

# Exploring Women's Life Course Experiences With Weight Using Story Theory

2011

Poff Allison Edmonds  
*University of Central Florida*

Find similar works at: <http://stars.library.ucf.edu/etd>

University of Central Florida Libraries <http://library.ucf.edu>

 Part of the [Nursing Commons](#)

---

## STARS Citation

Edmonds, Poff Allison, "Exploring Women's Life Course Experiences With Weight Using Story Theory" (2011). *Electronic Theses and Dissertations*. 1921.

<http://stars.library.ucf.edu/etd/1921>

This Doctoral Dissertation (Open Access) is brought to you for free and open access by STARS. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of STARS. For more information, please contact [lee.dotson@ucf.edu](mailto:lee.dotson@ucf.edu).

**EXPLORING WOMEN'S LIFE COURSE EXPERIENCES WITH WEIGHT USING  
STORY THEORY**

by

ALLISON RUTH EDMONDS POFF  
BSN Florida State University, 1993  
MS University of South Florida, 1998

A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the College of Nursing  
at the University of Central Florida  
Orlando, Florida

Summer Term  
2011

Major Professor: Angeline Bushy

© Allison Ruth Edmonds Poff

## ABSTRACT

This qualitative study included women who had gone through the menopausal transition and had experienced obesity, and it focused on their weight histories and experiences across the life course. The goal of this research was to add to the body of knowledge concerning weight gain by applying a novel middle range theory (story theory). Story theory was used to collect and interpret from women's life course stories the critical themes and patterns of their weight gain. Oral accounts were elicited during personal interviews from a convenience sample of ten women recruited from a weight loss and exercise program in Central Florida.

Literature focusing on the prevalence of obesity, contributing factors and associated complications, as well as treatment approaches is extensive. A variety of approaches have been proposed to identify factors that contribute to the development of obesity across the lifespan. Ultimately, the goal of these studies is to understand risk factors for weight gain along with corresponding prevention and management strategies. A particular life course approach focuses on critical periods across the life span that may be associated with risk for the development of obesity. For women, puberty, pregnancy and menopause are noted to be critical for weight change in the life course as they are associated with hormonal changes and changes in body composition including fat mass.

Story theory was chosen to conceptualize and guide participants through a personal interview in order to share their weight experiences along their life course. Content analysis procedures were used to analyze the data in order to identify themes and corresponding verbatim exemplars. A re-constructed composite story was developed that included excerpts from the participants' stories in order to reveal contextualized results. Themes that were identified relative to participants' experiences with their weight included: changes associated with emotional and

physical health; eating patterns associated with multiple and/or changing roles/relationships; and, changes in the environment.

An interpretation of the predominant pattern of weight gain included: *changes in eating and physical activity that occur during multiple and simultaneous transitional life experiences, primarily in adulthood*. The findings suggest that *transitional experiences* in women's lives - physiological, developmental, relational or environmental - were critical in that they presented risk for behavior changes related to eating and physical activity. The results of this study and the use of story theory have implications for providing individualized, patient-centered lifestyle recommendations for the prevention of unhealthy weight gain.

I dedicate this dissertation to my parents: My mother, Patricia Ann Hamlin Edmonds RN,  
who has been the inspiration for my life, my career and whose life work  
I continue in my professional and personal accomplishments. My father, Hugh Byron Edmonds,  
whose personal ethic and devotion to his family I strive to emulate.

## ACKNOWLEDGMENTS

I would like to acknowledge my dissertation chairperson Angeline Bushy, RN, Ph.D., FAAN who has shared her expertise, time and whose efforts have helped me finish these last steps of this journey.

I would also like to acknowledge my committee members Susan Chase, Ed.D, FNP-C, Stacey Dunn, Ph.D. and Judith Ruland RN, Ph.D. CNE as well as Elizabeth Rash, Ph.D., ARNP who served on my committee during my candidacy exam and dissertation proposal phases.

Michael Poff, MA, MSW, adult psychoanalyst who served as a reviewer and editor of the dissertation.

Lynn Summers DNS, ARNP who applying story theory, demonstrated the integration of research and practice in an approach to mental and physical health for adolescents. Her work inspired my interest in using story theory for this dissertation.

Karen Dennis Ph.D., FAAN, along with Patricia Liehr, Ph.D., FAAN who contributed to the initial conceptualization of this dissertation project. Patricia Liehr, Ph.D., FAAN and Mary Jane Smith, Ph.D, deserve significant acknowledgement for their synthesis of the vast intellectual territory in the development story theory and helpful conceptualizations of the ladder of abstraction for approaching middle range theory for the nursing discipline.

