview' or even 'focus group interview' being used interchangeably (Barbour 2010). I employed the use of FGDs to ascertain perceptions of learners and teachers on FA provisioning in schools.

The definition of an FGD used in this study is a broad one, which argues that any group discussion may be called a 'focus group', as long as the researcher is actively encouraging of and attentive to the group interaction (Kitzinger & Barbour, 1999: 20). This definition emphasises the importance of interaction *between* participants and avoids the mistaken notion that participants will always address their remarks via the moderator. Instead, an FGD is likely to involve participants talking 'across' the moderator, who may literally take a back seat during the discussion, provided that the topic guide is successful in focusing discussion on desired topics (Barbour 2010). This definition demands quite a lot of the moderator, who is required to 'keep several balls in the air' at any one time (Ibid). I held FGDs with grade 8 to 12 learners in two high schools. I also moderated FGDs with teachers at one high school and one pre-school. The other pre-school did not allow me to hold interviews with the staff because the teachers were supposed to be taking care of the children and had "no time".

Focus group research has become very popular in qualitative health research (Morse 2012:87). I had to consider a number of factors in conducting the FGDs. Focus group discussions appear to be a quick and relatively easy way to collect data, but it was important to note that focus group data are opinions given in response to questions asked in a group (Morse 2012:87). I paid due regard to the following critical factors:

- 1.The opinions are offered publicly; they may not be the participants' actual opinions.
- 2.The opinions are offered in response to semi-structured questions; they may overlook an important feature of an individual's opinions.
- 3.Some members may be shy and not prefer not to air their views, but to 'go with the flow' and agree with the dominant members (Ibid).

Focus group discussions are viewed as a 'lazy man's survey' (Morse 2012:88). Focus groups are best used in the preliminary stages of the study to assist with 'scoping' the domain, to identify the groups of interest in the topic, and to develop a sampling scheme

(Ibid). For my study FGDs were important to provide information about the knowledge and skills of teachers and learners in FA provisioning in the particular schools. Despite the weaknesses of FGDs listed above, they provided salient information on FA provisioning in schools. According to Morse (2012), it is no surprise that focus groups are widely used in health research. This method of collecting data is both efficient and amenable to a broad range of topics. I was fully cognisant of the fact that the attractiveness of the FDG method masks some of its subtleties and can lead to lazy and uncritical use (Ibid).

Barbour (2010) argues that different skills are needed when group discussions are used to generate research data. Focus group discussions may resemble informal conversations, but they serve a different purpose and demand additional competencies. The moderators' skills are sometimes presented as involving little more than a set of techniques, which can be imported to address a range of research questions. As the moderator I was fully aware of the fact that good focus group moderating is an art, requiring the researcher to use pre-existing abilities while learning from experience, always reflecting on the purpose and scope the research study. There was a lot of adapting to the kaleidoscope of the focus group scenes, bearing in mind that strict adherence to prescriptive texts can give rise to difficult problems that will send the focus group researcher back to the text looking in vain for solutions (Morse 2012). Critical skills in moderating FGDs were learnt through experience. This is supported by Morse (2012), who argues that the key to successful use of focus groups is to use them appropriately and imaginatively.

Running a focus group required me to generate data by stimulating discussion through active questioning and active listening and to anticipate analysis by remaining alert to the content of discussion, variations in opinion and nuanced differences (Morse 2012). This definition of a focus group underscores the dual imperative of planning ahead while continuously revising and refining my ideas, reflecting the iterative process that characterises the qualitative emergent research endeavour (Ibid).

For this study, FDGs were used because they enabled that cross-fertilisation of divergent views on FA provisioning in schools necessary to come up with a value on FA provisioning in schools. Barbour (2010) asserts that literature alludes to the fact that many studies have used focus groups opportunistically, not capitalising on their strengths, but using them, instead, to overcome perceived problems of arranging individual interviews with busy or potentially reluctant respondents. This may encourage them to treat the data generated as 'second best', limiting themselves to using focus groups to access respondents' perspectives through providing a window onto individual experience. For this study FGDs were not used as a convenient method to circumvent difficult-to-get individual interviews. They were used to gauge the level of FA literacy and competency among teachers and learners. This could not be obtained from questionnaires or individual face-to-face interviews because of time constraints. An FA discussion by a group was the best way to determine FA literacy and competency levels for as many teachers and learners as possible simultaneously. The extra effort required to extricate individual stories and sequences of events from focus group data should disabuse those who hope that focus groups can provide a short-cut to the sort of data usually generated via one-to-one interviews (Barbour, 2008).

It is misguided to attempt to extrapolate from FDGs in order to attempt to identify individuals' attitudes; focus groups for my study were not used as a 'back door' survey technique (Barbour, 2008). Similarly, concerns that surface during analysis about the differences between focus groups may reflect an over-simplistic expectation that the same questions will give rise to similar discussion, regardless of context, group composition and dynamics (Ibid).

Sampling for the FGDs was also done with due consideration for my study. Barbour (2010) argues that the more wily or experienced focus group researcher is likely to be aware that thoughtful sampling can help to highlight differences between groups and afford potential for comparison. Importantly, some approaches to using focus groups also fail to acknowledge the impact of the researcher on the data generated. While it is not always possible to match the researcher and focus group participants, it is certainly important to bear in mind the effect that the researcher's characteristics may have on

the direction and content of discussion (Kitzinger & Barbour, 1999). Selection of learners and teachers to include in the FGDs took into consideration *inter alia* issues of gender balance and information-richness.

Qualitative methods excel at accessing context, using it to make sense of data (Barbour 2010). Kidd and Parshall (2000:296) observe that “focus groups developed and have been maintained outside of the major methodological traditions of qualitative research, and they are thus relatively agnostic in terms of the methodologies attending them.” Barbour (2010) concurs and adds that focus groups are frequently used in a rather loose or casual way without giving due attention to their positioning and hence, their full potential.

Focus groups have usefully been described by Powney (1988) as ‘structured eavesdropping’ and there has been spirited debate as to where exactly focus groups fit on the continuum between structure and spontaneity. Located midway between structured interviewing and observational fieldwork, as Powney's (1988) description suggests, focus groups are often viewed as a poor relation of anthropology and ethnography, the hallmark of such approaches being that they afford insights into naturally occurring human behaviour. Focus groups may have some advantages over the more laborious and opportunistic aspects of observational fieldwork. Bloor, Frankland, Thomas and Robson (2001:6) argue that focus groups can provide, “concentrated and detailed information on an area of group life which is only occasionally, briefly, and allusively available to the ethnographer over months and years of fieldwork.” This was a strong argument in support of the use of FGDs for my research study.

Focus groups for my study related to FA group processes, establishing FA group norms, developing a consensus FA statement, interrogating new developments, procedures and advice dispensed (Barbour 2010). Focus group discussions do not require individual participants to talk at length about the topic. They are extremely useful in eliciting responses to issues that may not be of prime importance to participants (Ibid). The group situation allows them to step back from their taken-for-granted behaviours

and assumptions and provides space to 'problematise' concepts and ideas to which they may previously have paid scant attention (Barbour 2010). To someone who is physically fit and has not experienced any illness or injury, FA may not be an important part of a school system, but reference to real situations of death and disfigurement happening in schools may jog them into some serious reflection and conversation. It was for this reason that focus groups excelled at answering the 'why not' questions (Barbour 2010). Although individuals might find it hard to explain their reasons for neglecting to follow professional advice, group discussion gives them permission to formulate and articulate their responses, perhaps for the first time. This is one of the most significant advantages of focus groups compared to other methods (Ibid).

In support of the use of both FGDs and individual face-to-face interviews, Allen (2004) argues that where focus groups are used in conjunction with one-to-one interviews, the latter are often viewed as the 'gold standard', with focus group findings, should they contradict the accounts produced by interviews. Allen (2004) further purports that agonising over which method produces the most 'authentic' data is a futile exercise. This misses the fundamental point that complementary methods generate parallel data, with focus groups eliciting 'public' rather than 'private' accounts.

Focus groups can provide insights that interviews cannot. Wilson (2005, in Allen 2004) argues that we will never know what 'participants' might have revealed in the privacy of an in-depth interview, but we do know what they are prepared to elaborate on and defend in the company of their peers. Brannen and Pattman (2005:53, in Allen 2004) purport that the qualitative research context is a 'site of performance'. Focus groups afford perhaps unrivalled access to such performances and this constitutes valuable data. Rather than using focus groups and interviews to cross-check or 'triangulate' findings, the two methods should be seen as a fertile resource for exploring the limits of and subtleties involved in managing or making sense of both the 'public' and the 'private' and the tensions between the two (Ibid). Morgan (1993, in Allen 2004) concurs and adds "... if research finds differences between the results from individual and group interviews, then the methodological goal should be to understand the sources of these differences." For my research study, I was careful not to pay attention only to contradictions and exceptions, 'cherry-picking' those comments that supported my

emergent research design, so as to engage in systematic and thorough interrogation of data (Ibid).

According to Allen (2004), one of the main strengths of FDGs as a method is their capacity to engage with both micro- and macro-dimensions. This potential will only be realised if focus group researchers pay due attention to research design. Thoughtful sampling provides the key to allowing such factors to be taken into consideration. This paves the way for systematic interrogation of data and tentative explanations in order to produce an analytical account.

Rather than using focus groups in a descriptive manner in order to simply bear witness to the participants' experiences, we should seek to draw on the full potential inherent in this method to produce analytical insights (Atkinson 1997, in Allen 2004). Attention to structure is paramount in getting the most out of focus groups. This means paying attention to sampling, which is the key to the comparisons that can be made, which provide comparative and hence analytical potential. Honing topic guides and employing moderators' skills also have an important part to play in the thoughtful application of focus group research, as has the use of the constant comparative method from conception of the project to completion of analysis. This was typical of this emergent research design.

Allen (2004) winds up the debate on FGDs by saying that a critical appreciation of the use of focus groups throws into sharp focus some of the perennial dilemmas and challenges involved in doing qualitative research. Focus groups are an inherently flexible method and can allow for testing and refining of theoretical propositions in an especially economical way, provided due attention is paid to judicious research design. If employed thoughtfully, focus groups can produce qualitative research at its very sharpest (Ibid). This was the strength I relied on in using FGDs for this study.

4.4.8 Sampling and group composition

In view of Barbour's (2010) argument that although qualitative researchers are seldom called upon to formulate the precise inclusion and exclusion criteria that are a standard

feature of sampling decisions for randomised control trials, it was crucial that I gave some thought to the ethical issues involved. In my sampling procedures for teachers, I made use of the FA appointed person at one school to identify the participants. At the school where I was teaching, I allowed for gender equality and also included teachers that I knew to possess information on injuries and illnesses in the school. These were teachers that I considered to be “information-rich”. Some focus group projects rely on selecting samples from a pool of participants on a systematic basis. This has the advantage that preliminary analysis can help identify important characteristics of focus group discussants that are likely to reflect differing perceptions or experiences, making for richer discussion and debate (Barbour 2010). I found my selection of discussants to be information-rich and adequate for my study.

Barbour (2010) purports that as in all qualitative research, sampling holds the key to the systematic comparisons that our data allow us to make and, hence, determines the analytic potential of our studies. Whether described as ‘purposive’ (Kuzel 1992) or ‘theoretical’ sampling (Mays and Pope 1995), the intention is the same: to use what is already known about the variety encompassed by the group or population we are studying to make informed guesses on how these differences may affect experiences and perceptions and to select our sample in order to explore these more fully.

Focus group discussions were audio-recorded and later transcribed for this study. Barbour (2010) argues that rather than taking up valuable discussion and transcription time by asking focus group participants to provide detailed information, it can be useful to collect standard data by employing a *pro forma*. If this is done in preparation for the group session, it may have the added advantage of aiding recall and ensuring the accuracy of information obtained. This was supported by the use of an audio recorder, which freed me from the need to write down the deliberations. Audio-recordings were later replayed and transcribed verbatim.

As the FGD moderator I was mindful of the fact that the only way to ensure that I was not merely ‘eavesdropping’ on a conversation or discussion was to touch on issues salient to the research project (Barbour 2010). Sometimes participants veered off

course and talked about things not related to FA. I had to redirect the discussion “diplomatically” to bring refinement to the discussion in tandem with the research aim.

I concur with Barbour (2010) that obtaining permission from a group is seldom a straightforward business, as membership is likely to fluctuate and those who turn up on the day of the FGD may not, in fact, be the same individuals who agreed to participate in the focus group. I had to make provision for such eventualities by enlisting extra discussants and that effort was rewarded in all cases because a substantial number of participants gave excuses on the day of the FGDs. This also implies that it is important to ensure that participants are provided with relevant information in sufficient time to enable them to make an informed decision on attendance (Ibid).

A further issue in relation to capitalising on pre-existing groups that Barbour (2010) takes note of relates to the implications for the future of the group and its members taking part in the research. Generally, FDGs are unlikely to stimulate particularly heated discussions between individuals who are not already prone to interacting in this way and, in such instances, they probably have a repertoire of ways of accommodating and moving on from such disagreements (Ibid). I made provision for this especially with learners’ FGDs where many of them chose to remain quiet and reserved to the advantage of the extroverts who literally took over the discussion and dominated it. Barbour (2010) advises that it is wise to try to end an FDG on a conciliatory or positive note. FDGs should not generate into heated arguments. Having acquainted myself with the technicalities of FDGs, I moderated FDGs from an informed position.

4.4.9 Running focus group discussions

Before the group discussion took place, I had to make important decisions. The first was on the venue. Barbour (2010) advises that the choice of venue is important, as this may determine the emphasis placed on particular issues. This does not mean that there is such a thing as an ‘ideal location’ for a focus group, rather that the researcher should give thought to the likely impact of the setting on the nature of the discussion and should take care to structure the topic guide to ensure that the whole range of potential topics is covered (Ibid). I had to consider accessibility and transport issues for teachers and learners.

All FGDs with learners were done in classrooms located on the ground floor. This is supported by Barbour (2010), who asserts that access can be important, particularly where the research aims to be inclusive of those with physical disabilities. Travelling distance may also affect turnout and expenses if the project undertakes to provide compensation to participants (Ibid). I took this into account and offered to reimburse participants' transport expenses, especially for learners' FGDs.

Another decision relates to whether to audiotape or videotape discussions. I chose to audio-record the FGDs. According to Barbour (2010), many focus group researchers do audiotape discussions and produce verbatim transcripts, but do not subject these to detailed analysis. It is not the existence of a transcript that guarantees rigour, but the attention to detail and degree to which the researcher engages systematically with the data (Barbour 2008). This was achieved for my study by means of audio-recording FGDs and interviews, followed by verbatim transcriptions of recordings and meticulous analysis of notes through repeated re-listening to recordings.

I used an Olympus audio-recorder with a very high-quality sound. I practised using it and creating different file systems for FGDs with teachers and learners. This was done long before the commencement of FGDs and interviews to ensure that I was well acquainted with the device. Interviews with school managers and principals were recorded under differently labelled files for easy identification. I had to rehearse and practise recording many times before carrying out the interviews to iron out glitches associated with technical failure. The batteries were charged fully before each FGD or interview. I rehearsed a number of "mock" FGDs with my family members.

It was only after I had become adept at using the audio-recorder that I set out to conduct the discussions and interviews. Barbour (2010) asserts that if a recording is to be made, good quality equipment is essential and it pays to practise so that the researcher is confident in using the equipment and does not become distracted from the task, which is to facilitate and focus on the discussion. Notes on nonverbal cues may be especially valuable when it comes to interpreting data, as information on individual

speakers may be. The major problem with audio-recorders is that gestures are often missed by the audio-recorder, but speech intonation, sighs and stress are easily discernible. Non-verbal communication was very important for me, as the audio-recorder could not pick up the gestures, only the tone of voice. Barbour (2010) gives a clue and says moderators need to look out for nonverbal cues, which may provide an opportunity to engage otherwise quiet members and must also remain alert to the tenor of the discussion and potential impact on participants.

I got invaluable information on running FGDs from Owen (2001), who provides an insightful discussion about the difference between running groups for therapeutic purposes and using them in order to generate research data. When using groups in a research context, it is more important to encourage contributions from everyone and to explore the reasons for differing perspectives or qualifications because the focus is on the *process* rather than the outcome of the group discussion. It is also worth giving some thought to the match or potential mismatch between moderator and group members. Although participants may be more likely to talk openly with someone they identify as belonging to their group or community, it is easy to slip into making unwarranted assumptions about shared meanings and the 'seduction of sameness' (Hurd & McIntyre, 1996 in Barbour 2010). This may prevent moderators from asking the penetrating questions necessary to process discussions as research data.

In my focus group preparations I made provision for learners from minority groups with problems in expressing themselves in English. Such learners may be quiet for most of the discussion session. I ensured that all members of the FGD aired their views. This was necessary, according to Barbour (2010), who asserts that when conducting focus groups with members of ethnic minorities whose first language may not be that of the researchers, it is easy to make unwarranted assumptions about 'sameness' based on shared language skills. Dialects are important, as are shared cultural and religious reference.

Despite observations about the potential of focus groups to create consensus, not all FDGs reach consensus (Waterton and Wynne 1999 in Barbour 2010). Careful

development of topic guides and facilitation of discussion by an attentive moderator can help interrogate apparent consensus. The central focus was on providing a window on FA provisioning during the discussion, whether this was the airing of conflicting views, developing a shared understanding, refining individual perceptions or making decisions. It became clear that there is much more to carrying out focus group research than simply “sitting back and seeing what transpires” (Barbour 2010). Focus group moderators should attempt throughout to anticipate analysis, and this ultimate aim should guide requests for clarification or encourage participants to follow up on potentially interesting distinctions employed by, or alluded to, by the participants (Barbour 2010).

Tips on carrying out successful FGDs were invaluable in preparing me for the interviews. Bloor, Frankland, Thomas and Robson (2001) acknowledge that focus group participants can sometimes ‘under-react’ to questions and one of the most important skills for the novice moderator to master is that of learning to tolerate silences, in order to allow participants time to formulate responses. Sometimes one just needs to remain silent and gesture by an approving nod to a participant to carry on. I had to master a lot of moderating skills for the FGDs. I also realised that although topic guides may list what looks like rather vague areas for discussion, ‘the devil was in the detail’ in the form of prompts, which ensured that more specific issues were covered, but which allowed the moderator to judge when to wait and when to raise these sub-topics (Barbour 2010). An especially valuable skill for moderators is knowing when to let the discussion develop although, at times, it might appear that participants are going ‘off piste’; such speculation can ultimately lead to unanticipated insights (Ibid).

4.4.10 Selecting stimulus material

Colucci (2007) provides a useful catalogue of exercises suitable for use in focus group research, including some tasks that can be performed prior to the group sessions. In some FGDs I had to recite the introductory formalities on the interview guide. This was used as an “ice-breaker” to warm the participants into the discussion or interview. In other cases I had to use a chart that I had crafted, showing injured learners, to initiate a discussion among learners. Barbour (2010) concurs and says that it is not always

necessary to use exercises and a warm and unthreatening introduction from the moderator, coupled with the opportunity to introduce oneself to the group to set the scene for an informal and productive discussion. Stimulus materials may, however, be of much greater value if used at a later stage in the discussion, where they can be used in order to tease out similarities and differences in participants' perspectives.

I prepared a chart with pictures of injured learners to prod learners to air their views in response to accident scenes depicted in the pictures. There is no definitive guidance regarding the superiority of pre-existing over specially developed stimulus materials, but the test is always whether these give rise to the sort of discussion the researcher requires (Barbour 2010). The ultimate test of what to include is always the focus of the research in question and whether the vignettes are likely to encourage discussion of desired areas. The attentive focus group moderator should always be anticipating analysis, teasing out similarities and differences, whether these are stark oppositions or delicately nuanced variations (Ibid). The use of stimulus materials helps systematic comparison between groups, as the researcher can, for once, be certain that participants are referring to the same items, which have been presented to them in the same way by the moderator. Initial focus groups are quite likely to furnish material that can be employed in later groups as stimulus material (Hussey, Hoddinott, Wilson & Barbour 2004, in Barbour 2010).

4.4.11 Semi-structured interviews

For this study, I employed the use of semi-structured interviews for pre-school managers and principals. Morse (2012) purports that semi-structured interviews are used when the researcher knows what questions he or she wants to ask, but does not know what answers to expect. Question stems were asked in the same order in each interview, and responses to these open-ended questions were probed, so that the interviewee had the freedom to respond as he or she wished (Morse 2012:88). Focus group discussions in the previous section were guided by a semi-structured interview guide as well. First aid provisioning issues were audio-recorded as the interview progressed. A democratic evaluation model was adopted where information was

supplied in response to the needs of all those involved in what was being evaluated, i.e. FA provisioning (Atkinson, Delamont & Hammersley 1993:23).

4.4.12 Setting up appointments

The use of interviews and FDGs for managers, principals, teachers and learners presented a lot of administrative groundwork to ensure success. I had to request parents' consent in respect of minors. I had to identify the sample and set up appointments for the FDGs and interviews. Once that was in order, I had to send reminders by using the "short message service" (sms) to learners a day before the discussions. I had to do the same for teachers, pre-school managers and principals. Sometimes I got excuses at the last minute and some members of the groups could not attend the discussions owing to unforeseen circumstances. In many cases I had to re-schedule interview appointments.

I had to travel long distances just to make appointments with school principals and pre-school managers. Sometimes the appointments were rescheduled because of urgent and unforeseen commitments. At one pre-school I had to make three trips before securing an interview with the pre-school manager.

The most difficult appointment was to interview the MEC for the GDE. On setting up the appointment, I made the first trip just to get the contact details of the MEC's personal assistant from the reception. After getting the details, it was relatively easy to set up the appointment by using electronic mail (e-mail). The interview was rescheduled four times owing to sudden and more important commitments. I knew that it was difficult to interview the MEC because of his busy schedule. I ended up interviewing the DDG, which I had envisaged from the beginning of the study; I had made prior arrangements in anticipation of this. The DDG is mandated to speak on behalf of the MEC, hence the views of the MEC were not compromised in any way.

4.4.13 Gaining entry, the gate-keepers

The other constituency that needed to be taken into account with respect to FGDs and interviews was the gatekeepers – key individuals who can facilitate access to the study sample and advise as to how best to approach them, or where to hold discussions or

interviews (Morse 2012). Such people include security personnel, managers or professionals in contact with clients; depending on the study involved, they may sometimes undertake to present research behalf of researchers to potential participants (Ibid). This can be useful in situations where participants are likely to be especially wary of overtures from researchers who are strangers (Ibid).