Patricia Burns, Ph.D., FAAN and Judith Karshmer, Ph.D., Frances Sahebzamani-Rankin, Ph.D., ARNP, FAANP, Joan Gregory, Ph.D, ARNP, FAANP, Laurie Woodard, MD, Gregory Holm, Ph.D., ARNP, FAANP, Arthur Herold, MD and H. James Brownlee, MD, all have supported my professional development and my decision to pursue doctoral education. The friendship and

support of Nadine Connor, MS, ARNP and Josef Kie-Sioe Tan, Ph.D., as well as that of my family, has sustained me during my dissertation journey.

The women who agreed to share their stories with me.

The Sigma Theta Tau-Orlando Theta Epsilon Chapter, The Southern Nursing Research Society and the American Academy of Nurse Practitioners for allowing me to present aspects of this dissertation work during its creation.



## TABLE OF CONTENTS

LIST OF TABLES .....	x
CHAPTER 1: INTRODUCTION .....	1
References .....	4
CHAPTER TWO: REVIEW OF THE LITERATURE - WEIGHT CHANGES IN WOMEN ACROSS THE LIFE COURSE .....	5
Causes of Weight Gain - Physiologic .....	7
Causes - Interactions Between Physiology and Environment.....	8
Life Course Approach .....	9
Childhood - Prenatal, Birth Weight, Early Growth, Adiposity Rebound .....	10
Puberty .....	12
Pregnancy/Postpartum.....	13
Menopause .....	14
Discussion .....	15
References .....	17
CHAPTER THREE: REVIEW OF THE LITERATURE - STORY THEORY.....	26
Historical Perspectives .....	26
Story and Narrative in Nursing .....	27
Story: A Middle Range Theory .....	29
Levels of Abstraction.....	30
Philosophical Underpinnings .....	31
Phenomenology: A Precursor to Story Theory.....	31
Nursing Knowledge Development and Worldview.....	32
Assumptions .....	33
Theoretical Concepts.....	34
Intentional Dialogue: Querying Emergence in True Presence .....	34
Self-in Relation: Reflective Awareness on Personal History .....	36
Creating Ease: Re-membering Disjointed Story Moments with Flow in the Midst of Anchoring .....	37

Methodological/Empirical Applications .....	40
Review of Qualitative Literature .....	41
Application of Story Theory.....	45
References .....	48
<b>CHAPTER 4: EXPLORING WOMEN’S LIFE COURSE EXPERIENCES WITH WEIGHT USING STORY THEORY .....</b>	<b>53</b>
Abstract .....	53
Introduction .....	54
Methodology .....	56
Design.....	56
Participants .....	57
Data Collection.....	58
Data Analysis.....	60
Findings.....	61
Major Themes.....	61
Synthesis of Content Analysis and Composite Story .....	65
Jessica’s Story.....	65
Nursing Implications .....	76
Research.....	77
Education.....	78
Practice .....	78
Policy.....	79
Limitations.....	80
Summary .....	80
References .....	87
<b>APPENDIX A: IRB APPROVAL LETTER .....</b>	<b>94</b>
<b>APPENDIX B INFORMED CONSENT .....</b>	<b>96</b>
<b>APPENDIX C INTERVIEW GUIDE .....</b>	<b>100</b>
<b>APPENDIX D CURRICULUM VITAE .....</b>	<b>102</b>

## **LIST OF TABLES**

Table 1: Intrapersonal, Interpersonal, Community Categories: Select Descriptors & Themes .... 82

Table 2: Content Analysis: Intrapersonal Category: Select Descriptors, Theme, and Exemplars 83

Table 3: Content Analysis: Interpersonal Category: Select Descriptors, Theme, and Exemplars 84

Table 4: Content Analysis: Community Category: Select Descriptor, Theme, and Exemplar..... 86

## **CHAPTER 1: INTRODUCTION**

Multiple disciplinary approaches - including nursing, psychology, public health, medicine, nutrition and exercise science - are involved in the study of obesity including its physiologic and psychosocial implications. Each discipline utilizes methods of knowledge development including research and practice applications. The discipline of nursing involves both research and practice and offers doctoral education for each of these branches of knowledge development, the doctorate of philosophy (Ph.D.) degree and the doctorate in nursing practice (D.N.P.) degree, respectively. This dissertation serves in partial fulfillment of the requirements for the Ph.D. degree for the Nursing discipline and explores the issue of obesity using an interpretive qualitative research methodology.