I was well aware of the fact that gatekeepers' input could significantly shape my resulting sample, hence the potential of my dataset. I was mindful of the ways in which gatekeepers could block access either intentionally or inadvertently. I was aware that the gatekeepers could also screen potential participants by employing their own judgment as to who is or is not a suitable group member and could be selective with regard to how they received or presented the research message. I needed to bear in mind that gatekeepers may not always be the senior people we envisage (Morse 2012).

According to Ziebland and Wright (1997, in Smith *et al* 2005:167), "settings which are likely to be of interest to the health researcher are rarely characterised by entirely open access." It should be noted that while gatekeepers in relatively powerful positions are able to impose restrictions in an overt manner, those at other levels in the hierarchy may be even more effective in scuppering the process if they have not been appropriately consulted or if the researcher antagonises staff whose cooperation is essential (Ibid). Making appointments for interviews was a daunting task. I had to make the appointments in person and this meant that I had to travel to the institutions to make appointments. This also required that I had to establish good rapport with the gatekeepers and the sub-gatekeepers. Accessibility was not a problem for most schools, but the main difficulty was encountered with the MEC for the GDE. Most gatekeepers were very cooperative and offered assistance where needed.

4.4.14 Face-to-face interviews

Face-to-face or in-person interviews still remain a popular data collection method especially in South Africa due to low levels of literacy (Babbie and Mouton 2001 :248). I did not however, use this method for my study for this reason. The three most crucial aspects of any data gathering exercise include the cost of the selected data collection

method, the accuracy of data collected and the efficiency of data collection (Russell and Mugenyi 1997 in Babbie and Mouton 2001). For this study, face-to-face interviews were held with the school principals, the FA appointed persons in schools, pre-school managers and the DDG on behalf of the MEC for the GDE. A face-to-face interview method provides advantages over other data collection methods because interviews help with more accurate screening (Babbie and Mouton 2001). The individual being interviewed is unable to provide false information during screening questions such as gender, age, or race. A face-to-face interview is no doubt going to capture verbal and non-verbal cues, but this method also affords the capture of non-verbal cues including body language, which can indicate a level of discomfort with the questions. Face-to-face interviews capture an interviewee's emotions and behaviors. Adversely, it can also indicate a level of enthusiasm for the topics being discussed in the interview (Ibid). This is crucial for this study as there is a need to gauge perceptions about FA provisioning.

The interviewer is the one that has control over the interview and can keep the interviewee focused and on track to completion. Face-to-face interviews are in-the-moment and free from other distractions.. As with any data collection method, face-to-face interviews also provide some disadvantages over other data collection methods. Cost is a major disadvantage for face-to-face interviews. They require a staff of people to conduct the interviews, which means there will be personnel costs (Russell and Mugenyi 1997 in Babbie and Mouton 2001). Personnel are the highest cost a business can incur. It's difficult to keep costs low when personnel are needed. The quality of data you receive will often depend on the ability of the interviewer. For this study, interviews were recorded using an Olympus audio recorder. Audio recordings were later transcribed verbatim. The costs were borne in the initial cost price of the audio recorder. Transport costs were also factored in as I had to drive to different schools for setting up appointments and doing the subsequent interviews.

4.4.15 Data analysis

I expected the data-gathering instruments to provide answers to my questions as the study progressed, hence data generation and analysis were undertaken concurrently. Analysis in this context took a number of forms. It was apparent that some of the factors discussed in this chapter should actually appear in the next chapter on discussion of

findings and analysis. According to Allen (2004), the process of writing field notes may stimulate ideas about the significance of observations and these are typically added to field notes. In addition to these 'in-flight' analyses, periodically the researcher will take time away from the field to review a series of field note entries or audio transcripts and consider issues and themes of interest in a more systematic way (Ibid). Field researchers will write up these deliberations as analytic memos, which will inform decisions about future data generation and stimulate exploration of related literature (Ibid). At this stage, the analysis remains tentative and open to alternative interpretations and possibilities. In lone-ranger research studies, the fieldworker can be flexible about when these processes take place. I adopted this latter model. Audio recordings were transcribed from the respective files. Themes were devised from the data according to the research questions. Codes were formulated and the data from FGDs and interviews were used under different themes.

4.4.16 Coding

Allen (2004) argues that data analysis is an ongoing feature of field research; at some point a decision is taken to end data generation and undertake a systematic analysis of the data as a whole. At this stage, the corpus of field notes is reviewed and earlier hunches and tentative interpretations are refined (Ibid). I preferred to read field notes in chronological order, as this preserved the progressive narrowing of focus and the development of analytical skills.

Allen (2004) argues that fieldworkers typically begin with an initial reading of the data and adopt an open coding strategy covering a range of analytic possibilities. The codes are a means of thinking about the data and exploring interesting lines of inquiry and relationships between different elements of the phenomena of interest. As the analysis is refined, coding becomes more focused on key themes and issues, in which sub-codes are developed and consideration is given to the linkages between them.

Coding is, quite simply, an attempt to categorise excerpts of data with reference to a set of key themes and related subcategories developed by the researcher. Principles involved were much the same, whether I was coding field notes, interview or focus group transcripts. It was important not to slip into routinely coding individual comments

in FDGs, but rather to look out for collaborative efforts and what was being achieved in sections of consecutive talk (Allen 2004). In focus group research, group dynamics sometimes offered the data, particularly where I was interested in determining how peer groups made decisions or formulated collective understandings of the FA provisioning. Group dynamics were valuable resources for interpreting data. What was not said (non-verbal) was as important as what was articulated during group discussions, but this presented a challenge for analysis. Sensitive moderating ensured that any apparent silences were probed, using gambits such as 'other learners have mentioned that ... is that an issue for you at all?'

On the coding system, I got much of the information from Allen (2004), who asserts that most researchers use one of several coding programmes to analyse data. While these programmes differ in their use of labelling language, the underlying coding strategies are remarkably similar. Use of coding software is not a substitute for becoming conversant with the principles of qualitative data analysis. My analysis was not driven by the properties of a given package, but rather by the more important aims of my research project as enunciated by the research questions.

4.4.17 Identifying patterns and being analytical

I had to consult literature on identifying patterns and analysing themes or codes in order to gain the requisite expertise. Although many qualitative data analysts are content to identify and provide illustrations of themes that arise in discussions, this is only half of the story. In order to develop more analytically sophisticated accounts, it is essential to explore patterning in data and to seek to provide explanations for these patterns, including seeking to explain contradictions and exceptions (Allen 2004). This is what is meant by the term 'analytic induction' (Frankland & Bloor 1999, in Allen 2004). Systematic and thorough comparison lies at the root of the 'constant comparative method' (Green 1998, in Allen 2004) and provides the means through which we begin to articulate and test out our emergent theoretical explanations, paying particular attention to exceptions (Barbour, 2001). Although most of the comparisons that focus group researchers are likely to make will probably be at the level of groups, supplementary

information allows us as researchers to pay attention to individual voices in groups (Ibid).

It was essential that in acknowledging the importance of representing the views of FGD participants, I did not sidestep the important responsibility of providing an overview (Allen 2004). Although the question as to whether participants were telling me the truth or not did surface in relation to other types of qualitative research, focus groups probably attracted more than their fair share of such comments. According to Allen (2004), this question derives from the practice of viewing focus groups through the unforgiving and inappropriate lens of quantitative research. It was necessary to take what the participants said at face value and regard it as the objective true representation of their experiences and feelings.

4.5. Ethical measures

In simple terms, research needs to be ethical, valid and reliable. The validity and trustworthiness of qualitative research is related to the selection of viable sources that promote deepening of the understanding of the experience inquired about (Polkinghorne: 2005). To ensure that this research complied with research ethics, a number of requirements were met. Springer (2010:92) has this to say about research ethics: “the fact that educational research often requires interactions with people raises ethical issues.”

The fact that my research project involved minors raised important ethical considerations. The research had to be ethical from the proposal stage to the end. The research proposal was submitted to the UNISA Ethical Clearance Committee for approval before data collection commenced. The committee duly issued a compliance certificate to certify that the study conformed to the norms and standards guiding research ethics. The requisite certificate is attached at the end of this thesis (Appendix B). Much of what needed to be done to comply with research ethics was covered in the clearance requirements. The form stipulated what had to be done to satisfy the requirements for interviews, FGDs and observations.

Permission to carry out research was sought from the GDE. The requisite research code of the GDE as specified in the research approval letter (Appendix A), was complied with. Information gathered was used for research purposes only and participants were given permission to withdraw at any stage of the interview. Permission was sought from the individual schools and pre-schools. Copies of the GDE approval letter were furnished to each school and pre-school in the sample. Confidentiality and anonymity were guaranteed before interviews and FGDs were conducted. Participants had to sign letters of agreement to take part in the interviews and FGDs. Letters of assent were signed by parents and guardians of minors who took part in the FGDs.

Anonymity and confidentiality were guaranteed, as participants did not have to disclose their names or the names of their respective schools. All participants freely volunteered to take part in the study. Writing on research ethics, Springer (2010) stresses that participants must be informed in advance about the nature of the study and must be allowed to give or withhold consent to participate without coercion. The researcher agreed to furnish the DoE with a copy of the completed thesis for the library so that anyone interested may have access to the findings of the research. Names of schools and participants were withheld to protect schools and individuals.

4.5.1 Letters of assent

Letters of assent were handed out to minors' parents (see Appendix J). I did not interview children in pre-schools and primary schools for ethical reasons. I interviewed learners in the two high schools through FGDs.

Literature alludes to the difficulty of assuring confidentiality and anonymity with regard to FGDs. Barbour (2010) asserts that the issue of confidentiality, no longer a matter to be resolved merely between researcher and 'researched', has to be addressed at the outset of FDGs, as there is, obviously, the potential for subjects to leak information after the event. This applies to all participants and initial flagging of this issue also alerts participants to the potential of tampering with their contribution. Researchers who are keen to share transcripts with research participants should give careful consideration to the implications of providing focus group members with concrete accounts of each other's contributions to the discussion. The nature of the research was explained to all

teachers and learners before each FGD and interview thus guaranteeing anonymity and confidentiality (McMillan & Schumacher 2010:119)

4.5.2 Recruitment and ethical issues

Focus groups are frequently recommended when researchers wish to engage with groups that are notoriously hard to reach, since the informal nature of group discussions is generally considered to be less threatening to those who may have an antipathy to authority (Barbour 2010). This was important for the learners' FGDs where they had to conduct discussions in the presence of me as a teacher. Barbour argues that for this reason, focus groups have been used extensively with children (Mauthner, 1997), minority ethnic groups (Chiu and Knight, 1999), those out of contact with services, or those who have chosen not to take up opportunities such as screening or immunisation (Barbour, 2007) .

I was careful and felt it important not to alienate potential participants through "insensitive" approaches. An obvious example given by Barbour (2010) is the use of ethnic, religious, or age-related labels, which may be offensive. Care was also taken with the use of labels such as 'obese', which are frequently used by health researchers but are likely to provoke an unfavourable response in the target group. Even where the research design relies on 'stand-alone' focus groups, the researcher would be well advised to carry out some observational groundwork or to carry out some background reading or to seek advice from knowledgeable individuals in order to ensure that unfortunate mistakes are avoided (Ibid).

Although some researchers believe that one-to-one interviews are most suitable for sensitive topics, focus groups can afford 'safety in numbers'. Focus groups do not force each participant to answer each question and may, therefore, cede a greater degree of control to participants in terms of what they choose to share or withhold from discussions. Care was taken not to violate the law and infringe on individual civil rights on confidential medical records. It was not, for instance, practical to ask for learners' school files to look into their medical history. All identifiable information was treated with confidentiality.

4.6 Measures to ensure trustworthiness

In qualitative research we rarely talk of validity, rather of trustworthiness. Although notions and terms of validity and reliability are closely connected to quantitative approaches, they refer to certain quality criteria of the research process (Schwandt 2001). According to Steinke (2004:185), in qualitative research there is no possibility and desirability of measuring validity and reliability; nevertheless qualitative research cannot exist without evaluation criteria. Strategies need to be explained to enhance the rigour and quality of the process.

In sampling, the selection process was spread wide enough to encompass all “information-rich” participants (Steinke 2004:185). Interviews were used as a basis for comparing with other FGDs, observations and subsequent interviews, cross-checking data. Measures to avoid personal bias were put in place and the researcher did not make value judgements (Creswell 2007:202). The research design and methodology satisfactorily addressed the research questions and interviews were stopped when repetition of responses reached a degree of saturation where no new information could be obtained. A point of saturation was reached where new sources repeated what had previously been learnt. The use of multiple participants served as a kind of triangulation on FA provisioning in schools, locating its core meaning from different accounts (Polkinghorne 2005).

Participants were chosen not because they were available, but because they provided clarifying accounts of the FA provisioning experience. Research results need to be tested against the backdrop of validity and reliability, which will mirror data as measured against aims and objectives of the research topic. Newby (2010:121) aptly calls validity and reliability the “cornerstones” of any research. I was competent to conduct this research because I hold a level 3 FA certificate and studied various qualitative research texts and procedures for data collection (Polkinghorne: 2005). Triangulation was used to measure the aspect of reliability. It is defined as the use of two or more methods of data collection in the study of some aspects of human behaviour. Newby (2010:17) lists the

criteria that we need to demonstrate in research to be deemed valid and convincing to others:

1. Our data have to be representative of the issue we are investigating. In this study the researcher had to be rigorous in sampling and not choose schools based on accessibility and familiarity.

2. Our argument and the evidence that supports it have to be complete. The researcher did a lot of groundwork on this topic through literature review.

3. The presentation of our research processes and results has to be transparent and honest.

The selection of school was done objectively in order to cover the various school types in Gauteng. The training I received as part of the FA training helped much to provide me with the requisite knowledge and skills to do the study from an informed perspective. I also consulted a lot of literature on the subject of FA provisioning in schools. The research findings were transparent and honest in that the verbatim quotes were included in the text to validate the participants' responses and perceptions.

4.7 Summary

Chapter four described and explained the research design and methodology used for this study. The justification of the research design was inherently given to provide a birthing room for the next chapter. Chapter five reported, discussed and analysed the research findings in the context of the research topic, questions, aims and objectives of this study.

CHAPTER 5

PRESENTATION OF RESEARCH FINDINGS, ANALYSIS AND DISCUSSION

5.1 Introduction

The previous chapter described and explained the research design and methodology used for this research study. A detailed explanation of the data-gathering instrument, data processing and analysis was given and justified. Chapter six presented, analysed and discussed the research findings. The major aim of this chapter was to obtain the data to release the information needed to answer the research questions. The data patterns, themes and codes were interpreted in the context of the research questions. A thematic analysis approach was used. The chapter mirrored what the first chapter charted and planned to find, as enunciated by the research questions.

The main research question was divided into three trajectories. This chapter had to take cognisance of the three foci in presenting the research findings. The first trajectory presented the research findings on the FA literacy and competency levels for school managers or principals. The second thrust focused on FA literacy and competency for teachers. The third focus was FA literacy and competency for learners. The subsidiary question focused on the impact of these FA literacy and competency levels for principals, teachers and learners on FA provisioning in schools.

Having dissected the research questions to clarify what I intended to evaluate, I subsequently had to relate the research findings to the questions. The research topic resonated with the evaluation of the administrative efficacy of FA provisioning in Gauteng schools. I had to clarify how this administrative efficacy was evaluated. The units of measurement for administrative efficacy for this study were the relevant legal instruments in SASA, NEPA provisions, the South African Constitutional mandates on the rights of the child and other policy guidelines.

It became necessary to reconsider those provisions to evaluate them in the context of this study. While it is appreciated that I am not a law expert and cannot suggest

amendments to acts of law, I have indicated after each clause what appears to be problematic areas. This was restricted to interpretation, *vis à vis* reviewed literature findings concerning FA administration in schools and research findings in the context of this study. Literature findings and research findings provided a foundation that exposed loopholes in the acts.

5.2 Critical presentation and analysis of measurement of administrative efficacy

The units of measurement for administrative efficacy were the NEPA and SASA provisions on FA provisioning in schools, read together with the relevant sections 28 and 29 of the Constitution of the Republic of South Africa on the protection of the rights of the child. For the sake of reflection, the NEPA and constitutional provisions were reconsidered and simultaneously critiqued. After each provision, an interpretation and discussion of the implications for the school were given. This was necessary because the legal instruments needed to be critiqued against the backdrop of what literature and the research findings suggested. This was done to ensure that the SASA and NEPA loopholes were closed to ensure the optimal provisioning of FA in schools. The analysis started off with a critique of the legal instruments, viz NEPA 's national policy on HIV/AIDS, for learners and educators in public schools, and students and educators in further education and training institutions Sections 7 and 8. According to NEPA, the MEC for the DoE is empowered to ensure that:

Section 7.2 All schools and institutions should train learners, students, educators and staff in first aid, and have available and maintain at least two first aid kits, each of which should contain the following:

- 1 Two large and two medium pairs of disposable latex gloves;*
- 2 Two large and two medium pairs of household rubber gloves for handling blood-soaked material in specific instances (for example when broken glass makes the use of latex gloves inappropriate);*
- 3 Absorbent material, waterproof, disinfectant (such as hypochlorite), scissors, cotton wool, gauze tape, tissues, containers for*

water and a resuscitation mouthpiece with which mouth-to-mouth resuscitation could be applied without any contact being made with blood or other body fluids;.

4 *Protective eye wear; and*

5 *A protective face mask to cover nose and mouth.*

The Act recommends that “all schools and institutions should train learners, students, educators and staff in first aid.” The Act is vague in that it specifies ‘all schools’, but is silent on the number of learners, students, educators and staff that need to be trained. One would have liked it to include the fact that all learners, all students, all educators and all staff must be trained in FA. In its current state it implies that all schools and institutions must ensure that learners and staff members are trained. There is a glaring omission in respect of the number of the learners, educators and staff to be trained in FA. This aspect is likely to be interpreted differently and can be contested in a court of law.

The number of FA kits and the contents thereof are relatively inadequate for most of the schools in the sample, considering the respective enrolments. Instead of a minimum number of FA kits, the Act should have stipulated a ratio, for instance; an FA kit for every 10 people or an FA kit for every class/sport discipline. This would have been more specific. In the current form of the Act a school of 2000 learners can meet the minimum requirement of two FA kits, but the mere size of the school dictates that two boxes are inadequate for such a school.

Section 7.4 Each classroom or other teaching area should preferably have a pair of latex or household rubber gloves.

It seems as if these gloves are required in addition to the FA boxes in section 7.2 above. It is implied that they are over and above the gloves mentioned in section 7.2. This is contradictory, in that section 7.2 stipulates the minimum number of FA boxes and what is supposed to be in the boxes. This section now stipulates that each classroom or teaching area must have gloves, which are included in the FA boxes. I feel that there

should be more gloves. The word “preferably” gives room for complacency because it implies that this clause is not mandatory.

Section 7.5 Latex or household rubber gloves should be available at every sports event and should also be carried by the playground supervisor.

It is not clear how the playground supervisor will carry the gloves outside an FA box. The Act is apparently more concerned about the gloves and the safety of the playground supervisor than the administration of FA. Part of the training package for a first aiders' kit includes a pair of latex gloves and a mouthpiece for artificial respiration. These two FA gadgets are supposed to be on a first aiders' person always, preferably on the car keys holder. It is important to note that most injuries and illnesses do not really need gloves, except those where the injury or illness results in contact with blood or some other body fluids. Notwithstanding the issue of contamination by body fluids, it is a necessary FA precaution always to put on gloves when administering FA.

Section 7.6 First aid kits and appropriate cleaning equipment should be stored in one or more selected rooms in the school or institution and should be accessible at all times, also by the playground supervisor.

The clause does not specify the room where this equipment should be kept. This presents problems in many schools where classrooms are inadequate. To suggest that a room should be made available specifically for storing FA boxes and equipment when there is an apparent shortage of classrooms would be a pipe-dream. It is not clear how accessibility to the room is going to be guaranteed. Other issues, such as keys and access to the room need, to be considered. One is left wondering what would happen in the event that the person with the keys is absent or the keys have been misplaced. For most incidents requiring FA, the time factor is crucial and to run around looking for keys will not help a victim who is bleeding heavily.

Section 7.8 The contents of the first aid kits, or the availability of other suitable barriers, should be checked each week against a contents list by a designated staff member of the school or institution. Expired and depleted items should be replaced immediately.

While this is in order and praiseworthy, the instruction to check the contents is not specific in terms of who this designated staff member is. This is made worse by the fact that most teachers complain that they are overloaded with work. The Act is not specific on accountability and supervision. It is also silent on who is going to check that this clause is implemented from the DoE.

Section 7.9 A fully equipped first aid kit should be available at all school and institution events, outings and tours, and should be kept on vehicles for the transport of learners to such events.

There is a problem with this clause because it complicates sub-section 7.2, which stipulates that each school should have a minimum of two FA kits. It is unclear what could happen if the two FA kits are both out on school tours and the school is left with nothing for other accidents, injuries and illnesses happening at the school.

Section 7.10 All learners, students, educators and other staff members, including sport coaches, should be given appropriate information and training on HIV transmission, the handling and use of first aid kits, the application of universal precautions and the importance of adherence to universal precautions.

This clause is not specific and leaves room for complacency. There is no specified unit to follow up and ensure that the learners, students, educators and staff have been given appropriate information and training on HIV transmission, the handling of FA kits and application of universal precautions. If there is no formal certification or recognition of those who take part in the training successfully, then there will be a problem with enforcing this clause. The clause must include FA training in order to embrace all aspects of the training required. Training for HIV only is fragmentary and leaves out other important FA attributes. This clause is more concerned with the safety of the administrators of FA and not the victims requiring assistance.

Section 7.10.1 Learners, students, educators and other staff members should be trained to manage their own bleeding or injuries and to assist and protect others.

This is covered in an FA course for learners, teachers and staff members. The clause also leaves out an important factor about the number of learners, teachers and staff members who should be trained. It should just stipulate that all learners, all teachers and staff members should be trained.

Section 7.10.2 Learners, especially those in pre-primary and primary schools, and students should be instructed never to touch blood, open wounds, sores, breaks in the skin, grazes and open skin lesions of others, not to handle emergencies such as nosebleeds, cuts and scrapes of friends on their own. They should be taught to call for the assistance of an educator or other staff member immediately.

This is an essential component of FA training. If the learners, teachers and staff members are trained in FA they would inevitably cover these aspects as part of their FA training. The Norwegian study by Bollig *et al* (2014) documented in Chapter 3 proved that FA skills and knowledge can be taught to four-to-five-year-old children, hence it is possible to train children in pre-primary and primary schools in FA. This clause is not informed by research and takes for granted that children cannot be trained in FA and therefore have to keep away from injured people for fear of contamination. The advice is to call a teacher, leaving out the important factor that learners have to be trained to administer FA as well.

Section 7.10.3 Learners and students should be taught that all open wounds, sores, breaks in the skin, grazes and open skin lesions should be kept covered completely with waterproof dressings or plasters at all times, not only when they occur in the school or institution environment.

Section 7.11 All cleaning staff, learners, students, educators and parents should be informed about the universal precautions that will be adhered to at a school or institution.

The two clauses are covered in an FA course. Instead of all these sub-sections, one section that encompasses FA training for everyone in the school would cover every aspect of FA training. This current NEPA section treats handling of blood as if it were excluded from an FA training course. Most of the clauses are more concerned about

contamination than FA administration. This is understandable in the wake of the HIV/AIDS pandemic.

Section 7.12 A copy of this policy must be kept in the media centre of each school or institution.

This would be a first step to ensure that each school is complying with the provisions of SASA and NEPA. It should be noted, however, that the mere fact that a school can produce this policy on request does not guarantee that it is being implemented. It is, however, a necessary first step in implementation. One cannot implement what is not there. After ensuring that every school has this policy, the DoE can move on to the next stage of supervising and enforcing the implementation of the provisions.

Having commented on the provisions of NEPA, I will then reconsider the constitutional provisions on the rights of the child. It is difficult to critique or comment on these provisions from an individual perspective. Constitutional mandates are not open to criticism because by its very nature, the Constitution is the “supreme over-arching principles” upon which all law hangs. The Constitution is difficult to amend, reigns supreme and no acts must contradict or violate it. If an act of parliament contradicts the Constitution, then the act is deemed “*ultra vires*” null and void. The provisions are general principles that are given contexts and specifications by the national and provincial legislatures.

The Constitution of the Republic of South Africa's Chapter 2, the Bill of Rights states the following:

Section 11 states that everyone has the right to life.

Section 24 Everyone has the right to an environment that is not harmful to their health or well-being;

Section 27 (1) Everyone has the right to have access to -

(1) health care services, including reproductive health care;

(2) The state must take reasonable legislative and other measures, within its available resource, to achieve the progressive realisation of each of these rights.

(3) No one may be refused emergency medical treatment.

Section 28 (1) Every child has the right –

to basic nutrition, shelter, basic health care services and social services;

(f) not to be required or permitted to perform work or provide services that -

(ii) place at risk the child's well-being, education, physical or mental health or spiritual, moral or social development.

In this section "child" means a person under the age of 18 years according to the constitution.

The above constitutional mandates are very clear and explicit about putting the interests of the child first. Closely linked to the above provisions were the research questions that sought to determine the level of literacy and competency in respect of these provisions among learners, teachers and school managers in Gauteng schools. Through the use of FGDs, observations and interviews, the following section describes the findings that came out of this study.

I decided to deal with the findings according to the themes that emerged from the research questions. In my research study I started off by holding FGDs with learners. I could not conduct FGDs with the children in pre-schools and primary schools because of their age and to protect them on an ethical basis. I was guided by what the UNISA ethical clearance committee acceded to when the ethical clearance certificate was issued. I held FGDs with learners in two high schools, E and F. I then went on to conduct FGDs with teachers in schools B and E. Interviews with school principals followed thereafter. I carried out observations at school E. There should be cross-fertilisation of the three data-gathering instruments, comprising FGDs, interviews and

observations, throughout this chapter in a concerted effort to unravel the administrative efficacy of FA provisioning. The data themes, patterns and codes were derived from the relationship between the data and the research questions.

5.3 Data patterns, themes and codes

The two main research questions sought to determine the FA literacy and competency levels among principals, teachers and learners and how these literacies and competencies affected FA provisioning in Gauteng schools. The study was done in those three segments, viz principals, teachers and learners. The following section deals with the themes that emerged.

Five major themes emerged from the data. The first theme was FA literacy and the competency levels of principals, teachers and learners. It must be borne in mind that literacy and competency levels were measured by legal instruments in NEPA, SASA and the Constitution of the Republic of South Africa. The test for FA literacy was to determine how well principals knew their legal obligations with regard to FA provisioning in schools. FA competency was measured by how the principals articulated the rolling out of the FA programme in schools. This implied that the principals, teachers and learners be qualified first aiders themselves. In the following section I discussed the research findings as benchmarked against the themes. The first theme dealt with the principals', teachers' and learners' compliance with NEPA, SASA, the Constitution and other policy guidelines on FA provisioning in schools.

A summary of the data themes and sub themes is tabulated below (Table 5.1)

Table 5.1 data themes and subthemes

THEMES AND SUB THEMES	SCH A	SCH B	SCH C	SCH D	SCH E	SCH F
1 Compliance with policy guidelines- teachers, principals, pre-school managers and MEC for GDE	Not compliant	Not compliant	Not compliant	Not compliant	To an extent	To some extent
2 Continuing and professional development	none	none	none	none	yes	yes
3FA support by GDE and DBE	none	none	minimal	minimal	minimal	none
4 Teachers' and learners' perceptions of FA provisioning in schools	positive	positive	negative	negative	positive	positive
5 Management of health issues in Gauteng schools	elementary	none	elementary	elementary	substantial	substantial

5.3.1 Theme 1 - Compliance with policy guidelines: NEPA, SASA and the Constitution

FGDs, interviews and observations were the instruments used to indicate the level of FA literacy and competency among principals, teachers and learners in the schools. It was not objective to generalise about the three groups, hence the next section deals with specific groups. I can, however, confidently conclude from the findings that principals' literacy level with regard to FA provisioning in schools was very low. They could not articulate properly their responsibilities with regard to FA provisioning as expounded by the relevant legal instruments. None of them could refer to the relevant section of NEPA as the guiding tool for the provisioning of FA in schools. Those tasked with the

administrative efficacy of FA provisioning in schools had a shallow understanding of NEPA. This precluded effective administration of FA in Gauteng schools.

5.3.1.1 FA literacy and competency - MEC for GDE

Initially when I applied for permission to research in Gauteng schools, the personal assistant of the MEC for education responded and advised me to contact the Department of Health as my topic was not concerned with health and not education. The interview with the DDG was held on 31 July 2015 in a quiet and pleasant venue, as there were just the two of us and there was very little disturbance. The DDG's personal assistant (PA) had arranged the meeting, which had to be postponed three times owing to unexpected commitments that made the DDG unavailable at the last moment. The interview with the DDG was the tipping point for my research because NEPA invests power in the MEC to ensure that FA is implemented in schools. The MEC's office represented the highest authority I could interview to gauge the administrative efficacy of FA provisioning in Gauteng schools. The MEC's office represented the highest echelon in the FA administration hierarchy. The lower offices at district and school levels were tasked with implementing the mandate of the MEC. The interview with the MEC/DDG was therefore given greater prominence for that reason. Many of the statements that were made during the interview were therefore quoted verbatim to illustrate the importance of his pronouncements for my evaluation of the administrative efficacy of FA provisioning at the highest FA procurement level.

On entry, the DDG was concerned about the length of the interview. I told him that it would not take more than 40 minutes. The DDG greeted me, introduced himself and sat down. I then introduced myself and briefly outlined the purpose of my research study. I read the introductory part of the interview schedule and asked for permission to audio-record the interview, to which he agreed.

In the interview with the DDG it was apparent that the management of health issues was a grey area, with no one taking full responsibility. Management of health issues in a school set-up was restricted to FA provisioning as stipulated in the Constitution of the Republic of South Africa, SASA and NEPA. The research question to determine FA literacy among the DDG, school principals, teachers and learners was crafted in such a

way that the response was supposed to articulate the respective responsibilities with regard to FA in a school. The probing, if the response did not address the requirements, was meant to extract from the DDG, principals, teachers and learners what legal instrument guided their responsibility and what this legal tool entailed. The DDG's answer to the responsibility of the MEC with regard to compliance with NEPA, section 7 was:

“You correctly say that the MEC ensures that it is done. Remember that the MEC does not do it himself. The DoE is mainly concerned with the delivery of the academic curriculum and that curriculum must be delivered in a conducive environment and a number of things must be eliminated. If we are talking about the issue of health in school, there is a department within government that deals with health issues, which means that department of health has access to schools. Remember that we are not directly responsible for health, for example no educator is trained to manage vaccination of children because that is not their mandate. Parents must be involved for learners to be treated because they cannot make decisions on their own because they are minors. If you are talking FA, schools are divided into two groups: fee-paying and non-fee-paying schools. In the fee-paying schools they should provide FA using their resources but we as a department are obliged to provide and transfer funds to buy equipment or kits. School managers manage the administration of FA. We as a department provide training for the SGB.

Since this was the first question, the DDG was trying to get a foothold, to ascertain what the interview was about, and took time winding around the facts. As he warmed up to the interview, he grew more confident and direct in answering questions. I then went on to ask him if the MEC was also responsible for FA in pre-schools and whose responsibility it was to monitor pre-schools, as most of the deaths and disfigurement resulting from childhood injuries and illnesses being reported in the media occurred in pre-schools. The DDG responded by saying:

“For us the pre-school is grade R, which is those who are about to go to grade one. There are schools that have a crèche on-site. We are responsible for such pre-schools for grade R standards. In independent pre-schools we do not interfere in the administration but we set the parameters on what to do and what not to do”. At this point the DDG asked me if my audio recorder was on. I confirmed that it was on but reassured him that I was not going to mention his name in my thesis, to which he responded, “No, it is fine.”

The DDG did not articulate the role of the MEC very well and did not seem to understand his mandate as far as FA provisioning in schools was concerned. There was apparent buck-passing to the Department of Health to deal with health issues. According to him, his main purpose was academic curriculum delivery. This was a bad starting point. If the office that is empowered by the legislature to ensure that FA provisioning in schools is administered does not know about this mandate and regards it as subservient to the academic curriculum delivery, then we have a big problem as a province.

5.3.1.2 FA literacy and competency levels among principals

FA literacy and competency among pre-school managers and school principals according to the legal responsibilities was non-existent. I conducted interviews with the pre-school managers in schools A and B. There was a general feeling of unease with both managers. Appointments were changed at short notice quite a number of times. I could not get to interview principals in schools B, C, D, E and F. I had to interview the deputy principal in school C and a head of department (HOD) in school D because the principals were “busy”. At schools B, E and F I had to interview FA appointed persons.

In such cases where I could not interview the principals, I just got to ask them two quick questions on whether the principals were qualified first aiders and what their responsibilities were with regard to FA provisioning in the school. I also asked them if they knew the relevant laws guiding FA administration in schools. This was meant to enable me to gauge the levels of FA literacy and competence among school principals and pre-school managers. No principal had any prior training in FA and they did not see

it as their core business. All of them saw their duty as managing the delivery of the academic curriculum. They were all ignorant of the NEPA legal instrument. Principals in schools E and F, however, articulated their role eloquently but did not cite the relevant sections of the acts of parliament (SASA, NEPA and the Constitution).

The interview with the pre-school manager for school A was held in the office. The semi-structured interview guide was used. The manager was very helpful and went out of her way to divulge every detail. Her response to the first question on her responsibilities for FA was: *“with the staff I always give them a lecture on safety and remind them to have a close look on each and every child each day, making sure no one is sick and when playing that they are playing well. We have playground rules to guide us.”* She was not aware of the legal statutes guiding FA administration in schools.

The institutional pre-school B seemed well organised. The manager’s manner was very professional and I had to set up an appointment a week in advance through her secretary. However, on the appointed date, she had forgotten about the appointment and I had to reschedule it. When I came on the appointed date she was busy with some function and advised me to come the following week on an appointed date. When I came she was not ready and advised me to interview the FA appointed person in the school. I only needed to ask two quick questions in such a case, as I had learnt from previous cases. The two questions were about her responsibility for FA as a principal according to NEPA and whether she was a qualified first aider or not. The rest of the questions were answered by the FA appointed person. I got an interview with the appointed person, who was very co-operative. She demanded a list of the kind of questions that I was going to ask her first so that she could prepare. I was then supposed to come back at a later date. I explained to her that there was no need to prepare, as I wanted her opinions, but she insisted, so I gave her the interview schedule and returned on a later date. When I arrived for the interview, there was a lot of consultation and behind-the-scene briefings before I finally got to interview her.

With regard to the first question, her response was: *“learners get sick every day. We do encourage parents to keep children at home when the child is sick but there are many times when the children get sick at*

school as well as teachers and staff members. We treat the case immediately and get the best treatment we can.”

The pre-school manager for school B had no qualifications in FA and she seemed to lay the FA burden on the FA appointed person, thereby absolving herself of the responsibility by saying, “*we have a person who is qualified in those things*”. She also suggested that teachers learn about FA at university or college during training and there was no need to re-learn FA in the teaching field.

The school principal for school C was not a qualified first aider. He did not articulate his role and responsibility correctly with regard to FA provisioning in a school set-up. I could not hold an interview with him because of his tight schedule. I had to interview the deputy principal instead. The school principal for school D was not a qualified first aider and had no clue about his responsibility with regard to FA as described in the legal policy guidelines. I interviewed the HOD instead.

School E had an FA appointed person and the principal directed me to contact her. There was certain information that I needed from the principal, hence I just had a quick three-minute talk with him. These questions were if the principal was a qualified first aider or not, at what level if he was and his FA responsibility at the school according to the law. The principal was not a qualified first aider but he articulated his responsibility for FA provisioning in a school set-up in compliance with NEPA provisions. However, he could not quote the relevant laws.

I then held an interview with the appointed person in her office. The appointed person was a highly qualified and skilled first aider. She had worked in the mining industry for 16 years, including underground (2001-3) She had nine years’ experience of annual facilitation of training at school E. She was a level 3 first aider and had undergone three-yearly upgrades of qualification as a first aider from the time she first qualified. The interview proceeded very smoothly and there was little prodding, as much of the information was given spontaneously. She actually went beyond the question and gave extra detail that was not really relevant and I had to intervene a number of times to bring her back to the requirements of the research questions.

In response to the first question, she said her responsibility was *“to provide first line medical assistance as required and to obtain necessary ambulance, paramedics or whatever medical assistance was required.”* From her explanation and her mentioning of the relevant medicines, I was bound to appreciate the high level of FA literacy and competency exuded by the appointed person in school E.

The principal for school F was too busy to talk to me and advised me to interview the appointed person for FA in the school. The interview was held in the appointed person’s office. I had to ask the principal two quick questions, which the appointed person could not answer on his behalf (the principal). The first question was about his responsibility for FA in the school according to the law and the second whether he was a qualified first aider or not. The principal articulated his role very well and knew that he was responsible for implementing DoE policy on FA in the school. He was the man responsible for executing the mandate to ensure that FA was administered properly and effectively. However, he did not quote the relevant legal instruments and was not a qualified first aider, but knew a few FA skills from his young days as a “boy scouts” member.

The FA appointed person in this school was an expert in the field of first aid, judging by the way she responded to my questions and called in her “FA boys” to demonstrate a few of the FA procedures in the event of an accident or illness. The boys were also very adept at the provisioning of FA and left me in awe at their level of FA astuteness and agility at the signal of the FA appointed person.

Her response to FA responsibilities in the school was, *“Well, I have to manage all the health issues affecting boarders, day learners, teachers, cleaning staff and grounds staff. I am the Commander-in-Chief of first aid in this school.”*

From the foregoing data presentation it was clear that principals showed a very low level of understanding of policy guidelines regarding FA provisioning in schools. Only two principals knew their responsibilities with regard to FA provisioning, but even these could not refer to the relevant laws. None of the principals was a qualified first aider. This was a bad starting point, because if principals did not have the requisite FA

knowledge and skills, they could not be expected to implement FA in schools. It follows logically that one cannot implement what one does not know. The next section deals with FA literacy and competency levels for teachers.

5.3.1.3 FA literacy and competency levels among teachers

The literacy and competency levels of teachers were astoundingly low. Teachers' compliance was evaluated using FA training and the possession of a valid FA certificate from an accredited institution. FGDs in two schools were used to assess the FA knowledge and skills of teachers. Information on the number of teachers who were qualified first aiders was obtained from interviews with principals and FA appointed persons. There is no legal obligation for teachers to be trained and qualified in FA.

No teacher was qualified in FA at pre-school A, but the manager confided in me and said, *"Not yet. I am in the process with Crèche Management Skills Academy"*. There was apparent concern as the teachers in school B were summoned to an impromptu meeting before taking part in the FGD. There was a sort of a debriefing before the FGD with the teachers. According to the FA appointed person in school B, there were five qualified first aiders in the school. This contradicted the manager's earlier assertion that there was only one person qualified in FA. In total there were 10 teachers on the staff complement.

The FDG for school B was held in a classroom after school hours. I had intended to interview eight teachers, but because of commitments and last-minute rescheduling I ended up holding the FGD with five teachers. All teachers in the FGD were females. I noted that when it came to pre-schools, all teachers in the two pre-schools were female. There was some hesitancy on starting the discussion, as teachers took time to warm up to the discussion. My previous experiences were beneficial and I easily navigated around silent moments by giving a clue or explanation. The teachers were hesitant to give responses throughout, with a lot of glances at one particular teacher each time a question was posed. I got the impression that the other teachers sought approval from this one teacher to give or withhold responses. There seemed to have been some coaching beforehand on how they were going to respond. There were anomalies between the information I got from the FA appointed person and the teachers. The

discrepancies concerning the number of FA boxes and the number of FA qualified personnel in the school insinuated that there had been some debriefing or discussion of how the responses were going to be tailor-made to give a favourable impression by “falsifying” information.

Semi-structured questions were used to guide the discussions. The teachers did not explain their role in administering FA explicitly. There was a discrepancy in the number of FA boxes and the number of teachers trained in FA. This anomaly gave me an idea that there was a probability that numbers had been “doctored” to give the impression that FA was being administered at pre-school B.

There were no teachers qualified in FA at schools C and D. In school E there were 32 qualified first aiders among about 62 teachers. Nine of these teachers were qualified at level 3; 17 of the teachers were qualified at level 1 and three teachers had CPR certificates. The other three teachers’ certificates had lapsed and they had not renewed them. For the purpose of this research study, such teachers were regarded as unqualified first aiders because their certificates had expired and were therefore invalid.

There were 29 qualified first aiders if I had to count those who had valid FA certificates. The venue for the FGD was the staffroom after school hours at 14:45. Chairs were arranged in a circle. A table was placed in the middle. An Olympus audio-recorder was placed on the table. Consent forms had been issued and signed by all teachers beforehand. Letters on confidentiality had been signed and explained beforehand. Three of the eight sampled teachers made excuses not to attend. Five teachers were available and took part in the FGD. The gender balance was skewed in favour of men. There were four males and one female. All three teachers who did not turn up for the FGD were females.

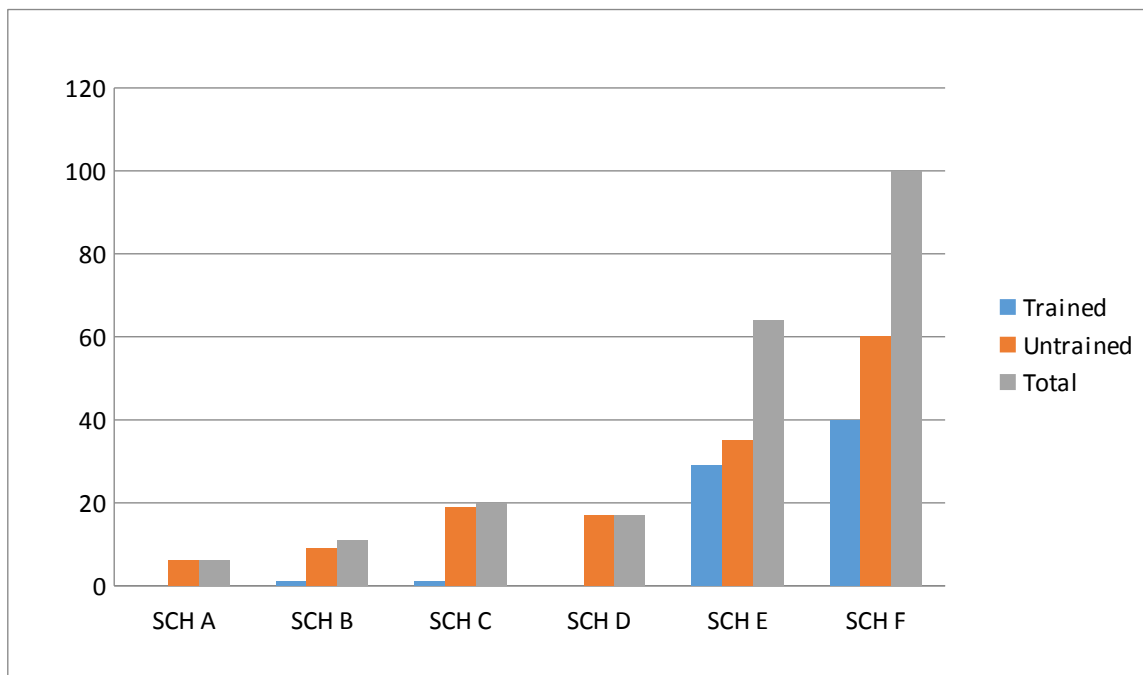
I gave an introduction on the purpose of the FGD as an ice-breaker. The interview schedule part dealing with whether they had any issues or concerns was read to the discussants. After guaranteeing that the discussions would be anonymous and confidential, teachers were given numbers: 1, 2, 3, 4 and 5. The blunders and experiences of the previous FGD with learners indicated pitfalls to be avoided in all subsequent FGDs, including this one.

Unlike learners, teachers were more forthcoming and prompt in their responses. After the first question, teacher 1 broke the ice and said, *“the teacher is the first person on the scene and must be able to access and give the first help or assistance needed.”* Teacher 3 seemed to be off-topic and responded, *“as a teacher there is little that I have done to manage health issues, however, I have made it my responsibility to clean my class every day.”* Apparently there was some confusion on what FA was about. He maybe thought that FA was synonymous with hygiene or something along the lines of cleanliness. The research topic mentioned health issues on the first stem, but had narrowed it down to FA provisioning in a school set-up. At this point I explained that the discussion was going to focus specifically on FA. The FGD revealed that the level of FA literacy and competency among teachers was very low.

I asked the appointed person in school F how many teachers were qualified first aiders. I had to explain what I meant by the term qualified, i.e. possession of a valid FA certificate. She said

“The whole of the pre-preparatory school staff and the whole of preparatory staff which I would say, is about 30 teachers are qualified. In the high school it is about 10 so in total about 40.”

The number of qualified aiders among teachers was relatively low. Two schools, E and F, had a commendable number of FA qualified teachers. Schools B and C had a negligible number of teachers who were qualified first aiders. The rest of the schools had none. Graph 5.1 shows the number of FA qualified teachers in the respective schools. The graph was used to illustrate the number of teachers qualified in FA in each school. One can also compare the qualified with the unqualified teachers when compared to the total number of teachers per school.