Interpretive research involves the investigator's perspective and experience which influence the research strategy, and intentionally serve as a guide in collecting, analyzing, interpreting and disseminating research results. I have been a nurse for eighteen years and a nurse practitioner for thirteen years, and am employed as a primary care nurse practitioner in a multidisciplinary health science center. I am certified in family and mental health and my clinical experience is in family practice. I have been a nursing educator for nine years and educate students both didactically and clinically. The students I serve are graduate and baccalaureate nursing students as well as students in the disciplines of medicine and public health.

Nursing science, as an applied human science, develops knowledge by integrating the theoretical and the practical in order to further understanding of phenomena involving human health and healing processes. Reed (2008) discusses the role of practitioners as clinical scholars in the following words:

They participate in both the application of knowledge through practice and in the production of knowledge through inquiry. Clinical scholars are skilled at interfacing with various contexts to develop knowledge. They are pivotal in bringing together the objective perspectives of the researcher and scientist, the subjective views of the patient, and their own patterns of knowing – personal, empirical, ethical, aesthetic. Clinical scholars are knowledge managers, sifting, analyzing, and discerning what is important in a diversity of data. But the data will not yield up theories by themselves. So, clinical scholars are also knowledge producers – linking empirical to the theoretical to explain events and helping patients recognize patterns and meaning in what they are experiencing so they can participate more fully in their own health. The clinical scholar regards knowledge as process, not product. The answers are never final because patient contexts and conditions change, and knowledge itself changes. Clinical scholars use theories to help them anticipate change and see the bigger picture (p.429).

This dissertation describes research conducted using the novel and integrated middle range theoretical application of story theory and serves as a contribution to interdisciplinary solutions that advance health care approaches to obesity. The goal of the present research is to add to the body of knowledge concerning weight gain across the life course by application of story theory. Story theory was used to collect and interpret from women's life course stories the critical themes and patterns of their weight gain.

There is a trend in weight gain as people age, and people of all weight statuses often seek weight reduction. The complex physical and psychosocial conditions associated with weight gain and loss are prevalent and persistent across the life course for many. The process of weight gain and weight loss is complex, and scientific literature and clinical approaches on the subject are extensive and vary widely. One approach considering a life course perspective employs the concept of *critical periods*, which suggests that particular periods of growth and development pose greater risk for the development of obesity. For women these include the reproductive phases of puberty, pregnancy and menopause. Epidemiologic literature demonstrates population trends in obesity during these phases of life; other research designs and methods from a multitude of disciplinary perspectives have explored the complex causes, consequences and

treatment approaches to obesity including qualitative inquiry into women's experiences with their weight. Lacking are qualitative studies that explore the nature of critical periods for the development of obesity that account for individuals' weight histories, interpersonal, psychosocial, and environmental contexts in order to help clinicians, together with their patients, recognize critical times and patterns.

Middle range theory (MRT) provides a link between theory and practice and is intended to provide a usable structure of ideas that stem from the focus of the discipline. The purpose of MRT is to identify and solve problems in the discipline of nursing grounded in specifics, while also recognizing complexity. Story theory is a middle range theory for the discipline of nursing, which offers an integration of the philosophical, theoretical and empirical that can be used for both clinical practice and research. The theory serves as a structure for the development of research data, a means of creative dissemination of research findings, and in addition it has the potential to serve as a method for therapeutic patient assessment in clinical practice (Smith & Liehr, 2003).

This dissertation follows the University of Central Florida non-traditional dissertation model and is comprised of three manuscripts. The first manuscript, entitled *Review of the literature: Weight changes in women across the life course*, presents a summary of literature focusing on the development of adiposity across the life course and epidemiologic observations of weight gain during times of normal physiologic development. The second manuscript, entitled *Review of the literature: Story theory*, highlights literature on story as middle range theory, including its evolution from phenomenology, its theoretical concepts that have their origins in psychology and psychotherapy, and the qualitative research applications that have been implemented with the theory. The third manuscript, entitled *Exploring women's life course*

*experiences with weight using story theory*, presents the research method, analysis and results of the study's findings. Suggestions for future research, theoretical and clinical applications are provided, along with implications for policy and nursing education.

### **References**

Reed, P.G. (2008). A paradigm for the production of practice-based knowledge. *Journal of Nursing Management*, 16, 422-432.