Graph 5.1 Levels of FA literacy and competency among teachers

The summarised graph above (5.1) illustrates that the number of qualified FA teachers was disproportionately skewed in favour of schools E and F. Schools A and D did not have a single teacher who was qualified in FA. The number of teachers trained in FA was relatively low. The ideal situation is one where every teacher is trained in FA, but as the graph above shows, this is far from being realised at all six sampled schools. The next section deals with FA literacy and competency levels among learners.

5.3.1.4 FA literacy and competency levels among learners

There were no learners who were qualified in FA in schools A, B, C D and E. The response from the appointed person for school B was, “*because we are a crèche and the children are too young to be trained.*” This belief was also echoed in school A. In school F the total enrolment was 1 700 learners. I asked the appointed person how many learners were qualified first aiders and her response was;

“I have 50 of first aiders among the learners trained in FA and do duty with me. They do duty with me in the morning and they do duty with me in the afternoon. They make up a team of first aiders. Those first aiders are probably going to do something in the medical field when they finish

school so they are given an opportunity to learn with me. They know exactly what to do in the event of an injury or accident they know the correct procedure to call the emergency services even when I am not present. Of the 50 learners qualified in first aid, 25% are level 1 and the rest are level 3”.

I also held an FGD in school E with the learners. I had made provision for 12 learners for the FGD, but only six turned up on the date of the discussions. There was uneven representation in gender: one boy and five girls. All the other boys made excuses at the last minute not to attend.

The FGD was held in a ground floor classroom for ease of access. The FGD took place after school hours so as not to interfere with teaching and learning. A light lunch was provided after the discussion. The lunch arrangement had been promised on the consent letters to parents and guardians. I had also made arrangements to reimburse transport money for the learners because they had to remain after school. The seating arrangement was circular, with a table in the middle. On top of the central table, an Olympus audio-recorder was mounted for convenience. After going through the introductory formalities and setting the ground rules, the FDG commenced. The learners took a long time to warm up to the discussion and during the initial stages there was a lot of silence and careful treading. As the moderator, I had gained a lot of information from literature about handling FGDs. This information on how to conduct successful FGDs proved invaluable in manoeuvring around such silent moments during the discussions.

The consent letters, assent letters and confidentiality letters were issued prior to the FGD. Two parents did not give their children consent to participate and these were excluded from the FGD. One parent expressed doubts about the “*whole thing*” and was not comfortable with his child participating in the research study. The other parent did not sign the forms up to the date of the discussions. I had to exclude this child despite the fact that the learner was willing to take part in the FGD.

Two learners were given consent forms but they had an extra lesson and could not attend. They were duly excused to attend the extra mathematics lesson. During the

FGD, questions were recrafted and it was necessary to do a lot of probing to extract correct responses from the learners. A poster was also used to stimulate discussion on injuries and accidents in schools.

Many changes were made to the interview schedule. I also learnt valuable lessons for the subsequent FGD in the next school. I perfected my interviewing and moderating skills with each FGD. This first FGD acted as a trial run for subsequent FGDs. Literature suggests that FGDs should be analysed in the context of group viewpoints rather than individually. I tended to follow that line of analysis, only mentioning individual viewpoints where they were important in highlighting a vital or divergent view that needed individual acknowledgement. These individual quotes protected individuals by giving them numbers to hide their identity and guarantee anonymity.

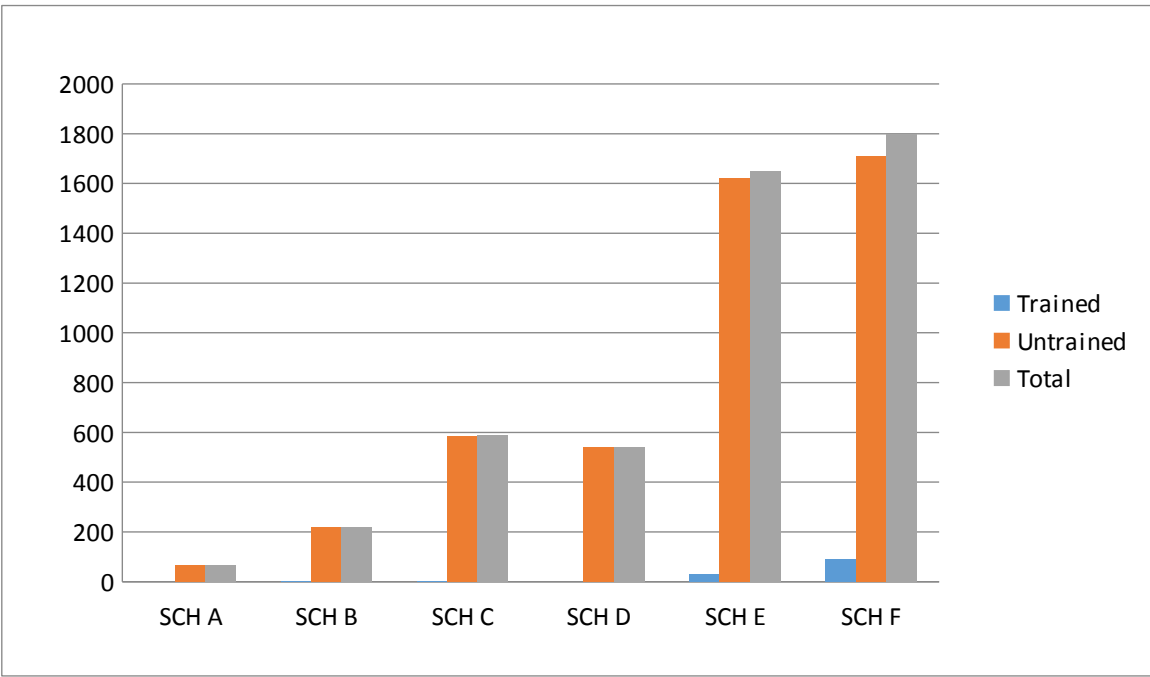
In response to the first question about the learners' responsibility with regard to FA in a school set-up, there was silence and no response for a few initial moments. It seemed as if learners were hesitant to be the first to speak. I had to give many clues and probe to get the learners to talk in the initial stages of the FGDs. Learners had expressed their concern about what this FGD was all about before. I explained fully to them at the time of issuing consent letters, but they had not fully comprehended, as this was the first time they took part in such a research study. They were very sceptical and suspicious, as shown by their reluctance to respond immediately. After showing them a picture of an injured learner, one learner eventually opened up the discussion and the rest joined in.

There were two learners trained in FA by their church, but since they did not possess FA certificates, they could not be deemed to be trained according to this research. The learners were given numbers from learner 1 to learner 6 instead of using actual names to protect their identity. In school E there was no learner trained in FA except the two trained in FA at church as "pathfinders" or girl guides/scouts. I probed the two learners on FA procedures for different conditions. Their responses were correct in all cases. They could not, however, be deemed to be trained in FA, as the definition of a first aider for this study and legally is the possession of a valid FA certificate issued by an accredited institution.

I also carried out an FGD with learners in school F. I had initially intended to have ten learners in the FGDs in school F, but circumstances dictated otherwise. The FGD in school F was difficult to arrange because most of the learners were boarders living far away from their homes and parents. I had intended to have five boys and five girls to maintain gender balance, but the school was for boys only. I ended up having five boys for the FGD. I also had problems with getting consent letters from parents who were not living in the vicinity of the school. Consent letters were issued in the first term for the FGD that was to take place in the second term. The private school used different calendar terms from the DoE school calendar. The advantage for me was that when I had to conduct the FGD, it was during the holidays for public schools but the private school was open. I therefore had all the time I needed and did not compromise teaching and learning in the school where I was working. Only five learners fulfilled the requirement of having consent letters signed and returned by parents/guardians. The FGD was carried out in the gymnasium hall after school hours. It lasted about 30 minutes.

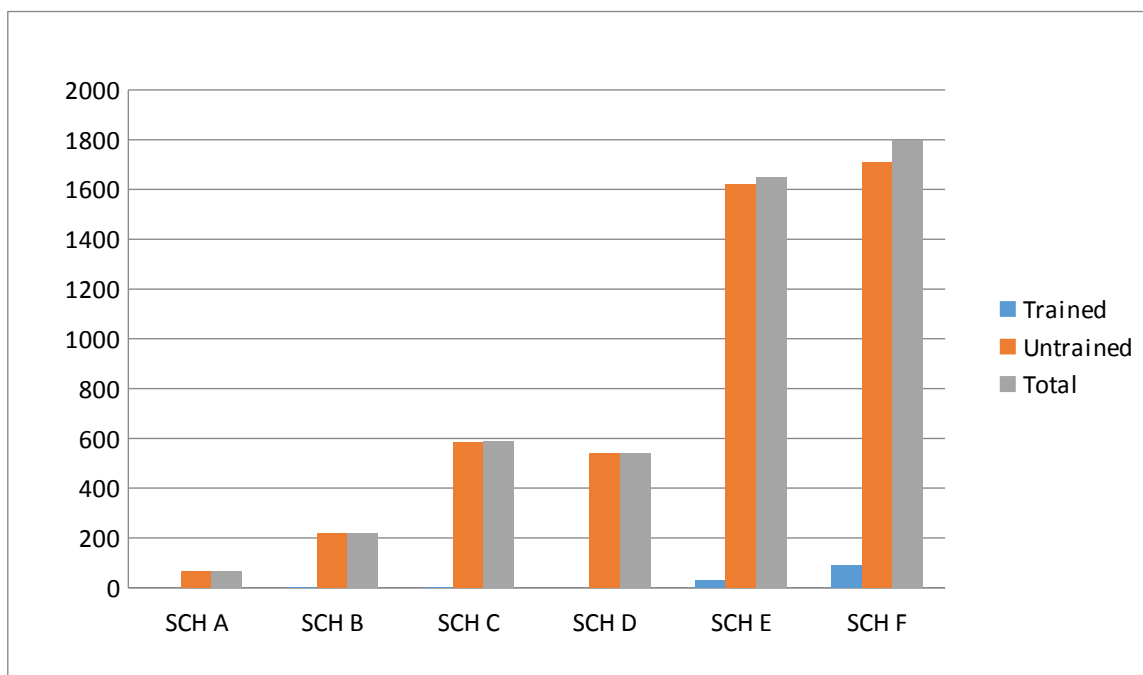
Learners in this FGD were sampled for me by the FA appointed person and were all qualified level 1 first aiders. The discussion was smooth and vibrant because the learners knew a lot about FA in schools. They even demonstrated what was supposed to be done in case of different injuries and illnesses. Their demonstration of the “recovery position” and CPR was superb and done effortlessly. The learners knew their responsibility as first aiders and knew the correct procedures to follow in the event of an illness or injury.

The level of FA literacy and competency among learners in the schools was relatively low. Except for school F, none of the other schools had a single FA qualified learner. The graph below (5.2) illustrates the number of FA qualified learners per school compared to the total number of learners in the respective schools.



Graph 5.2 Levels of FA literacy and competency among learners

The graph above shows the number of learners who were trained in FA in the six schools. There was not a single learner trained in FA in five of the schools (A to E). School F had 50 learners qualified in FA, which was a commendable achievement when compared to the other five schools. The graph illustrates that the level of FA literacy and competency among the learners is very low. A composite graph showing the level of FA literacy and competency for both teachers and learners (graph 5.3) is shown below.



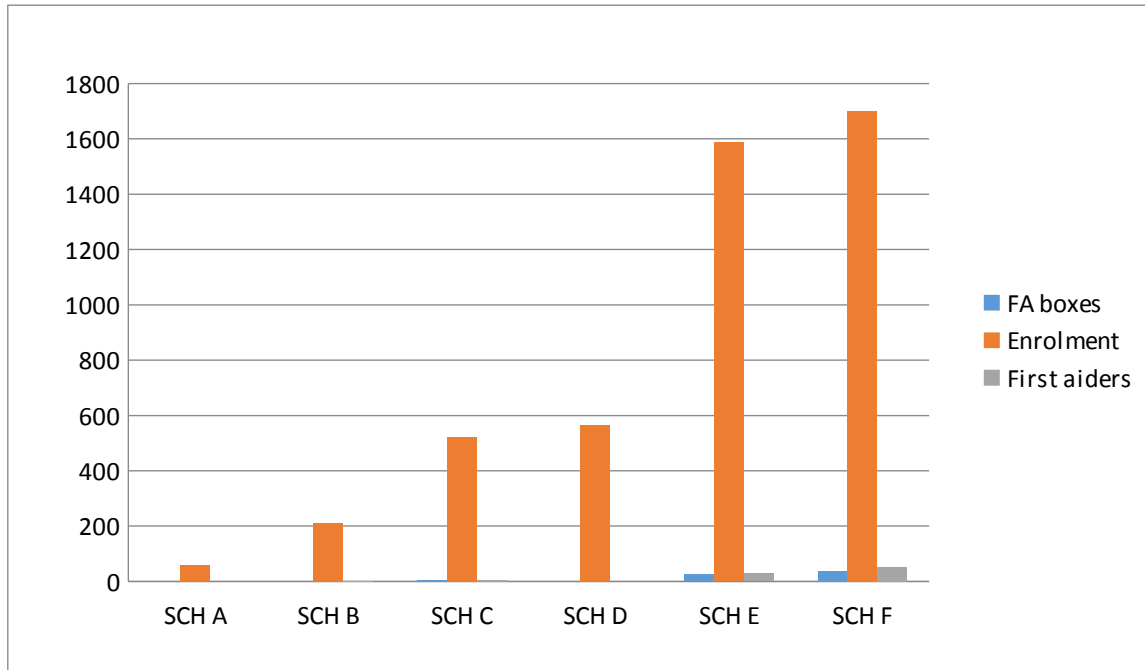
Graph 5.3 Composite levels of FA literacy and competency among teachers and learners

The graph above (5.3) is a combined summary of the total number of teachers and learners trained in FA in the six schools. It can be concluded with some degree of certainty that administrative efficacy of FA provisioning in schools A to D was non-existent. FA provisioning levels were at exceptionally low levels at the other two schools, E and F.

5.3.1.5 Number of FA boxes per school

FA boxes or kits were inadequate for all schools. There was not a single FA box in schools A and D. School A had 60 children and did not have a single FA box. School B had 210 children and one FA box. School C had an enrolment of 523 learners and had five FA boxes. School D had 567 learners and did not have a single FA kit. There were 25 FA boxes for school E with an enrolment of 1 587 learners. The FA appointed person in school E was responsible for ordering FA kits and replenishing stock. She was also responsible for end-of-year complete upgrade of kits and back-up supplies. The school had eight FA units and four boxes, 25 FA kits and regulation 3 and 5 laboratory kits. School F had 36 FA kits. The school's FA appointed person was responsible for

replenishing stock. The graph below (5.4) illustrates the total numbers of FA boxes per school compared with the total enrolment and the number of FA qualified teachers and learners. When compared to the total enrolment, the number of FA kits was relatively low. Where the number of FA boxes was low, as in schools B and D, they are not even visible on the graph.



Graph 5.4 Number of FA boxes per school

The number of FA kits was grossly inadequate for all schools. Schools A and D did not have a single FA box. The general trend for the four graphs is that school F had the most effective FA provisioning level when compared to the other five schools. School F also had the highest number of FA boxes and the highest number of FA qualified teachers and learners. This school was comparatively better resourced than the other schools. This finding was supported by literature, which asserted that the level of FA provisioning was positively linked to the wealth status of a country or organisation. An overall conclusion for all schools would not be objective enough, hence the next section concludes this theme by describing the levels of FA literacy and competency for each school in the sample.

5.3.1.6 Compliance with NEPA: School A

There was no compliance with the provisions of NEPA in this pre-school at all. None of the stipulations of the policy was met.

5.3.1.7 Compliance with NEPA: School B

There was some compliance in that there was one teacher qualified in FA and certificated. There was also an FA box visibly located next to the administration office. This was, however, inadequate and fell far short of the NEPA stipulations. The level of FA provisioning in the school needed to be improved significantly.

5.3.1.8 Compliance with NEPA: School C

There was some compliance with the NEPA provisions in this school, as one teacher was trained in FA. There were also five FA boxes, although they were not enough and fell far behind the minimum required for the school enrolment and size of the school.

5.3.1.9 Compliance with NEPA: School D

There was no compliance with the provisions of NEPA at all in this school. There was not a single FA box for the whole school. There was no teacher or learner trained in FA. The teachers and learners seemed to take solace in the fact that they could call emergency services quickly. This cannot be relied upon as an FA measure.

5.3.1.10 Compliance with NEPA: School E

There was considerable compliance with the provisions of NEPA in school E. There were 17 level 1 trained first aiders and nine level 3 trained teachers. It was, however, not a good thing that there was no learner trained in FA. The number of FA kits, although inadequate, was commendable. The school had 25 FA kits, four boxes and two laboratory kits. CPR posters were pasted all over the administration doors, with the requisite procedures of the number of compressions and air inflations per cycle. The FA appointed person was a very experienced and qualified first aider.

5.3.1.11 Compliance with NEPA: School F

There was a high degree of compliance with the provisions of NEPA at this school. The school was the best when considering all the schools in the sample. There were 50 learners who were trained and certified first aiders. This was a first for the sampled schools. The school, however, lagged behind in the number of FA trained teachers, which was about 40. The number of FA kits was also remarkable, considering the sampled schools, but they were still inadequate.

The next theme deals with professional development in schools with regard to FA needs.

5.3.2 Theme 2 - FA continuing education and professional development

First aid certificates in the South African context are valid for three years from the date of issue. Thereafter the first aider has to undergo a theoretical examination and a practical test. FA training is not compulsory in South Africa for teachers and learners. This theme sought to answer the question on compliance with NEPA, SASA and the Constitution with regard to the training and maintenance of the validity of FA certificates in schools. Behind this theme are the following questions:

1. Who ensures training for teachers and learners to keep the certificates valid?
2. Who is responsible for the renewal of certificates to maintain validity?
3. What is the role of principals and FA appointed persons in advancing the need for training teachers and learners in FA?
4. Is FA training optional/mandatory for schools?
5. Do principals, teachers and learners have time for FA training?

During the FGD in school E, all learners were unanimous in expressing that there was a need to introduce FA for everyone in schools. They were all willing to come for FA training after school hours. Their verbal affirmations were, however, not tested in practice. Their words might not match deeds in practical situations. As a way of rounding up this FGD I asked the learners' individual perceptions about anything that

they could offer with regard to FA provisioning in schools and the feasibility of training teachers and learners.

Learner 1 advocated for *the “introduction of FA as a compulsory subject in schools on the timetable. Stop to panic, think and then act. This was important for teachers to be qualified in FA so that if something happened to a learner they would make the right decisions.”*

Learner 2 responded that there was a need to *“ensure people knew what to do when people were injured”*.

Learner: 3 responded *“I do not get your question, Sir”*. I had to explain and rephrase the question again, to which he responded that *“there was a need to introduce FA in all schools. (Pela = by the way) ... what do you call this box? First aid box (yeah! = yes) we should have more of them!”*

Learner 4 suggested that the DoE must *“employ teachers trained in first aid so that they knew what to do before the ambulance arrived”*.

Learner 5 suggested that the DoE must get *“teachers who are qualified in first aid and let them teach other children and have activities after school or make it as a subject.”*

Learner 6 was asthmatic and was emotional about FA provisioning. She responded *“I would personally ensure that FA is taught in all schools because I am asthmatic and one day I had an asthma attack and no-one knew what to do, I did not have my pump on that day with me. FA in schools would assist those people who would want to become doctors as a base. FA should be included during periods (lessons). During break, teachers are not teaching and if something happened then learners must do first aid.”*

The five teachers in school E agreed that FA was necessary in schools during the FGD. In the words of teacher 1, *“... FA for learners was very important so as to give immediate assistance to another learner when need be in case a teacher is far away.”* Teacher 3 said, *“yes it is necessary because our learners are very much active in sports.”*

The FGD for teachers in school E was unanimous that FA training for many school teachers and learners was necessary. They fell short, however, of the ideal of training all teachers and learners. Teacher 3 suggested that schools should give financial rewards and remunerate teachers who opted for FA training. The other option, according to teacher 3, was to have specific individuals appointed as first aiders.

On the challenges faced in school with regard to FA, the group cited inadequate equipment and, lack of time, because training was done during holidays so some teachers would have to travel. The other factor was that training was done during school holidays when most of the staff was away on holiday.

The pre-school manager in school A considered the issue of FA provisioning in schools as essential and the following were her words: *“it is very necessary because with children you need to be ready to assist any time because they are very active so when playing it is possible to miss and hurt each other. It is imperative for schools to have first aid kits and first aiders to quickly assist when there is danger and avoid unnecessary bad situations due to lack of immediate attention to the staff or children.”*

She was also cognisant of the fact that there was a need to train all staff members in FA and added the aspect of *“funds permitting”*.

The major problems she faced were expressed as follows: *“the challenge is finance, to train the unskilled or to pay the skilled. The skilled personnel needs higher salaries which we cannot afford, the unskilled cannot afford to sponsor their training hence I decided to start with myself.”*

The teachers in school B were willing to enrol for an FA training course if the pre-school was prepared to foot the bill for the training. The group valued the importance of FA training for both teachers and learners. They advocated the inclusion of FA as a subject to be taught as part of the school curriculum. All learners agreed that they were not really prepared for a major catastrophe but could manage all other injuries and illnesses

well. The schools indicated that they were willing to participate in FA training for both teachers and learners.

The main problems were that there were no funds and there was no one to initiate the training. Because of the low literacy and competency levels of principals, there was no one to champion the training programmes for teachers and learners. The FA appointed person who acted as coordinator for FA in school E was well-versed in FA and suggested that each classroom must have one FA kit. She suggested that there was a need for all teaching staff as well as ground staff to be trained in FA. All non-teaching and interacting staff on site had to be trained: *“it is very important because an emergency can happen so fast that the first responder will save that life if adequately trained”*, she added. Her major challenges in the school were funds for training and reluctance on the part of teachers to come for training without being coerced. She often had to request the assistance of the school principal to coerce teachers to attend training sessions over the weekend, during holidays or after school hours. She spearheaded the FA training programme for teachers. There was no training programme for learners because of lack of funds. Training and professional development for teachers were non-existent in schools A, B, C and D. There were some moves towards training in schools E and F.

The next theme covered the support that schools get from higher offices of the DBE.

5.3.3 Theme 3 - FA support for schools by the DBE and GDE

FA provisioning in schools must emanate from the office of the MEC of the GDE. To get a glimpse of how the MEC viewed his mandate with regard to FA, I asked the DDG about this. On challenges that the GDE was facing in the administration of FA in Gauteng schools, the DDG said:

“There are a number of issues, to be honest with you. These range from natural and unnatural things. If you take the learners’ socio-economic issues, issues of learners not having something to eat for instance, a learner who is a child of a domestic worker. The learner lives near the model “C” school but because the mother cannot afford it the child collapses at school because of hunger. There is need to

administer FA. Educators are taught about those things. There is a problem if the educator who was trained is absent, then someone must administer FA. The trained educator must train others. The other challenge is that sometimes the equipment normally used for FA is finished and not replaced. Kids play and get injured, but there may not be ... what do you call this? ... bandages! Then comes the issue of HIV/AIDS and the issue of blood. Some would take chances in administering FA. I still remember in 2010 or 2011 a learner was stabbed in one school and people did not want to touch blood for fear of HIV/AIDS. The child died because people were scared to touch blood. I am saying these are some of the challenges. We are taking educators from time to time to train them in dealing with FA. We engage service providers to train educators, municipalities go to schools but they are not enough to reach every school. The Department of Health again assists us in terms of ensuring that workshops and clinics are held talking about various issues about FA.” According to the DDG, there are support structures from the MEC’s office but they are inadequate.

I asked the DDG if the GDE had officers at district level to monitor the administration of FA in schools, to which the DDG responded:

“Yes, we have. We also hold meetings with (he did not finish)... talking of issues of FA e.g. vaccination, parents must be involved, consent forms must be distributed. Parents must give consent or none consent. With HIV, coordinators manage in that area.” His answer was not satisfactory as it did not identify the officers responsible for FA administration at district level.

I asked the DDG whether, given the current status of FA provisioning in Gauteng schools, the GDE was adequately prepared for a major catastrophe in Gauteng schools, such as an earthquake, terrorist attack or a major accident. The DDG quipped, *“Is that first aid?”* I had to clarify my question and explained that I was actually referring to the time between injury and the arrival of emergence services. The DDG’s answer was;

“Remember you are talking about major issues and we might not be ready as a department, but remember that there is a disaster management team that involves the Department of Co-operative Governance and Traditional Affairs. What would happen in such a case would be that before the arrival of emergence services, we may not be capacitated to an extent where we can say before they arrive, we will have done 50 percent. We are not equipped. On our side we deal with minor issues. The issue at hand is, are they capable of calling the emergence services? To that end the school has the capability to do that?”

The DDG echoed a belief among a number of teachers and principals that FA for schools was only about calling an ambulance or emergency services and “guarding” the patient in the interim.

At this point I intended to end the interview and thanked the DDG for his time and information. The interview was officially over after 23 minutes. We both got up as if preparing to leave the boardroom, but it was at this time that another informal interview started, while we were standing by the door. Fortunately, I had not turned off the audio-recorder and the informal talk was captured as well. It was actually during this informal talk that the DDG was free to describe fully the *status quo* of FA in Gauteng schools. I was very curious about his exposé but had not prepared for it. The DDG continued:

“Let me also thank you for sharing these issues with us. We may not have those capacities but this is a wake-up call for us to improve. After completion of your studies and you are admitted to the degree, please furnish us with a copy of your findings so that we can be able to improve. We are a learning department, to improve and implement as situations are forever changing. You correctly say about the issues of disasters or terror attacks. Just on Monday I was revisiting the tsunami disaster... in what is this? Japan! and I was watching videos and it is strange despite the warnings that people were given, if they were any, then they were caught unaware. They said there was no such thing, but people took pictures and videos. You could see reality, this was not a

movie. Now how do you plan for and implement programmes for major issues?

We are looking at the issue of location. If the school is properly located - we have schools located in dolomite areas that have sinkholes. It is a disaster in waiting. We must work together with municipalities and send an alarm to monitor these areas. Some must not be emergencies; we must prevent them because as you know, money for emergencies is more. Prevention is better than cure. We have to ensure that the few resources must be channelled in a fair and equitable manner. If we wait for the disaster to happen then someone will charge you for the services. I also want to apologise for the many times I have shifted your appointment but you must know that I have a very busy schedule. I prioritise my appointments and other things come first. The whole issue is about what you prioritise. You have to be pragmatic and see where your bread is buttered. One person was furious and accused me of not planning. You cannot be furious with me it is an issue of priorities.”

The interview ended and we went together to his office, as I wanted to express my gratitude and say goodbye to the MEC’s personal PA. The MEC’s mandate, according to section 7 of NEPA, was not being implemented. The interview revealed that the GDE had no control over what was happening in pre-schools with regard to FA provisioning. This is a serious oversight, as most injuries occurred in private pre-schools and there was no one to take responsibility except the pre-school owners.

5.3.4 Theme 4 - Teachers’ and learners’ perceptions about FA provisioning in schools

This theme was catered for by the question on what the teachers and learners thought about the level of FA provisioning in their particular schools. This question was on the interview guide. The responses were obtained through probing questions focusing on the adequacy of FA measures and the preparedness of the teachers and learners to tackle injuries and illnesses. On the level of FA preparedness, the teachers pointed out that they were not well prepared for major incidents, only for some smaller and less

complicated issues. *In the FGD in school E* one teacher quipped “*these incidents are always scary so there is never enough preparedness*”. Teacher 3 responded, “*No, I think I will need a refresher course to be able to attend to these with confidence.*”

What came out of the FGD with teachers in school E was that the administrative efficacy in FA provisioning was still elementary and more needed to be done to bring it to an acceptable level as stipulated by NEPA.

In school F the FA appointed person felt that the school was confident that if a major event such as a terrorist attack occurred the staff knew how to contact the right security department to deal with such a threat. If it was a natural disaster such as an earthquake they knew which department to call in the event of such an emergency. They appreciated the fact that the Departments’ response was not guaranteed to arrive in the shortest possible time, but there was nothing they could do about it. They could handle minor injuries and illnesses effectively.

The overall response to the last question on the level of preparedness in the event of a major catastrophe was negative. The learners felt that they were not prepared for a major incident in terms of FA provisioning. All schools were unanimous in saying that they were not ready to deal with a major accident or disaster, but could only manage smaller incidents.

The *status quo* concerning FA provisioning in pre-school A epitomised the dire situation of FA provisioning in Gauteng schools. The level of FA provisioning with regard to literacy and competency was extremely poor in school A. There was no FA monitoring mechanism for this school from any government department. There was a high degree of honesty in the responses given in school A, as the manager backed up her responses with tangible evidence in the form of the registration deposit slip for an FA course. The school manager was also very cooperative.

There were 210 children in school B. The FA appointed person felt that FA was necessary because “*yes, it is important to save life and reduce suffering from pain and each staff member was supposed to have FA training on a regular basis,*” According to the FA appointed person there were no problems, “*because FA was done and staff understood the importance of this matter*”.

The GDE was concerned about academic pass rates rather than FA provisioning, with the DDG openly acknowledging that his mandate was curriculum delivery. Because of the lacklustre attitude towards FA in schools, teachers showed indifference, while learners advocated the compulsory introduction of FA in all schools as a subject. Some teachers and FA appointed persons indicated that FA was not for pre-school children because they were too young to go through such training. This is one myth that was disproved by research, e.g. Bollig *et al* (2011).

The next theme looked at how the schools dealt with incidents requiring FA in their schools.

5.3.5 Theme 5 - Management of health issues in Gauteng schools.

One over-arching response to the question about how the teachers and learners dealt with health issues requiring FA was calling teachers, ambulances or emergency services. The second most popular form of assistance was almost always tainted by the issue of the fear of blood and contamination in the wake of HIV/AIDS infection. After saying that they would offer assistance, the learners and teachers would be quick to add that if there was blood they would be hesitant. When prodded to explain in detail the form of assistance that they would give in specific situations, I gleaned from their explanations that these were not FA standard procedures and practices but stop-gap common-sense measures. Some were even unorthodox methods to “make do” in an emergency.

Schools were also tardy about keeping and maintaining records of injuries and illnesses. Schools E and F had elaborate files for teachers and learners, with medical records passed on from primary schools. When asked what she did with FA records in school A, the contact person’s response was “*for any injuries for now whenever it happens we record and file, though we never use the records*”. Records are invaluable in crafting a needs analysis for a school’s FA programme.

The major ailments experienced at school A were coughing, flu (common cold), rash and fever. The manager said that they hardly experienced injuries. Below is her response to questions on illnesses: “*if the child has a rash we call the parents to take the child home until we are sure it is not contagious. If one of the staff members is ill we*

advise the staff member to take medication but still continue to work. Children may stay at home until they are fine. Sometimes we separate (quarantine) them.”

School C relied on calling ambulances for serious cases. Apparently the level of FA literacy was very low, to such an extent that the deputy principal believed that FA provisioning was the preserve of nurses and doctors, not teachers. In his own words “*Teachers were not doctors.*” The deputy principal saw no need to be prepared for emergencies, since they relied on calling ambulances to attend to illnesses and injuries.

School D relied on calling emergency services for illnesses and injuries. They “*fixed minor illnesses and injuries using their experience and knowledge of biology.*” The school felt that they were ready for any incident because they “*could phone ambulances and the fire brigade quickly.*”

During the FGDs with teachers in school E, three of the teachers hinted that the fear of making mistakes had resulted in them being less willing to administer FA. I asked the FA coordinator if this was an issue and why. Her response was: “*well-trained first responders are trained not to make mistakes. They are trained well to assist the injured and not cause further complications to the patient. First responders are trained to comply with the law, hence there is no need to be afraid of a subsequent lawsuit.*” Her major problems in the school were “*budgetary constraints, unwilling teachers who feared contamination by blood or bodily fluids and therefore refuse training on that basis. We first aiders are trained by our own facilitators to know how to protect ourselves and not to risk our own health. There is no need to fear contamination therefore. We also do not have updated stretchers, neck braces, spine boards and wheelchairs. We are desperately in need of these items. We are also prepared for a major accident or catastrophe. For such extreme cases we know how to call those responsible for disaster relief and management*”.

Learners in school E agreed during the FGD that the best procedure in case of an injury or illness was to “*call the teacher*”. Learner 3 raised concern about the issue of blood

and said she was not going to assist until she was certain that there was no blood. She was apparently going to play it safe with regard to blood contamination, adding “... *I do not want to end up getting AIDS eeh!*”

Learner 2 also raised concerns about helping someone with epileptic fits and gave an example of a teacher at the school who suffered from seizures. At this point I reminded the learners of treating the discussion as confidential. I advised them not to mention names of people to protect their identity. Learner 2 was concerned about getting fits from the froth that came out of a victim’s mouth during a seizure. Apparently this was one of the myths that hindered learners from administering FA, based on half-truths and ignorance. Learner 1 knew the correct FA procedure for epileptic seizures, using layman’s terms, and said “... *wait for that person to finish rather than to try and stop the fidgeting. Remove tables and desks so that the learner does not get injured.*” Learner 3 asked, “... *(mara = but) Sir, what if the epilepsy does not stop?*” Learner 1 was one of the learners who got “FA training” from her church’s “pathfinder” programme. At this moment I had to intervene and redirect the focus of the discussion so that it did not degenerate into a discussion about epilepsy. I explained briefly that epileptic fits do not go on forever. They would always stop at some point but could recur. I then drew the learners’ attention to the sort of illnesses and injuries that they experienced in the school. In response to Question 3, which asked what sort of FA intervention they provided, Teacher 1 at school E said, “*we send them to (mentioned name of appointed person); learners’ parents are then called to pick them up from the sick room.*” In this focus group, there were three teachers qualified in FA at Level 3. One teacher in the group had a level 1 certificate. The fifth teacher was not a qualified first aider. According to teacher 1, the person in charge of FA was responsible for checking and replenishing the contents of the FA boxes each term if no major replenishments were required. Teacher 3 was a soccer team manager and had one FA kit. The FA kit was checked at the end of the year by the school’s FA appointed person.

On being asked what they were doing with regard to records of injuries and illnesses, the focus group responded that these were recorded on the inventory sheet that was placed inside each FA kit for subsequent capturing by the FA appointed person. This

was given to personnel in charge of FA who put it in the school file for illness and injury incidents reports. Teachers did not keep records as individuals.

For injuries in school F, the learners in the FGD knew exactly what to do in each case. It was amazing how the learners gave the correct response off-hand, as if they had rehearsed it all beforehand. The learners explained that the school offered, as part of its extra-curricular activities, contact sports such as rugby, which resulted in neck and spinal injuries. Each sport discipline had its own particular injuries. Basketball resulted in twisted ankles and sprains. Cricket produced head injuries and bleeding. Swimming resulted in drowning. Athletics produced cramps, hamstring injuries and pulled muscles. Soccer resulted in fractures. Most of the injuries were attributed to the different sport disciplines. Unlike school E, there were no stabbings or incidents of being struck with hard objects such as bricks or rocks. There were no issues of pregnancy, as it was a boys' school.

In school B the FA appointed person said in the event of an illness or injury the management *“took the necessary precaution at the time and informed the child’s parents immediately.”* Her response to questions on the keeping of records was, *“each teacher had a file for her class when any injuries occurred, when any accidents happened and they had a sick book as well so everything was kept in a file for each class and was submitted to the principal once a week.”*

I asked her if she had experienced any challenges with regard to FA provisioning in the school and she said,

“We are actually fine here at (mentioning the name of the school) we do not have any challenges. We have all records, we have an injury report form, every child that comes here with an injury will fill in a form and how the injury was managed. The injury report form is completed on a weekly basis. I notify the headmaster of those injured during the week and those illnesses that come on a daily basis. The sick and injured see a doctor or see me, then they have to fill in a form on a daily basis.”

My last question for school F was the level of preparedness of the school with regard to FA provisioning in the school and how they managed health issues in the school. The FA appointed person responded;

“We have a health and safety committee, which meets once a month to discuss all those things. We have fire drills, we have lectures on how to deal with the kinds of those things, you know, terrorist attacks or whatever. We do that all the time.”

I asked the FA appointed person at school F how she dealt with sport injuries specifically and she said; *“How do you deal with sport injuries? I deal with them myself. Obviously if they are severe I send them to the casualty department. We have a medical doctor who comes here every morning from 7 to 8 and if necessary they consult with him but if they are bad, we send them to the specialists. We have a whole lot of specialists that we use and they are just a phone call away”*. At this point I thanked the FA appointed person for according me the opportunity to interview her at short notice when at that point, a group of learners arrived at the office door. Her face lit up as if the group had shown up at the right time and she said;

“These are all first aiders, if I am not here, they know what to do, the first thing being not to panic. They all know what to do, how to deal with the treatment, whether it is or not an emergency, to phone me or an ambulance. They are trained not only in FA but they are also trained to manage an incident, you know ... there is no need to panic, the person is not going to die, take time to splint the arm or ankles, etc. If I had the time I was going to let them do a demonstration for you in CPR, drowning victim, choking, etc.”

The learners at school F carried out demonstrations later during the FGD.

Illnesses and injuries were managed in a haphazard and uncoordinated manner at schools A, B, C and D. There was, however, an elementary coordinated effort to administer FA in schools E and F.

5.3.5.1 Injuries and illnesses experienced in Gauteng schools

In school E the FA appointed person's response to the question on the kind of illnesses experienced in the school was, "*all kinds, asthmatic, allergies, high blood, low blood, flu, coughing and fever.*" School E experienced injuries from sport activities and during break when learners were playing. Injuries cited were bruises, sprained ankles, cuts and bleeding. Illnesses included common colds, rashes, nose-bleeding, pink eyes and fever. According to her the major diseases that haunted the school were asthma, diabetes, high/low blood pressure, pregnancy, fractures, wounds, epilepsy, colds and allergies. Most common illnesses, conditions and injuries in school E were cited by the learners during the FGD. These included stabbings, pregnancy, scratches, broken limbs, epilepsy, bruises, Turrets' syndrome and asthma.

The types of illnesses and injuries experienced and mentioned at school E were asthma, heart problems, broken hands and legs, period pains, headaches, migraines, stomach bugs, rashes, pink eyes, epilepsy and mostly injuries as a result of participation in different sport activities.

When I asked her about the sort of illnesses and injuries in school F, the FA appointed person's response was, "*well, we have no major problems, but with boarders it is flu and things like that because they are in confined spaces but with sports injuries that is where we have the biggest problem.*"

The illnesses that the learners experienced most frequently in school F were common colds, asthma, head-aches, migraines, nose-bleeding, allergies, bee stings and pink eyes. The main injuries included sprains, twisted ankles, fractures, muscle cramps, hamstring injuries, pulled muscles, head injuries, neck injuries, drowning, spinal injuries and bleeding. The illnesses cited in school C included colds, coughing, fever, rashes, allergies and injuries. Injuries were mainly from falling.

Tables 5.1, 5.2 and 5.3 illustrate injuries and illnesses by grade level and school type respectively.

Table 5.1 Summary of injuries by grade level

Preschools	Primary schools	High schools
Bruises and cuts associated with falling	Bruises associated with falling	Cuts with sharp objects, stab wounds, bleeding,
		lacerations, fractures, cramps, hamstrings injuries, neck and head injuries.

Table 5.2 Summary of illnesses by grade level

Preschools	Primary schools	High schools
Colds, fever, rash	Colds, rash, bee stings,	Asthma, period pains
	Allergies, pink eyes	Head-aches, nose bleeding, allergies, pink eyes, nausea
		Colds, epilepsy, Turrets' syndrome, cardiac arrest, vomiting.

Table 5.3 Summary of injuries by school type

preschools	Primary schools	High school	Private high school
Bruises	Bruises	Fractures, sprains, stab wounds	Fractures, neck and head injuries,

The tables above indicate that illnesses and injuries are age-specific. In the lower grades (early childhood) injuries are mainly caused by falling. Illnesses are mostly common colds, fever, etc. In high schools the injuries are associated with sport activities and fighting. Pregnancy-related issues also come to the fore. Problems associated with puberty (period pains) also become an issue for girls. There was a particular absence of violence-related injuries in the private school. The reasons for this trend were outside the scope of this research study schools is given below. Injuries and illnesses identified through FGDs, interviews and observations are shown below (Table 5.4)

5.3.6.1 A composite summary of injuries and illnesses occurring in each school

Table 5.4 Injuries and illnesses occurring in each school

School A	School B	School C	School D	School E	School F
Colds	colds	Allergies	rashes	Headaches	flue
Flue	rashes	Bruises	colds	Nose-bleeding	sprains
Rashes		Pink eyes	bruises	Cuts	fractures
Fever		Colds	Bee stings	Period pain, pregnancy, abdominal pains	colds
				Fits, spirit possession, Turrets' syndrome	headaches
				Pink eyes	allergies
				Allergies, bee stings, spider stings	asthma
				Asthma, fainting, exhaustion	Nose-bleeding
				Fractures	

The tables above indicate that illnesses and injuries are age-specific. In the lower grades (early childhood) injuries are mainly caused by falling. Illnesses are mostly common colds, fever, etc. In high schools the injuries are associated with sport activities and fighting. Pregnancy-related issues also come to the fore. Problems associated with puberty (period pains) also become an issue for girls. There was a particular absence of violence-related injuries in the private school. The reasons for this trend were outside the scope of this research study.

From the table above, one can see that the major illnesses and injuries in the lower levels of the school system were different from the high school illnesses and injuries. In the preschools (A and B) the illnesses were the same, being dominated by colds, fevers and rashes. Of notable absence in these schools were illnesses such as headaches, fractures and cuts resulting from fighting. The primary schools experienced similar illnesses and injuries. The high schools seemed to be experiencing more injuries and illnesses. School E had to deal with cuts from sharp instruments as a result of rampant fights at the school. These were not experienced in school F. School E experienced more injuries and illnesses than any of the other schools.

This information could be very useful in planning an FA programme that is tailor-made to the needs of the particular school. FA training should emphasise the illnesses and injuries experienced in the particular school. The table helped to give a needs assessment tool for each school. Observation at school E required that I consider the findings separately from FGDs and interviews.

5.4 Observations at school E

Observations were done at one school only, school E. The results for the duration of the month were recorded on an observation sheet. The findings are shown on the sheet below. The observations reflect what happened in one school with regard to FA provisioning. Observations on FA provisioning at this particular school helped me to triangulate the information obtained from FGDs and interviews with school principals. Although the observations were done in one particular school, the findings helped to understand FA provisioning in similar schools.

5.4.1 Observation sheet

I observed FA provisioning at one school and recorded the findings on a record sheet (Table 5.4) below. This observation was for one month only, but FA provisioning at school E was done over four months.

Table 5.5 FA observation record sheet (school E)

FA OBSERVATION RECORD SHEET

Day	Incident	Time	FA (Y/N)	T/L	Follow-up	Records (Y/N)	Gender (M/F)	Grade	Result
1	fighting/stabbing	14:30	Y	L	ES	Y	F	11	wound
2	sprain	11:20	N	L	non	N	M	9	limp
3	Nose-bleeding	10:30	N	L	N	N	M	10	fine
4	Allergy (eyes)	09:30	N	L	N	N	F	9	Itchy
	fighting	10:30	N	L	N	N	M	10	Cut
	stabbing	14:50	Y	L	ES	Y	M	10	wound
			Y	Y					
5	Fighting	13:40	N	L	N	N	M	10	Bruise
	Stab wound	14:30	Y	Y	ES	Y	F	F	wound
1	Pink eyes	11:30	N	T	N	N	F	Staff	itchy
2	Epilepsy, Allergy	10:41	N	T	N	N	F	Staff	fine
3	Nose-bleeding	11:09	N	L	N	N	M	8	Fine
	nausea	13:45	N	L	N	N	F	9	Fine
4	Period pains	11:41	N	L	N	N	F	9	Fine
	vomiting	09:45	N	L	N	N	M	9	Fine
5	Gash wound(hit by a brick)	11:37	Y	L	Y	Y	M	10	wound
1	Allergy (eyes)	11:12							itchy
2	Spiritual possession "ancestors"	11:35	N	L	N	N	F	9	fine
3	Epilepsy	11:09	Y	T	N	N	F	Staff	fine
4	Migraine	11:23	N	L	N	N	F	11	Fine
	Panic attack	12:10	Y	L	Y	Y	F	11	Fine
5	Asthma attack	11:13	N	L	N	N	M	10	fine
1	Bee sting	11:46	Y	L	Y	Y	F	8	Swell
2	Broken arm	16:04	Y	L	Y	Y	M	11	Plaster
	Overdose of pills in suicide attempt	08:10	Y	L	Y	Y	F	9	Fine
3	Hamstring	15:04	Y	L	Y	N	M	11	Fine
	Vomiting	10:15	N	L	N	N	F	9	Fine
4	Angle sprain	15:47	Y	L	N	N	M	9	Swell
	Fainting (coma)	14:37	Y	L	ES	Y	M	12	Death

KEY for abbreviations used in the table
Y=Yes N= No
ES= Emergency services called (ambulance)
M=Male
F=Female
L=Learner
T=Teacher

From the observations it was apparent that the major injuries were experienced during sport activities. Soccer caused the highest number of injuries. Most of the learners were injured while playing soccer at break. Injuries associated with soccer included sprains, hamstrings injuries, pulled muscles, fractures, bruises and head injuries.

Fighting and stabbing came second after sport injuries. There was a lot of fighting among both boys and girls, especially on Fridays. Most fights and stabbings happened immediately after school outside the school fence. The major reasons were gambling (for boys), cyber-bullying (for girls) and “dissing”. It looked as if learners did not want to be affected by the disciplinary measures of the school, hence, they “postponed” their fighting until they were outside the jurisdiction of the school. They took their fights immediately outside the school gates immediately after school hours. Most stabbings were in the upper parts of the body, the stomach and neck area. Although no death resulted from the fights, the nature of the stabbings showed determination to end the victims’ lives.

An important illness that caught me by surprise and needs special mention in this study was “spiritual possession”. While attending a lesson in my classroom, a girl went into a trance and started muttering some unintelligible words. She started removing her clothes and sweating profusely. Other learners took the girl to one teacher who knew how to deal with “such cases”. It has to be noted that the DoE does not give legal recognition to spiritualism in schools and such trances are treated as hysteria or hallucination.

The girl eventually calmed down and became normal again. No FA training is available to cater for spiritual conditions. The belief in African tradition is that such a person is actually not ill. Although it is not a medical condition requiring FA, it is worth mentioning because sometimes the person may be violent and may not be in complete control of all faculties. In such a trance the learner could injure herself or others. Apparently this particular learner was known to be possessed on quite a number of occasions since primary school. At one time she had enrolled for a training “course” to become a spirit medium or fortune-teller.

Below is a tabulated summary of the findings in the six schools. The themes/codes are listed downwards in the first column. The summarised results in the table came from the data gathering instruments, namely observation, interviews and FGDs.

5.5 A composite summary of FA provisioning in sampled schools

To get a glimpse of the overall FA provisioning levels in the six sampled schools, the findings are tabulated below.

Table 5.6 A composite summary of FA provisioning in sampled schools

Theme/Code	School A	School B	School C	School D	School E	School F
FA policy	none	None	none	none	none	available
No. of FA boxes	0	1	5	0	25	36
FA certified teachers	0	1	5	0	29	40
FA certified learners	0	0	0	0	0	50
Admin. (SMT) FA certified	0	0	0	0	1	1
Admin. FA competency (Likert)	0	0	0	0	2	3
FA Evaluation level (Likert)	0	0	0	0	0	1
Illnesses/injuries	Colds, rashes, fever	colds, rashes, fever	Colds, falling, bruises	Colds, falls, bruises	Stab wounds, period pains, fractures, nose bleeding	Fractures, sprains, headaches,
FA provisioning	Call ER			Call ER		

From the table above one can glean that the level of FA provisioning in Gauteng schools defied a one-size-fits-all description. There was huge discrepancy between affluent schools and relatively less-resourced public and private schools. The schools did not have an FA policy, save for the private high school F. School E was just starting to

formulate a policy for FA but said the current FA needs were catered for in the school health and safety policy which was available. I read through the policy and realised that the FA needs were catered for by just two statements that underlined the importance of having FA boxes. There was a committee that had recently been constituted to look into the FA policy. No other school had any policy at all and none was going to have one soon, judging by what transpired in the subsequent FGDs and interviews.

The number of FA kits fell far below the minimum requirements. In school A, there was no single FA box for the children. In school B the manager apparently inflated the number of FA boxes to five. The staff members mentioned that they had one box only, which I also saw at the entrance to the school. There were more FA boxes in schools E and F. The ideal situation is that each classroom and sport discipline should have an FA box.

The number of teachers trained in FA and certificated in the schools was too low. There were no FA trained teachers in schools A and D at all. There was only one FA trained teacher in school B, which had about 210 children. The minimum requirement is one FA trained person per 50 people for a school establishment, according to the Labour Relations Act.

The number of learners trained in FA was also very low. There was not a single learner trained in FA in schools A, B, C, D and E. Only school F had 50 learners qualified in FA administration, which again was a far cry from the ideal. The school had about 1 700 learners. Although two learners in school E said they were qualified in FA after completing a course in FA in their “pathfinders” training course at a certain church, I could not deem them qualified for the sake of my study. According to this study the qualification for FA was the possession of a valid certificate issued by the SAFAL or some other accredited institution.

The level of FA literacy per sampled school was based on a Likert scale of 0 to 5, with 0 being very poor and 5 being excellent. The scale I devised and used is illustrated below:

Table 5.7 FA literacy and competency levels in schools

1.No FA at all, very poor, non-compliance with NEPA and SASA.
2.Poor, the need for FA provisioning is acknowledged, but there are no moves to introduce it now or in the near future, to meet the requirements of NEPA and SASA.
3.Minimal FA, the school has taken some steps to implement FA, although it is inadequate. There are at least two FA kits and more than a quarter of teachers and a quarter of learners have been trained and qualified in FA.
4.FA is being administered, with at least half of the staff and learners trained and qualified in FA. There are more than two FA boxes.
5.Three quarters of the teachers and learners are trained in FA. There are more than 10 FA boxes.
6.All teachers and learners are trained in FA. FA boxes are adequate. FA provisioning complies 100% with NEPA and SASA.

All six schools fell far behind in compliance with NEPA and SASA. Only school F registered a score of 1, which was still very low.

The number of the SMTs trained in FA was also very low. According to the interviews with school principals and pre-school managers, none of them had any training in FA. In the section on the psychology of workplace safety, it was pointed out that the drive towards safety needs must start with the managers/ principals. If there leaders showed no noticeable interest and motivation, the staff and learners would not buy into the FA training programme.

I devised a customised “Likert scale” in an attempt to evaluate the level of FA provisioning, based on the provisions of NEPA. According to the scale, all schools fell short of the FA provisioning requirements, only one school registering a score of 1 and all other schools registering a score of zero. School F, which is the model school, still did not come near the minimal requirements with regard to compliance with FA provisioning as stipulated by NEPA.

With regard to dealing with FA incidents, most teachers and learners knew how to call an ambulance, but little else in the form of FA. Most learners were sceptical about helping in any situation especially where blood was involved. They tended to take the issue of HIV/AIDS infection to extremes.

The type of injuries and illnesses were different depending on the school. Injuries in preschools were in the main, caused by falling. The type of bone structure in pre-school

children is not predisposed to fractures, hence there were few fractures. Instead of broken bones, young children tend to suffer “green stick” fractures. Illnesses were the common cold, rashes and fevers.

In primary schools the type of illnesses and injuries included colds, influenza and bruises associated with falling and grazing against hard objects. In high school injuries included stab wounds, sprains, fractures, bleeding, bee stings, cuts, lacerations and swellings associated with being struck with a hard object. Illnesses in high school were period pains in girls, abdominal pains, asthma, rashes, allergies, head-aches, migraines, pink eyes, common colds, dizziness, fainting, epilepsy, fever, nausea and running stomachs.

5.6 Summary

When viewed against the backdrop of the research topic, the administrative efficacy of FA provisioning in Gauteng schools was grossly inadequate. The level of FA literacy and competency among principals, teachers and learners was very low. Chapter five presented the research findings, analysed and discussed them in the context of the research questions. Chapter six synthesised and gave a summary of research findings, made recommendations, described and explained the limitations of the study and wound up with concluding remarks for this research study.

CHAPTER 6

SUMMARY OF FINDINGS, RECOMMENDATIONS, LIMITATIONS AND CONCLUSION

6.1 Introduction

Chapter five analysed the results and discussed the research findings against the backdrop of the research questions. Chapter six wrapped up the study and made recommendations in the light of the research topic. This last chapter gave a synthesis of the research findings and recommendations for the various stakeholders. The research study's contribution to the body of knowledge also formed an important part of this chapter and was included in the section on the summary of findings. The research study's limitations were inherently highlighted.

6.2 Discussion of research findings.

This section is dedicated to comparing and contrasting the study's findings from other findings in other research studies. The research findings were also benchmarked against the theoretical and conceptual frameworks discussed in Chapter 2. First aid is an effective life-preservation tool at work, school, home and in public locations (International Federation of Red Cross and Red Crescent Societies 2009). First aid can make the injured child feel more comfortable, because it can reduce bleeding or pain (Graham *et al* 2009, in Wagida & Hanan 2014).

The consequences of injury can be minimised by the administration of FA, and in some self-limiting or minor injuries, only FA is required (Difazio & Atkinson 2005, in Wagida & Hanan 2014). In some cases there may be no need to refer the injured learner or teacher to a clinic or hospital after the administration of FA. In the South African context this study unravelled the fact that there is no policy specifically on FA provisioning in schools. The fact that FA is encapsulated in the policy dealing with HIV/AIDS transmission is a recipe for disaster. While FA is recommended, the HIV/AIDS policy discourages contamination through contact with bodily fluids. There is need for an FA policy that factors-in the HIV/AIDS transmission.

There is a dire need for FA provisioning in schools. All schools saw the importance of FA and held it in high regard in curbing deaths and disfigurement attributed to injuries and illnesses. However, little is being done to administer FA in the sampled schools. This was in stark contrast to recommendations from research findings by Wagida and Hanan (2014). Important differences between children and adults and the stage of childhood should be taken into account during emergency care and FA administration. There was an apparent neglect of the pre-school child where a number of deaths were highlighted in the local print media. The differences between these groups exist not only in anatomical, physiological, and psychological development, but also in exposure to various injuries and illnesses. Children are more prone to injuries than adults. FA provisioning is needed more in pre-schools than high schools. This study revealed that specific illnesses and injuries were peculiar to particular age groups and school levels.

The mental and physical abilities of children are not developed enough to allow them to protect and defend themselves; they sustain accidents and injuries more frequently and therefore require FA more often than adults (Çavuş, oğlu 2002, in Wagida & Hanan 2014). There is a need for health education and promotion. All schools, including the affluent private one, fell short of the ideal situation in FA administration in schools. Literature indicated that FA in schools could make the difference between life and death. FA can be taught at all levels from four years upwards. In the sampled two pre-schools the managers believed that there was no need to train children in FA because they were too young. Once injury or sudden illness has occurred, providing effective FA can make the difference between life and death, rapid versus prolonged recovery and temporary versus permanent disability (American Safety & Health Institute 2008 in Wagida & Hanan 2014).

This study discovered that knowledge of FA, which constitutes life-saving treatment for injuries or unexpected illnesses, is important for every individual at every age. Literature confirmed this by asserting that first aid and BLS are so important that teaching basic FA should be compulsory in all schools (Bas,er *et al* 2007, in Wagida & Hanan 2014). Childhood injuries are a growing global public health problem (WHO 2010). This was revealed by the growing number of deaths, illnesses and injuries occurring in

schools. FA can be taught and should be taught early to pre-school children to inculcate empathy.

Although children are admitted to emergency departments every day with injuries sustained at home, school and elsewhere, few receive FA before arrival (Rogovik & Goldman 2006, Ali *et al* 2010, in Wagida & Hanan 2014). The study showed that many learners die before the arrival of emergency services. In many cases emergency services arrived to certify that the learner was dead. According to the International Federation of Red Cross and Red Crescent Societies (2009, in Wagida & Hanan 2014), in the UK there are three million attendances at emergency departments per year for injuries that FA can treat.

None of the principals or managers of pre-schools was trained in FA, which was a bad example and bad starting point. The managers and principals must be trained in FA first if they are to be taken seriously by the teachers, learners and staff members.

The number of FA kits was inadequate in all schools and there was a dire situation in two schools where there was not a single FA box. Literature alludes to the fact that most of the injuries and illnesses highlighted in the print and electronic media occurred in preschools. The study revealed that the supervision of pre-schools in Gauteng is a grey area, with no one taking responsibility. The GDE absolved itself from control and supervision of pre-schools. This is an untenable situation, as nobody will be accountable for injuries and deaths happening in Gauteng pre-schools. The district officials responsible for school health and safety were understaffed and unable to monitor FA provisioning in schools satisfactorily.

From the research findings I can safely conclude that the administrative efficacy of FA provisioning in Gauteng schools is in its infancy; it is low, inadequate and haphazardly administered. The level of FA literacy and competency among teachers is very low. First aid administration varied from school to school. Disadvantaged schools had low levels of literacy and competency when compared to the affluent former model "C" and private schools. In the latter schools, the proportion of FA trained learners and teachers was still unacceptably low. The potential value of FA training for laypeople has recently assumed heightened importance in the context of both man-made and natural mass casualty

incidents and correspondence. Starting FA education early might strengthen interest, empathy, motivation and the ability to administer it. Bollig *et al* (2011) recommended that all fit laypeople above the age of ten years should learn LSFA skills, including BLS and CPR. This was supported by Baser *et al* (2007, in Wagida & Hanan 2014), who emphasised that teaching FA should be compulsory in schools. There is need for further research into the provisioning of FA in schools.

6.3 Summary of findings

The management of health issues in a school set-up is restricted to health education, health promotion and FA provisioning. It does not, however, go as far as health care provision. The research findings revealed a critically low level of literacy and competency of FA provisioning in Gauteng schools among principals, pre-school managers, teachers and learners. Although a blanket conclusion would not be possible for all sampled schools, it is important to note that school administrators, teachers and learners in the schools had scanty knowledge and skills for the effective provisioning of FA. The sampled school F that was best in FA provisioning came nowhere near the ideal FA provisioning level as recommended in literature. The NEPA provisions guiding FA provisioning were found to be inadequate legal instruments for the ideal FA provisioning requirements for schools in Gauteng province. There is a need to change and revise the legal instruments guiding FA provisioning in schools at the law-making level with a view to streamlining them with the dictates of literature and practicalities in schools. There is also a need to change the FA clauses in NEPA to be more FA specific and user-friendly. The current policy was crafted with HIV/AIDS transmission in mind. This militates against FA provisioning because a reading of the provisions advise teachers and learners to be cautious of HIV/AIDS infection. One has to weigh the options between risking HIV infection by assisting or refrain and be safe. The DDG described a worrying situation where a learner died in 2011 because teachers and learners were not going to risk assisting the heavily bleeding learner.

6.4 Generation of new knowledge

The research study evaluated the administrative efficacy of FA provisioning in Gauteng schools. It was premised on the assumption that managing health issues in schools,

which is restricted to FA provisioning , should be done through mandatory FA training for teachers and learners. The mandatory FA training would increase the preparedness of schools to deal with a plethora of health issues affecting teachers and learners. This study was important to the body of knowledge in that the DHSD and the DoE should complement each other. Currently there is an uncoordinated approach to health education, promotion and FA administration in schools. The DHSD deals with immunisations and vaccinations in schools. The DHSD should supply the expertise by training teachers, principals and learners in FA. Since the DHSD is already involved in vaccinations and immunisation of children in schools, it should go a step further and give health education and FA training in schools to promote health. Health personnel can use their expertise to train teachers and learners in FA provisioning in schools. There is a need to adopt a coordinated approach to health education, health promotion and FA provisioning in schools by both the DoE and the Department of Health.

The study also brought to the fore the issue of FA provisioning in schools. It was made manifest that calling an ambulance or emergency services, while an important step in the FA administrative chain, was not really an end in itself, but part of FA procedures. The time between injury, illness and death before the arrival of emergency services is crucial. FA in schools is crucial in saving lives and relieving pain. The study emphasised the importance of FA not just for injuries in schools, but also for illnesses that affect both teachers and learners in schools. FA in schools goes beyond calling an ambulance. Illnesses emanating from health problems, not necessarily injuries, are also part of FA provisioning in schools. FA should cover health conditions such as heart attacks, asthma, obesity, nose-bleeding, period pains, etc.

The research findings are very important for policy-makers at both local and national government levels. One of the issues raised by the GDE DDG was that they needed to get a copy of this thesis so that they could learn and implement some of the research findings. To this end, the section on recommendations to the GDE will prove invaluable.

The study produced invaluable content and knowledge material for health education and promotion. At a time when “a healthy lifestyle” is the catch phrase, the findings provide a useful account of how to reduce pain, suffering and ultimately save lives in a proactive health education and promotion drive. Research findings served as a starting

point to stimulate further research in the field of FA provisioning in the school context. To this end, this research study provided a springboard and benchmark to gauge the pulse of management of health issues in Gauteng schools, with particular reference to FA provisioning.

The research findings should be the harbinger of things to come with regard to health and safety in schools by acknowledging that there is a problem with FA provisioning in schools in Gauteng. There is also a need for a proactive stance to curb injuries and illnesses happening in schools today. There has not been an awareness of the problem and isolated incidents at different schools have not been a wake-up call to jog the GDE into proactive and assertive action.

Cooks (2002) suggests that, contrary to popular belief, small amounts of money are required to outsource emergency care. Having just one or two facilitators qualified in FA reduces the risk of an incident leaving a child scarred for life (Ibid). FA is a life skill. This is a worthwhile feat, given that FA training for the basic level 1 can be done within six hours. Writing about South Africa, Cooks (2002) notes that in violent times everyone has the ability to take a life, but painfully few take the time to learn to save a life, or to bring relief at the very least. There are schools and colleges that give recognition to students who involve themselves in the emergency teams because these students become part of the solution, not the problem (Ibid). They are safety-conscious and are genuine assets to their communities by being of value in case of an emergency at any time. Cooks (2002) ends by asking pertinent questions, requiring pertinent answers, to South Africa as a country: Should not FA be a compulsory part of educational curricula? Is FA not for everyone? Is it not time to 'dig in' and be involved? This is one of few opportunities that can and will make a lifelong difference (Cooks 2002:158-159).

Thousands of fatalities involving pre-school and school-aged children occur annually (Strasser, Aaron, Ralph & Eales 1964:7). The accidental death of a child means the loss of well over 50 years of productive life (Ibid). There should be some means of evaluating various aspects of safety programmes to determine if they are getting the desired results (Strasser *et al* 1964:112).

This evaluation of FA provisioning offered independent information and insight, which can be used for a number of purposes (Black 1990:15). Evaluations provide information that can measure success in achieving goals, in meeting performance criteria and in providing value for money (Ibid). Marx, Wooley and Northrup (1998, in Walsh & Murphy 2003) purport that there is an inextricable link between students' health and their ability to learn. Teachers, parents and researchers no longer believe that a child's success in school depends exclusively on knowledge and academic skills that the learner brings to the classroom (West, Germino-Hausken & Collins 1993, in Walsh & Murphy 2003). The primary responsibilities of the school are to provide adequate instruction in safe living and a safe school environment for students (Strasser *et al* 1964:115). School safety is a management function (Ibid). There was a dire need therefore for this study to evaluate the administrative efficacy of FA provisioning in schools.

Greef (1994) stresses the point that although FA is not a substitute for medical care, those trained in FA are able to assess the nature and extent of an emergency and determine the best course of action to take until advanced medical help arrives.

The next section deals with the recommendations suggested for the different sectors as reflected in the research topic. FA provisioning should start from the law-making arm of the government legislature and filter down to the DoE. The DoE should be mandated with the task of implementing FA provisioning through its provincial offices, district offices, school principals and pre-school managers. The study exposed the current level of FA provisioning in Gauteng schools to serve as a starting point that would inform future health policies and evaluations. As a starting point, the promulgation of the law dealing with FA provisioning needs a complete overhaul. The current policy is skewed towards HIV/AIDS transmission. The policy tends to act as a bastion against FA provisioning and discourages people from coming into contact with bodily fluids.

6.5 Recommendations for the DBE

FA provisioning in schools requires state funding. The government, through an act of parliament, should mandate the DBE to allocate financial resources specifically for the provisioning of FA in schools right across the system from pre-schools to high schools. FA provisioning in schools, following the French example, should be made compulsory.

All teachers and learners must be trained in at least a basic FA course at level 1. Training at higher levels could be optional, funds permitting. Support from the higher offices of the DoE is called for.

FA should be part of the curriculum and should be on the school timetable. Qualified FA trainers should be co-opted into schools to train specifically teachers as a first step. Once teachers have been trained and certificated, the thrust should then shift to learners. The proof of being a first aider in the South African context is the possession of a level 1, 2 or 3 certificate issued by a recognised accredited body. The validity of the certificate extends over three years. For logistical problems in the case of schools, the three-year validity can be waived. Learners who have been certified first aiders are obviously better off in dealing with injuries and illnesses using their base knowledge and skills than those who were never exposed to this training. Each school must also have an FA appointed person to coordinate FA provisioning and training for the particular school.

One very important aspect of the management of health issues that was obvious in this study was the lack of health education and health promotion in schools. The DBE must ensure that learners are taught health education and health promotion. Issues about diet, healthy food and eating habits, the role of exercise, mental health, etc. need to be inculcated into learners' minds at an early age. Schools should teach all learners about health issues as part of formal school curricula. Children should be made aware of the link between diet, obesity, a sedentary lifestyle and cardio-pulmonary health from an early age.

The DBE must also educate principals on the legal implications of negligence for schools if basic policy guidelines are not adhered to. The following article serves as an actual example of the costs of litigation arising from injuries experienced by learners while at school. Identifiable information and names have been left out to protect the characters on ethical grounds.

A learner suffered "deep burns" to his arms, hands, legs and feet and had to have one finger amputated during a horror accident at school (Narsee 2014:11). The incident happened while the learner was cleaning the toilet floor as part of "detention"

punishment. Someone lit a cigarette, which ignited the cleaning product that the learner was using. The burnt learner dropped out of school, became a drug addict and was jailed for three years for theft. The learner's dreams of being a paramedic were shattered.

With the assistance of his mother, the learner sued the MEC for education for R7.1 million in damages, but was awarded R4.5 million instead in an out-of-court settlement. The school was found to have been negligent because the learner and others who had to clean the toilets were unsupervised and had not been provided with any safety equipment or clothing. Contrary to popular belief, detaining learners as a punitive measure is illegal according to SASA. This case is likely to be a harbinger of worse things to haunt schools in South Africa. We are likely to witness similar lawsuits in future if nothing is done about the issue of health education, promotion and FA training in schools.

6.6 Recommendations for the GDE

Most of the interviews and FGDs revealed that the introduction of FA in Gauteng schools as a compulsory subject is long overdue. To meet the requirement that every teacher and learner should be trained in FA, there is a need to start this training sooner rather than later. Good health is one of our most important possessions for the enjoyment of all other faculties. It is better to take the "safety first" adage at face value. The GDE seems to be oblivious to the scourge of injuries and illnesses happening in schools. The lacklustre attitude to injuries, illnesses and deaths in Gauteng schools may be attributable to the fact that people regard these health issues and deaths as natural and normal for everyone. What they need to realise is that such incidents can be avoided through a proactive stance in FA training for teachers and learners.

The GDE should make it mandatory for all schools to develop a comprehensive FA policy as a starting point, for the effective implementation of FA training for all teachers and learners. The importance of an FA policy for schools cannot be overemphasised in the context of a working document or blueprint of an FA programme. A written health and safety school policy provides a framework on which procedures and practices can be built. It makes it possible to require or demand appropriate behaviour or action in

relation to safety matters. Management and staff members must negotiate and agree to the policy (Lauplugh & Pagan 1996).

According to Lauplugh and Pagan (1996), the FA policy formulation must include *inter alia* the following:

1. Policy title
2. Purpose
3. Definition
4. Philosophy; values and beliefs
5. Whom the policy covers, e.g. learners and staff
6. What the employer is committed to do
7. What is required of individuals
8. Performance measures to gauge effectiveness
9. Evaluation and responsibility for review
10. Response implications.

6.7 Recommendations for district offices of the DBE

The GDE has district offices under its jurisdiction that are responsible for the different schools in all areas of Gauteng province. Each educational district is under the control of a district director. There are a number of subject facilitators responsible for the different learning areas and administrative disciplines at each district office. I strongly recommend that there should be a facilitator at each district office responsible for training teachers and learners in FA provisioning.

The district facilitator should be mandated to ensure that teachers and learners are trained in FA. He/she should hold periodic workshops and seminars for learners, teachers and school principals on FA provisioning in schools. Through this facilitator, the DBE can ensure the effective administration of FA in Gauteng schools. The facilitator can identify the different needs for different schools and tailor-make training programmes suitable for the respective schools. The district facilitator can serve as an “inspector” responsible for the effective implementation of FA training in Gauteng

schools. In this task, the district facilitator can liaise with the FA appointed person at each school. Although this calls for more funds, it is worth it in the end because there is no price tag for a life lost. Resources need to be marshalled to protect the lives of teachers and learners.

As with all departments, the FA district facilitator is expected to produce reports on FA provisioning in the district each term and annually with a view to evaluating successes and highlighting challenges. The district reports could be used to compile provincial reports to inform policy at national level.

6.8 Recommendations for principals and pre-school managers

School administrators must be qualified first aiders in order to lead by example. One school principal summed up the evolving role of the school principal succinctly when she wrote, "... due to the increased level of litigation between schools, parents, and other parties, a school principal now also needs additional competence in managerial and administrative skills, as well as knowledge of education law" (Liwane-Mazengwe (2013:7). Principals and pre-school managers need to be prepared for emergencies and evaluate safety measures because "... high-performing organisations are prepared for surprises and catastrophes" (Fallon *et al* 2013:61). While preparation for emergencies is a process that begins with developing emergency plans, evaluation triggers the next cycle of planning and preparation (Ibid). Most of the principals in this research study expressed the sentiment that FA was not very important. Principals were pre-occupied with the instructional programme and academic curriculum delivery. The principals and pre-school managers must set the pace for the administration of FA in all schools. It has been proven that perceptions of a safety climate can influence employees' attitudes to safety, the way employees perform their work and the way employees interact with regard to safety issues (Barling & Frone 2002).

This study revealed that principals regarded their fundamental function as delivery of the academic curriculum. The level of FA literacy and competency among principals and pre-school managers was very low. Most of the managers could not even articulate their role as administrators insofar as FA provisioning was concerned. This is not only worrying, but also dangerous, because Fallon *et al* (2013:62) argue that "from a national

perspective, emergencies are a part of life; from the perspective of a single community, emergencies are essentially random events that cannot be accurately predicted in advance.” In such cases, preparation is the best form of defence (Ibid).

The matriculation pass rate has been used exclusively to judge whether a school is performing or “underperforming.” This is understandable, coming in the wake of the MEC threatening to “fire” the four worst performing school principals in the province in 2015. This attitude is usually adopted at the expense of health issues. There needs to be a paradigm shift in thought patterns, especially concerning FA provisioning across the DoE formal school curriculum system. FA provisioning in schools needs to be viewed in context. There is a thin line separating FA from other health issues affecting schools. FA provisioning, health education and promotion form part and parcel of the broader health care provision and management issues affecting learners and teachers in a school.

Principals and pre-school managers need to acquaint themselves with the legal implications of accidents, illnesses and injuries sustained by people while they are within their designated school perimeter area. The following test case was used for this study to typify the legal complexities that may arise if due processes are omitted in a school’s health and safety policy. The responsibility in such cases lies with the school principal.

The case is a true account of an incident taking place at the time of compiling this thesis. The identifiable names of people, the school and lawyers were omitted for ethical reasons. The case resorts under the aegis of health and safety in schools. Although it does not resonate with FA provisioning specifically, it is an invaluable case illustrating the kind of lawsuit that can arise from normal day-to-day events that may result in tragic incidents attributable to negligence on the part of the school’s administrators. It is relevant for this study because it is usually difficult to separate injuries that happen at a school from FA provisioning. If there had been a comprehensive school health and safety policy in place, some of the loopholes in this case could have been taken care of.

At the time of conducting this research study, a case was before the courts concerning a mother who was suing an upmarket school over a hockey “flying ball” injury (Bornman

2015). The mother was suing the school for seven million South African rands. The Johannesburg mother was struck in the face by a flying hockey ball at a prestigious boys' school in May 2011. The mother said the school failed to provide "a safe environment" for visitors and spectators during hockey trials that were held in May 2011.

The mother suffered "extensive scarring and disfigurement" when she was hit by the ball as she walked along a pedestrian path at the school while accompanying her son to the event. She also lost almost all vision in the right eye. In court papers, the mother said that the school's failure to prevent this incident from happening had resulted in her losing nearly all the vision in her right eye.

A school health and safety policy would include such a health education and promotion preventative measure. An FA training course would make teachers and learners aware of the dangers of "flying hockey balls" and make the hockey area and precincts a "hard hat area" as a safety precaution for anyone who came into the vicinity of the hockey field.

According to the doctor's report the mother suffered multiple "fractures of her right orbit, a burst globe, detached retina and a split iris of the right eye, as well as extensive and massive damage to the eye and skin around it" (Bornman 2015). Despite ophthalmic, plastic and reconstructive surgery, the mother was left with "extensive scarring and disfigurement, which was likely to persist permanently" (Ibid).

The following factors further complicated this case: The injury resulted in the mother suffering severe and chronic depression, as well as post-traumatic stress disorder. The mother had graduated from the University of the Witwatersrand in 1985 with a Bachelor of Arts (BA) degree. She had intended to enrol for a Bachelor of Law degree in January 2015 and would have completed her studies in 2017. She hoped to have been admitted as an attorney by 2020. The mother wanted the court to grant her R6.8 million, including R800 000 for general damages, R4 million for future loss of earnings and R2 million for future medical expenses. These amounts of money on their own would render an average school bankrupt, in the event that the courts of law ruled in favour of the complainant.

The mother claimed that the school's safety netting and screens that were supposed to protect visitors and spectators were inadequate on that day. She further argued that the school did not provide a safe environment for visitors and failed to warn them about the risks of flying hockey balls.

In its court papers, the school claimed that it had no responsibility for the injury because there was a disclaimer of liability notice at the entrance to the school. The school, in responding papers before the court said, the mother "waived any claim" she might have had because of the disclaimer notice at the entrance. "Hockey balls are hard objects that can, when struck by a stick, be projected in a direction other than that which was intended and be projected into the air ... in this instance, the air above the fence surrounding the astro" (Bornman 2015). It must be borne in mind that the mere existence of a disclaimer at the gate or entrance to a school cannot be used to absolve institutions from litigation in the event of an injury or death arising from negligence on the part of the school.

The school further argued that the accident occurred as a result of the "risk inherent in the proximity of spectators" and not, as the mother claimed, because of negligence on the part of the school. The upmarket school could afford to defend this case because of its affluence and ability to hire reputable lawyers. Such resources are non-existent in most township and former model "C" schools. In such cases disgruntled parties sue the DoE instead.

The Johannesburg High Court granted an order compelling the school to make available the minutes of every board, management, council and staff meeting relating to the safety layout of the school's hockey fields. In addition, the school was ordered to provide all necessary information about the procurement and erection of new hockey goalposts and safety screens and all memoranda sent to staff about disclaimer notices and the removal and placement of disclaimer notices between May 2009 and May 2011. Notwithstanding the school's ability to challenge the case in court, the unnecessary hassle, time-wasting and the negative publicity had a very adverse effect on the school's reputation and social standing.

Apparently the evidence demanded by the court from the school will prove if the school had in fact put in place safety measures with regard to visitors before the unfortunate event. In the event that the school cannot prove that such measures were instituted, specifically between 2009 and 2011, the injured mother can sue for damages and win the case. The person who represents the GDE at school level is the school principal and he/she will be accountable for any incidents that happen there. It is easier to sue wealthy private schools. The same cannot be said of public schools and poor independent schools. Court cases are also known to drag on for long periods of time, thus causing unnecessary inconvenience.

Strasser, Aaron, Ralph and Eales (1964:232) argue that every teacher must be aware of the legal responsibilities he/she has for the welfare of learners. If a learner is injured in school and parents or guardians believe that the school or its representatives were negligent in providing for the learner's safety, they have a right to seek a financial judgement to pay for damages arising from the accident (Ibid). At about the same time in 2015, there was a case before the courts of law in which a Limpopo family sued the DBE for the negligent death of their six-year old child who fell into a pit latrine and drowned in 2014.

6.9 Recommendations for teachers

According to Beaty (2004:2), safety begins with the teacher, student or assistant teacher. Teachers in a school act in the place of parents (*in loco parentis*). They are entrusted by parents with the care of their children for the time spent at school. The teachers should be in the vanguard of FA administration in a school set-up. FA should be part of the teacher-training programme in universities. All teachers must be trained in FA as a requirement before they can stand before a class. Teachers can easily be used to train learners once they have attended a trainer's course. The trainer's course is done after qualifying as a first aider at level 3. Teachers need to make time to train in FA for both their benefit and the benefit of the learners they are in charge of. For a teacher to stand in front of a class with no FA skills and knowledge in this day and age is not only dangerous and out of place, but it is anathema to one who holds a position *in loco parentis*.

Soni (2012) argues that although it is not mandatory by law for all teachers to have FA training, the fact remains that teachers are surrounded by children for a significant amount of time and some teachers may actually find themselves in a situation where other means of intervention is required. Preventing injuries by providing a safe educational environment is of prime concern to teachers. Teachers should be well prepared to act when learners are injured.

6.10 Recommendations for learners

All learners in schools must be trained in FA provisioning, from pre-school children to high school learners. Notwithstanding the unavailability of finances, the issue of FA training for teachers and learners should take precedence over other extra-curricular activities that eat into schools' budgets. If one should investigate the funding allocated to sport in a school's budget and compare it to the amount of money allocated to health and safety issues, I have no doubt that the figures will be skewed in favour of sport. Health and safety issues should receive equal importance alongside academic achievement and extra-curricular activities. Most learners who took part in the FGDs were more than willing to be trained in FA so that they could assist fellow learners and teachers in distress.

6.11 Recommendations for parents and all other stakeholders

Although parents were not consulted on the issue of FA provisioning in schools in this study, it should be made clear that the involvement of parents in the administration of FA in schools is of paramount importance. Parents, through the auspices of the SGB, must be educated on the importance of FA so that they can buy into the FA programme by providing support and resources through payment of school fees, to be channelled towards FA training.

In compliance with the provisions of NEPA, SASA and the Constitution of the Republic of South Africa, all learners and pre-school children must be trained in FA. FA training should start in pre-schools. There is also a need to emphasise the importance of health education and health promotion so that learners can advance behaviours that are health-enhancing rather than engaging in behaviours that are risky for health and safety.

Currently the behaviour in most schools is high-risk, as shown by the injuries and accidents that can be attributed to deliberate injurious actions by learners. The teaching of FA, health education and promotion should start as early as pre-school. The following incident will help to illustrate the importance of FA in pre-schools. Names have been omitted for anonymity.

The mother of a seven-month old baby who was not breathing well at a day-care centre and later died, warned other parents to be extra careful when choosing a day-care centre for their children (Tshetlo 2015). The cause of death was sudden cardio-respiratory arrest with failed response to resuscitation.

A report that appeared in one of the South African national newspapers warned of things to come for South African schools, which could happen if policy-makers do not take due precautions. While there are a number of health issues affecting learners and teachers in Gauteng province, the research article discussed in the following section tried to put into perspective the need for an urgent national conversation on health education, health promotion and FA provisioning in Gauteng schools.

According to Keeton (2015), it was discovered in one study that “chubbier children” may have a greater risk of high blood pressure later in life. High blood pressure in children is a growing problem in South Africa and affects one in every four school children. South Africans older than 50 years had the highest rate of hypertension in the world, at almost four in five adults, a recent WHO study quoted by Keeton (2015) found.

The 1990 to 2010 Birth-to-Twenty (Bt20) study among children was the first in South Africa to report that elevated blood pressure continued from early childhood into late adolescence. A third of the children with high blood pressure at five and eight years old still had hypertension when they turned 18 (Ibid).

Children should be screened early to prevent high blood pressure in adulthood. Kagura, (2015 in Keeton 2015:13) did a study and analysed data collected from predominantly black children (78%) in Soweto and Johannesburg from 1990 to 2010 for the Bt20 study. The study was based at the University of the Witwatersrand Development Pathways for Health Research Unit. “We see a lot of hypertension, strokes and heart attacks in midlife South Africans. As much as family history is important, the roots may

be in childhood,” said Kagura (2010) about the results published in *BMC Pediatrics* (Keeton 2015).

Children born with a lower birth weight usually experience “catch-up growth” and excess weight gain can stress their system. Being overweight or obese nearly triples the risk later on. “As much as we want babies to be chubby, if they are overweight in the first two years this can be a risk later on” (Kagura 2010, in Keeton 2015). South Africa’s shift to refined foods and a high salt intake contributed to high blood pressure and rising obesity.

Kagura (2010, in Keeton 2015) speculated that being overweight and inactive are not the only causes of high blood pressure; environmental stress is likely to be an aggravating factor for children. Living in a stressful environment with crime has an impact on the psycho-social stress of children who may be afraid to go outside and play. As they get older they could start smoking and drinking and this could be linked to an unsafe environment. More children in South Africa are overweight; they smoke and use alcohol earlier than before. Doctor Essack Mitha (2015), head of the Newtown Clinical Research Centre, studied elevated blood pressure among 300 rural and urban children aged seven to 13 years old and found that elevated blood pressure was common. According to Mitha (2015,) in Keeton 2015:13) “this has serious implications for the health of these children as they approach adulthood. ... Fast food and a sedentary lifestyle have contributed to an increase in this condition.” He recommended that schools consider basic medical check-ups for all learners. Two learners at one school in the sample for this study died of heart-related complications within two months.

Hypertension was uncommon in Africa in the past, but this has changed, according to Alta Schutte (2015, in Keeton 2015), director of the Medical Research Council unit for hypertension and cardiovascular disease. Professor Schutte, also president of the Southern African Hypertension Society, said “worldwide it is well-known that high blood pressure is more common in black populations.” He advises that parents who know that their families risk of hypertension should get their children’s blood pressure measured from age 10 onwards annually.

6.12 Recommendations for further research

This research study was motivated by a dearth of information on evaluation of the administrative efficacy of FA provisioning in Gauteng schools. The first stem of the research topic dealing with managing health issues in Gauteng schools needs further research. Many studies on the concept of health and safety in schools are skewed towards safety issues. There is more research on bullying, security and safety in schools than research on health issues. Health issues have often received a scanty glimpse. There is a need for a full-scale research thrust into the management of health issues in schools in general.

With the advent of new health challenges affecting schools, there is an urgent need to research the preparedness of schools to deal with issues affecting the health of learners and teachers. This comes in the wake of a new threat of terrorist groups targeting schools for their suicide bomb detonations. South Africa is not immune to such attacks. An SABC news broadcast by Genevieve Quintal (2015) warned that South Africa could be at risk of terrorist attacks, saying that “the Islamic State declaring its intention to attack Western interests in any part of the world makes any country including South Africa vulnerable” (Martin 2015). A senior researcher with the Institute of Security Studies, Martin (2015), said that “there were a number of western interests in South Africa and there could be an attack because we harbour elements that are incompatible with these Islamic groups.” He went on to argue that “terrorists have all the time on their hands and you will never know that you are going to be attacked the next day. No one in France knew terrorists were going to attack on Friday night.” Schools need to put in place measures to deal with such eventualities if they are not to be caught unaware.

There is a need to do further research into how the whole country deals with FA provisioning, especially in far-flung rural communities where emergency services cannot arrive in time. Research needs to unveil through a SWOT analysis what the health needs are in the South African context, so that a national health policy can be drawn-up that is tailor-made for the country. A needs analysis will help to craft a national FA provisioning policy from pre-schools to high schools. South Africa as a country faces serious challenges with regard to violent crime, safety and security issues at schools.

Lingering and rearing its ugly head on the horizon is the issue of health. A number of health issues in school are gradually manifesting themselves in the form of illnesses, injuries and deaths. One example is cited in the following paragraph.

South Africa is ranked as the third most obese nation in the world, according to Doctor Peter Hill (2015:8) of Met-S Care, a specialist in metabolic syndrome. This relatively new condition is not a single disease, but a cluster of conditions that includes among others increased blood pressure, a high blood sugar level and excess body fat around the waist, as well as abnormal cholesterol and blood fat levels. The metabolic syndrome increases the risk of heart disease, stroke and diabetes. There is concern in the South African context because of the “alarming rise over the last 10 years in the burden of the diseases like hypertension, diabetes, asthma, depression, cancer, Alzheimer’s disease, dementia, coronary heart disease and stroke” (Hill 2015:8).

Hill (2015) believes that the underlying and unifying metabolic dysfunction of metabolic syndrome appears to be insulin resistance, which leads to an imbalance in fat metabolism. Controlling and normalising insulin is key to improving metabolic syndrome health outcomes. What is important for this research study is the fact that one of the most effective ways to turn around this pandemic and other health threats, including injuries and illnesses, is through self-care and not purely medical care. Hill (2015:8) argues that “while medical care is of course important, self-care decisions about taking or not taking medicines, what to eat, how much exercise to get, what tests to do, keeping doctor appointments, etc., are all decisions almost always made by the person with the chronic disease and not by the healthcare providers.” This is an important aspect of health education and health promotion.

The empowerment approach to chronic disease care has resulted in a shift from provider-centred care to more patient-centred models that acknowledge the primary role of patients in providing their own care, problem-solving, informed decision-making and self-efficacy (Hill 2015:8). Closely related to this aspect is the issue of mental health. The WHO states that “there is no health without mental health” (Friedli 2009, in Gilbert 2011:25). According to Ranklin (2005, in Gilbert 2011:25), “mental health may be central to all health and well-being.” There is a need for research to look into the issue of

mental health in the school environment. This study discovered an issue of spirituality in three cases where learners were possessed by “ancestral spirits”.

Writing on the issue of the paranormal, Hawes and Khan (2011:162) assert that “it is crucially important to distinguish spiritual torment from mental illness and never to carry out an exorcism on a person with a diagnosed mental illness.” It is also vitally important to take the local people’s beliefs into account when dealing with issues of spirituality to avoid conflict. A research study into spiritual possession in South African schools is therefore recommended. Hawes and Khan (2011:162) assert that in the Christian tradition most dioceses in the UK have a trained team of practitioners, often including a psychiatrist, to provide a ‘deliverance’ ministry (deliverance from evil) by ministering to people in great distress (fighting their own demons) and those caught up in the paranormal.

6.13 Limitations of the study

This study had a number of limitations. The study left out schools in rural communities and independent schools. The study was restricted to Gauteng province, therefore the findings cannot be generalised to the whole country. Another limitation was the duration of the study. The data collection was done over a relatively short time span. A study of this nature has to be conducted over an extended period to yield better results. The researcher needs to go back and forth observing and interviewing as many teachers and learners as possible to get a variety of views.

An inherent limitation of the interview as a research instrument is that the interviewees may not be completely truthful in their responses in order to please the researcher or to protect their role (Catania 1999). To curb this, the researcher was careful not to indicate agreement with the learners, teachers and school managers, or to show preference for the direction of the discussion (Branch 2007:277). There should have been a higher number of participants, more schools and wider coverage that also included schools in the rural areas.

6.14 Conclusion

This research study found out that the low levels of FA literacy and competency among school managers, teachers and learners in Gauteng schools has dire consequences for FA provisioning in schools. There is a need for the education stakeholders to make a massive drive to make it mandatory for all school managers, teachers and learners to be trained in basic FA. If this is not done urgently, then the harbinger of things to come is that injuries, illnesses and deaths in Gauteng schools will be an ever growing menace that is likely to haunt schools.

Throughout the world, recognition of the importance of public health for sustainable, safe and healthy societies is growing. Major improvements in people's health will be effected by controlling communicable diseases, eradicating environmental hazards, improving people's diets and quality of effective health care (Smith, Sinclair, Raine and Reeves 2005). To achieve this, South Africa needs a cadre of knowledgeable and skilled school managers, teachers and learners with social, political and organisational skills to lead and bring about changes at provincial and local levels. This study was important in highlighting this gap so that stakeholders can make concerted efforts to curb injuries, illnesses and deaths occurring in schools.

The research findings are supported by literature. School safety goes beyond issues of security that are in place to protect students, faculty and staff (Dunlap 2013). Children continue to be injured and lose their lives as a result of heat stress from extracurricular activities or being abandoned in vehicles (Ibid). Staff members are significantly injured by simple activities such as climbing on a chair instead of a ladder to hang classroom decorations (Dunlap 2013). FA training for teachers and learners is not only recommended but necessary. According to Smith *et al* (2005), public health has three main aims: protecting the public from environmental hazards, improving the health of the public and ensuring that high-quality health services are available to all. Literature alludes to the importance of FA in schools. The realisation of this ideal is still far off for Gauteng province. A lot needs to be done to ensure that FA is effectively administered in schools, with a high degree of urgency.

Evaluation is the critical assessment of the value of an activity. Health care evaluation is the critical assessment, on as scientifically rigorous a basis as possible, of the degree to which health services fulfil stated objectives. The process of evaluation seeks to analyse health care interventions in terms of four key dimensions: effectiveness, efficiency, humanity and equity (Smith *et al* 2005). Evaluation is a key activity of health services research. This research study fulfills this requirement. The management of health issues in Gauteng schools is a highly neglected area with everyone being concerned with academic achievement. Many school managers and teachers strongly believed that FA administration in a school is restricted to calling an ambulance in serious cases and doing the basic assistance in mild cases. Such an attitude is a recipe for disaster in Gauteng province where ambulance services do not always respond in the nick of time.

Nearly every society seeks improved health for its members. When the basic necessities for survival have been met, the search for better health is often pursued by seeking better forms of health care. According to Hill (2015:8), “we need to empower patients to be actively involved in their care rather than being treated as passive recipients.” In this regard the research study advocated for a concerted effort in health education and promotion. In a school situation management of health issues is restricted to FA provisioning, health education and health promotion. There is an urgent need to institute measures in schools to identify FA needs, set FA goals, discuss and agree on an FA policy and strategic plan, implement interventions, monitor and evaluate FA programme outcomes. Children’s health is an important concern for all societies, since it contributes to their overall development. Health, nutrition and education are important for the overall development of the child and these three inputs need to be addressed in a comprehensive manner (Soni 2012:31). This study evaluated the administrative efficacy of FA provisioning in Gauteng schools and was premised on the assumption that managing health issues, through mandatory training of school managers, teachers and learners, will increase the preparedness of schools to deal with health issues affecting teachers and learners

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APPENDIX A

GAUTENG DEPARTMENT OF EDUCATION APPROVAL LETTER TO CONDUCT RESEARCH



GAUTENG PROVINCE

Department: Education
REPUBLIC OF SOUTH AFRICA

For administrative use:
Reference no: D2015 / 237

GDE RESEARCH APPROVAL LETTER

Date:	1 August 2014
Validity of Research Approval:	1 August 2014 to 3 October 2014
Name of Researcher:	Binduko S.
Address of Researcher:	P.O. Box 1097 Kempton Park 1620
Telephone Number:	011 972 4144; 073 889 9770
Fax Number:	011 391 2530
Email address:	binduko@webmail.co.za
Research Topic:	Managing health issues in Gauteng Schools: An evaluation of the administrative efficacy of the First Aid (FA) provisioning
Number and type of schools:	TWO Primary, TWO Secondary, TWO Pre- Schools
District/s/HO	Ekurhuleni North, Johannesburg Central; Johannesburg North; Tshwane South and Head Office

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

H. Makhado
2014/08/04

1

Making education a societal priority

Office of the Director: Knowledge Management and Research

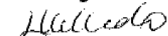
9th Floor, 111 Commissioner Street, Johannesburg, 2001
P.O. Box 7710, Johannesburg, 2000 Tel: (011) 355 0506
Email: David.Makhado@gauteng.gov.za
Website: www.education.gpg.gov.za

The following conditions apply to GDE research. The researcher may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3. *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*
4. *A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
12. *On completion of the study the researcher/s must supply the Director: Knowledge Management & Research with one Hard Cover bound and an electronic copy of the research.*
13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards



Dr David Makhado
Director: Education Research and Knowledge Management

DATE: 2014/08/04

2

Making education a societal priority

Office of the Director: Knowledge Management and Research

8th Floor, 111 Commissioner Street, Johannesburg, 2001
P.O. Box 7710, Johannesburg, 2000 Tel: (011) 355 0506
Email: David.Makhado@gauteng.gov.za
Website: www.education.gpg.gov.za



GAUTENG PROVINCE

Department: Education
REPUBLIC OF SOUTH AFRICA

For administrative use:
Reference no. D2015 / 336 A

GDE AMENDED RESEARCH APPROVAL LETTER

Date:	3 November 2014
Validity of Research Approval:	9 February 2015 to 2 October 2015
Previous GDE Research Approval letter reference number	D2015/237 dated 1 August 2014
Name of Researcher:	Binduko S.
Address of Researcher:	P.O. Box 1097
	Kempton Park
	1620
Telephone Number:	011 972 4144; 073 889 9770
Fax Number:	011 391 2530
Email address:	binduko@webmail.co.za
Research Topic:	Managing health issues in Gauteng Schools: An evaluation of the administrative efficacy of the First Aid (FA) provisioning
Number and type of schools:	TWO Primary, TWO Secondary and TWO Pre-schools
District/s/HO	Ekurhuleni North; Johannesburg Central; Johannesburg North, Tshwane South and Head Office

Re: Approval in Respect of Request to Conduct Research

*M. Makhado
2014/11/05*

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

1

Making education a societal priority

Office of the Director: Knowledge Management and Research

9th Floor, 111 Commissioner Street, Johannesburg, 2001
P.O. Box 7710, Johannesburg, 2000 Tel: (011) 355 0506
Email: David.Makhado@gauteng.gov.za
Website: www.education.gpg.gov.za

The following conditions apply to GDE research. The researcher may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3. *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*
4. *A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
12. *On completion of the study the researcher/s must supply the Director: Knowledge Management & Research with one Hard Cover bound and an electronic copy of the research.*
13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

Makhado
.....

Dr David Makhado
Director: Education Research and Knowledge Management

DATE: *2014/11/10*
.....

2

Making education a societal priority

Office of the Director: Knowledge Management and Research

9th Floor, 111 Commissioner Street, Johannesburg, 2001
P.O. Box 7710, Johannesburg, 2000 Tel: (011) 355 0506
Email: David.Makhado@gauteng.gov.za
Website: www.education.gpg.gov.za

APPENDIX B

Research Ethics Clearance Certificate


This is to certify that the application for ethical clearance submitted by

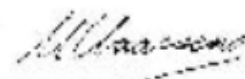
S Bhehuka (42832977)

for a D Ed study entitled

**Managing health issues in Gauteng Schools: An evaluation of the administrative
efficacy of the First Aid (FA) provisioning**

has met the ethical requirements as specified by the University of South Africa
College of Education Research Ethics Committee. This certificate is valid for two
years from the date of issue.


Prof KP Dzvimbo
Executive Dean : CEDU


Dr M Claassens
CEDU REC (Chairperson)
rec@ce@unisa.ac.za

Reference number: 2014 SEPTEMBER /42832977/MC

12 SEPTEMBER 2014

APPENDIX C

RESEARCH QUESTIONS, AIM AND OBJECTIVES.

Research questions

The investigation is guided by the following two main research questions:

1. What are the literacy and competency levels among principals, teachers and learners in Gauteng schools of Section 7 of the National Education policy Act 27 of 1996 on first aid provisioning in schools in Gauteng province?
2. How do the literacy and competency levels affect first aid provisioning practices at school level to learners and teachers?

Sub-questions

11. What are the levels of first aid literacy and competency among learners, teachers and school managers in Gauteng schools?
12. What are the medical conditions experienced at schools in Gauteng province that require first aid?
13. What is the school management doing about the medical emergencies?
14. What role does the school management play in imparting first aid knowledge and skills to learners and teachers in schools?

Aim of the study

The study aims to explore, determine and evaluate the administrative efficacy in first aid provisioning, literacy and competency among principals, teachers and learners in Gauteng schools.

Objectives of the study

The researcher's objectives are:

- 1.To determine the level of literacy and competence of the National Education policy Act 27 of 1996 Section 7on first aid provisioning among teachers, learners and school managers.
- 2.To find out what school managers are doing to provide first aid to learners and teachers.
- 3.To explore the impact of first aid measures on learners and teachers.
- 4.To suggest possible ways of improving the provision of first aid in Gauteng schools.

APPENDIX D

INTERVIEW GUIDE FOR SCHOOL PRINCIPALS/ PRE-SCHOOL MANAGERS

INTRODUCTION AND “ICE-BREAKER”:

My name is Samuel Binduko. I am currently employed as a Geography teacher at..... school in Kempton Park. In fulfilment of the requirement for my doctoral degree in Education Management at UNISA, I am doing a study on managing health issues in Gauteng schools with particular focus on first aid provisioning. Your participation in this project will provide useful information on this topic.

3. Please give your honest opinion in answering the questions.
4. There is no wrong answer.
5. Your responses will be completely anonymous, confidential and will not be used for any other purpose.
6. You may withdraw from the interview at any point if you so wish.
7. Your co-operation will be highly appreciated.
8. Do you have any questions or concerns to be addressed before we can continue?

3. Learners, children and teachers at schools and pre-schools are exposed to injuries, accidents, chronic medical conditions, etc. In terms of management and leadership, what do you regard as your main duties/ responsibilities as the school principal in managing health issues affecting learners and staff? Which legal instruments guides you in fulfilling this task?

4. What health issues do you experience in the school?

5. How do you deal with these health issues?

6. What training did you undergo as principal to equip you with first aid provisioning in the school?

7. How many first aid kits do you have in the school? Who checks on the contents of the first aid kits?
8. How many staff members are qualified first aiders? At what level (s)?
9. Do you have any learners trained in first aid?
10. How many learners/children are enrolled in the school?
11. How many teachers are employed at this school?
12. In your opinion, is first aid training necessary for school learners and staff?
13. What improvement strategies have you adopted to focus on first aid provisioning for the school?
14. What suggestions will you offer regarding first aid provisioning in Gauteng schools?
15. What are some of the challenges that you face as school principal/manager with regard to first aid provisioning in this school?
16. How do you keep track of health incidents such as injuries, illnesses and accidents happening in the school? Any records?
17. Given the current status of first aid training in the school for teachers and learners, do you feel well-prepared enough for any incident, injury, illness, accident, disaster or major catastrophe?

I wish to express my sincere gratitude for your time and co-operation.

APPENDIX E

INTERVIEW GUIDE FOR TEACHERS (Focus group discussions)

INTRODUCTION AND “ICE-BREAKER”:

My name is Samuel Binduko. I am currently employed as a Geography teacher atschool in Kempton Park. In fulfilment of the requirement for my doctoral degree in Education Management at UNISA, I am doing a study on managing health issues in Gauteng schools with particular focus on first aid provisioning. Your participation in this project will provide useful information on this topic.

This guide will be used to ensure adequate coverage of important issues. It will not dictate the course of the discussion and all participants will be given the leeway to raise issues that are of concern to them. The researcher will also use probing questions for clarification and elaboration.

9. Please give your honest opinion in the discussion.

10. There is no wrong answer.

11. Your responses will be completely anonymous and confidential and will not be used for any other purpose.

12. You may withdraw from the study at any point if you so wish.

13. Your co-operation will be highly appreciated.

14. Do you have any questions or concerns to be addressed before we can continue?

9. Learners and teachers at school are exposed to injuries, accidents, chronic medical conditions, etc. What do you regard as your main duties and responsibilities as teachers in managing health issues affecting learners and teachers?

10. What health issues do you experience in the school?

11. How do you deal with these health issues?

12.What training did you undergo as teachers to equip you with first aid provisioning in the school?

13.How many staff members are qualified first aiders? Levels?

14.In your opinion is first aid training necessary for school learners and staff?

15.What suggestions will you offer regarding first aid provisioning in Gauteng schools?

16.What are some of the challenges that you face as teachers with regard to first aid provisioning in this school?

17.Given the current status of first aid training in the school, do you feel well-prepared enough for any injury, illness, accident, disaster or catastrophe?

I wish to express my sincere gratitude for your time and co-operation.

APPENDIX F

INTERVIEW GUIDE FOR LEARNERS (Focus group discussions)

INTRODUCTION AND “ICE-BREAKER”:

My name is Mr Binduko. I am currently employed as a Geography teacher atschool in Kempton Park. In fulfilment of the requirement for my doctoral degree in Education Management at UNISA, I am doing a study on managing health issues in Gauteng schools with particular focus on first aid provisioning. Your participation in this project will provide useful information on this topic.

The guide will be used to ensure adequate coverage of important issues. It will not dictate the course of the discussion and all participants will be given the leeway to raise issues that are of concern to them.

1. Please give your honest opinion in the discussion.
2. There is no wrong answer.
3. Your responses will be completely anonymous and confidential and will not be used for any other purpose.
4. You may withdraw from the study at any point if you so wish.
5. Your co-operation will be highly appreciated.
6. Do you have any questions or concerns to be addressed before we can continue?

5. Learners and teachers at school are exposed to injuries, accidents, illnesses and different medical conditions. What do you regard as your main duties/responsibilities as learners in the event of an injury or illness of a fellow learner or teacher?
6. What health issues do you experience in the school?
7. How do you deal with these health issues?
8. What training did you undergo as learners to equip you in terms of first aid provisioning in the school?
9. How many learners are qualified first aiders in this group? Levels?

10. In your opinion is first aid training necessary for school learners and staff?

11. What suggestions will you offer regarding first aid provisioning in Gauteng schools?

12. What are some of the challenges that you face as learners with regard to first aid provisioning in this school?

13. Given the current status of first aid training in the school, do you feel well-prepared enough for any injury, illness, accident, disaster or catastrophe?

I wish to express my sincere gratitude for your time and co-operation.

APPENDIX G

**CONSENT LETTER FOR PARENTS/ LEGAL GUARDIANS IN RESPECT OF
MINORS/LEARNERS**

P.O.Box 1097

Kempton Park

1620

Date:

Dear Mr/Mrs/Ms/Dr

**Re: Request for permission to involvein Grade.....at
.....school in a research study.**

This letter serves to request your permission to involve
.....in a research study. I wish to inform you that
participation in the study is voluntary and learners who take part in the research
study do so without any form of obligation or coercion. The study will be done
after school and will take about 30 minutes. Transport expenses will be met by
the researcher in cases where learners use public transport. Learners are free to
withdraw from the study at any time. Information obtained from the study will be
anonymous, confidential and will not be used for any other purpose. Learners'
names and the names of their schools will not be mentioned. A copy of the
questions that will guide the discussion is given below.

**To give consent for participation in the study, parents/ guardians are kindly
requested to fill in the reply slip at the end of this letter and return it to me
by the respective learner in person. If you require any further clarification
please feel free to contact me. My contact details are:**

Cell : 073 889 9770, e-mail: binduko@webmail.co.za

INTERVIEW GUIDE FOR LEARNERS (Focus group discussions)

INTRODUCTION AND “ICE-BREAKER”:

My name is Mr Binduko. I am currently employed as a Geography teacher atschool in Kempton Park. In fulfilment of the requirement for my doctoral degree in Education Management at UNISA, I am doing a study on managing health issues in Gauteng schools with particular focus on first aid provisioning. Your participation in this project will provide useful information on this topic.

The guide will be used to ensure adequate coverage of important issues. It will not dictate the course of the discussion and all participants will be given the opportunity to raise issues that are of concern to them.

1. Please give your honest opinion in answering the questions.
2. There is no wrong answer.
3. Your responses will be completely anonymous and confidential and will not be used for any other purpose.
4. You may withdraw from the study at any point if you so wish.
5. Your co-operation will be highly appreciated.
6. Do you have any questions or concerns to be addressed before we can continue?

4. Learners and teachers at school are exposed to injuries, accidents, chronic medical conditions, etc. What do you regard as your main duties/ responsibilities as learners in the event of an injury or illness of a fellow learner or teacher?
5. What health issues do you experience in the school?
6. How do you deal with these health issues?
7. What training did you undergo as learners to equip you in terms of first aid provisioning in the school?
8. How many learners are qualified in first aid in this group?
9. In your opinion, is first aid training necessary for school learners and staff?
10. What suggestions will you offer regarding first aid provisioning in Gauteng schools?

11.What are some of the challenges that you face as learners with regard to first aid provisioning in this school?

12.Given the current status of first aid training in the school, do you feel well-prepared enough for any accident, disaster or catastrophe?

I wish to express my sincere gratitude for your time and co-operation.

TEAR-OFF REPLY SLIP

I,the
parent/ legal guardian of
..... in Grade.....at
..... school, hereby ***give permission/ do
not give consent** for him/her to take part in the research study. I affirm that I
have read the purpose and intention of the research study and fully understand
the contents thereof.

Signed on(day)(month).....(year) at
.....(place).

Parent/ Legal guardian

Signature.....

Learner

Signature.....

Mr S. Binduko (Researcher)..... Date

* (delete/ cancel that which **does not** apply to you)

APPENDIX H

INTERVIEW GUIDE FOR MEC FOR EDUCATION (GDE) OR HIS REPRESENTATIVE

INTRODUCTION AND “ICE-BREAKER”:

My name is Samuel Binduko. I am currently employed as a Geography teacher atschool in Kempton Park. In fulfilment of the requirement for my doctoral degree in Education Management at UNISA, I am doing a study on managing health issues in Gauteng schools with particular focus on first aid provisioning. Your participation in this project will provide useful information on this topic.

1. Please give your honest opinion in answering the questions.
2. There is no wrong answer.
3. Your responses will be completely anonymous and confidential and will not be used for any other purpose.
4. You may withdraw from the interview at any point if you so wish.
5. Your co-operation will be highly appreciated.
6. Do you have any questions or concerns to be addressed before we can continue?

Section 7 of The National Education Policy Act 27 of 1996 empowers the Member of the Executive Council (MEC) to create a safe school and institutional environment by ensuring the following:

All schools and institutions should train learners, students, educators and staff in first aid, and have available and maintain at least two first aid kits, each of which should contain the following:

Two large and two medium pairs of disposable latex gloves;

Two large and two medium pairs of household rubber gloves for handling blood-soaked material in specific instances (for example when broken glass makes the use of latex gloves inappropriate);

Absorbent material, waterproof, disinfectant (such as hypochlorite), scissors, cotton wool, gauze tape, tissues, containers for water and a resuscitation mouth piece with which mouth-to-mouth resuscitation could be applied without any contact being made with blood or other body fluids.

4. What are you doing currently as MEC for education to comply with the National Education Act cited?

5. What are some of the concerns and challenges that you face as MEC with regard to first aid provisioning in Gauteng schools? Are any recurrent health problems being reported to your office by schools? How do you respond to them?

6. How do you supervise and keep track of the implementation of the National Education Act in Gauteng schools? At district/ school level?

7. Given the current status of first aid training in Gauteng schools for teachers and learners, do you feel well-prepared enough for any incident, terrorist attack, accident, disaster or major catastrophe?

I wish to express my sincere gratitude for your time and co-operation.

APPENDIX I

OBSERVATION PROTOCOL

The Principal/ SGB Chairperson

Dear Sir

Re: Request for permission to observe first aid activities atschool at break and during sport activities after school.

This letter serves to request permission to observe daily activities at the school. The observation is aimed at taking note of how first aid provisioning occurs during the day-to-day running of the school. Observations will be restricted to illnesses, injuries and accidents happening at the school and how first aid provisioning plays out for each of these.

I take responsibility for the observation and the necessary precautions will be taken to ensure that no personal integrity, respect and rights of teachers and learners will be compromised. As a safe-guard for individuals, no names will be mentioned, no photographs will be taken and observation notes will be used for research purposes only (anonymity and confidentiality will be guaranteed).

Observations will be done during break (playground duties) and school sport activities after school hours.

If you have any issue that you would want to be clarified concerning the observation please feel free to contact me. My contact details are : Cell: 073 889 9770 ; e-mail address binduko@webmail.co.za

I hope to hear from you soon.

Yours faithfully

Samuel Binduko

APPENDIX J

**WRITTEN ASSENT IN RESPECT OF MINORS/ LEARNERS TAKING PART IN THE
FOCUS GROUP DISCUSSIONS**

Iin
Grade.....atSchool agree
to take part in the focus group discussions as part of a research study being done by Mr
Samuel Binduko, a UNISA doctoral student. The study seeks to evaluate the
management of health issues in Gauteng schools with particular reference to first aid
practices. I understand that the discussions are to be held after school hours for not
more than 40 minutes and I participate freely. I have the right to withdraw from the study
at any time without reprisal. I understand that my participation will be anonymous and
confidential.

Whatever I say or contribute during the discussions may not be used for any other
purpose except for this research study. I will not disclose to or give any other person
information about the discussion or what happened during the discussion.

Learner

Signed.....Date.....

Researcher

Name: Samuel Binduko Cell 073 889 9770 e-mail binduko@webmail.co.za

Signed.....Date.....

APPENDIX K

**CONFIDENTIALITY AGREEMENT FOR PARTICIPANTS IN FOCUS GROUP
DISCUSSIONS**

I.....AGREE TO PARTICIPATE IN THE FOCUS GROUP DISCUSSIONS AS PART OF SAMUEL BINDUKO'S DOCTORAL DEGREE RESEARCH STUDY. THE TOPIC IS: **MANAGING HEALTH ISSUES IN GAUTENG SCHOOLS: AN EVALUATION OF THE ADMINISTRATIVE EFFICACY OF THE FIRST AID (FA) PROVISIONING.**

THE RESEARCHER HAS ASSURED ME THAT PARTICIPATION IS VOLUNTARY AND I MAY WITHDRAW FROM THE STUDY AT ANY TIME WITHOUT REPRISALS. INFORMATION GATHERED FROM THE DISCUSSIONS WILL BE ANONYMOUS AND CONFIDENTIAL. I FURTHER AGREE TO TREAT THE DISCUSSIONS AS CONFIDENTIAL AND PLEDGE NOT TO DIVULGE INFORMATION DISCUSSED IN THE FOCUS GROUP TO ANYONE.

TEACHER

Signed.....Date.....

RESEARCHER

Name: Samuel Binduko Cell 073 889 9770 e-mail binduko@webmail.co.za

Signed.....Date.....

APPENDIX L:

SERTIFIKAT
CERTIFICATE
IN
NOODHULP/FIRST AID
LEVEL { 3 }

afgeleverd aan:
issued to: S BINDUKO

certificaats Nr.:
certificate No.: 22-064667H-83

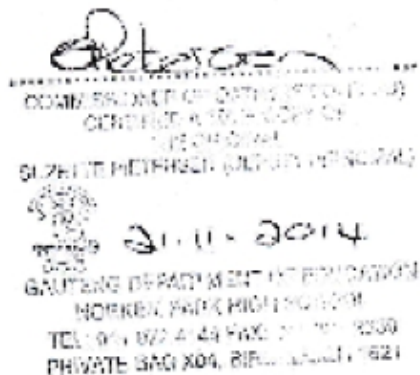
certificaats Nr.:
certificate No.: V111/24/2013/AK

afgavedatum:
date of Issue: 2013/07/17

Verval Datum:
Expiry Date: 2016/07/17



Hoofd van de
Executive Director


DEPARTMENT OF EDUCATION
GAUTENG PROVINCE
NORREK, PAKK HOUTKLOOF
TEL: 011 492 4444 FAX: 011 492 4444
PRIVATE BAG 104, BIRCHBURG 1624

APPENDIX M
LANGUAGE EDITOR'S CERTIFICATE

M.B. BRADLEY

P.O. Box 37326

Faerie Glen

Pretoria 0043

072 369 5149

DECLARATION ON EDITING

Customer: S. Binduko

Date 2016/05/17

Thesis submitted for editing
Managing health issues in Gauteng schools: An evaluation of the administrative efficacy of first aid provisioning
The above thesis was submitted to me for language editing, which was completed on 1 February 2016. M.B. BRADLEY (MA) - Language editor Cell no 072 3695 149