Smith, M.J. & Liehr, P.R. (Eds.) (2003). *Middle range theory for nursing*. New York: Springer.

## **CHAPTER TWO: REVIEW OF THE LITERATURE - WEIGHT CHANGES IN WOMEN ACROSS THE LIFE COURSE**

This paper will review the issue of obesity in women across the life course. Due to the prevalence of obesity and weight loss behaviors and the physical and psychosocial complications associated with weight, an understanding of the development of weight gain across the life course is helpful in observing trends. The medical and epidemiologic approach to prevention and management of obesity across the life course uses the concept of critical periods, times when the risk of development of excess adiposity is more likely to occur. Identifying critical periods is intended to assist in prevention and management strategies. Critical periods have been proposed to begin in prenatal life and include birth weight and growth in early childhood. As women experience a natural increase in fat mass relative to men in order to support health and reproduction, the developmental phases of puberty, pregnancy/postpartum, and menopause have also been suggested as potentially critical to the development of excess adiposity. A basic review of the normal development of fat mass followed by epidemiologic observational studies during these phases of the life course will be provided. A suggestion for a refinement in the concept of critical periods for the development of weight gain will be suggested, considering translational approaches to caring for individuals.

*Healthy People 2020* (HP2020) contains a set of health objectives for the nation to achieve over the first decade of this century. One of the goals of HP2020 is to promote health and reduce chronic disease risk through the consumption of healthful diets and achievement and maintenance of healthy body weights.

Body composition includes both non-fat and fat mass (adipose tissue). Adipose tissue represents a form of energy storage in which large quantities can be stored, allowing for survival



during periods of food deprivation (Norgan, 1997). Obesity is fat mass in excess of normal body requirements. It is defined as abnormal or extensive fat accumulation that negatively affects health (World Health Organization, 2000). For the purposes of classification and terminology, obesity is defined as Body Mass Index (BMI), which is weight in kilograms divided by height in meters squared. Overweight is considered as a BMI 25-29.9 kg/m<sup>2</sup>, while obesity is classified as BMI  $\geq$  30kg/m<sup>2</sup> (Flegal, Carroll, Ogden, & Curtin, 2010). However, there are a number of methods to assess body fat, including total body water, total body potassium, bioelectrical impedance, and dual energy X-ray absorptiometry, which help to discern body composition including fat distribution in the body. BMI serves as the primary measure of obesity in many observational epidemiologic studies.

In the United States, according to data collected from the National Health and Nutrition Examination Survey (NHANES), from 2007-2008, the combined prevalence of overweight and obesity (BMI  $\geq$  25) was 68% among adults in the United States (Flegal, et al., 2009). The age-adjusted prevalence of obesity among a sample of adult women in the United States was 35.5%, compared to 32.2% of men; women also demonstrated a higher prevalence of grade 2 (BMI  $\geq$  35) and grade 3 (BMI  $\geq$  40) obesity than men, 17.8% versus 10.7% and 7.2% versus 4.2% respectively (Flegal et al., 2010).

Obesity is associated with cardiovascular disease (CVD) risk and predisposes individuals to a large number of co-morbidities, including hypertension, congestive heart failure, stroke, hyperlipidemia, type-2 diabetes, certain types of cancer, arthritis, gallstones, and sleep apnea, among others (National Institute of Health, 1998). Stigmatization, discrimination, and body image dissatisfaction have been shown in overweight and obese women across all ages (Annis, Cash & Hraboski, 2004; Slevic & Tiggemann, 2011). Obesity is also associated with increases in

depressive and anxiety disorders in women, particularly those with greater body mass (BMI  $\geq 35$ ) (Scott, et al., 2008).

Many people attempt weight loss multiple times throughout their lives. National surveys have demonstrated that between 2001-2002 51.3% of adults reported trying to lose weight, with women demonstrating a greater prevalence of weight loss efforts, 47.9%, than for males, 33.8% (Weiss, Galuska, Kettel Kahn & Serdula, 2006). From a survey of adolescents in 2001, females reported 62.3% prevalence of attempting weight loss, and males reporting 28.8% prevalence (Lowry, Galuska, Fulton, Burgeson, & Kann, 2005). Women have been shown to have a greater diet frequency than men in multiple studies (Forster & Jeffrey, 1986; Keel, Baxter, Heatherton, & Joiner Jr., 2007; Williamson, Serdula, Anda, Levy, & Byers, 1992). Many people who lose weight regain it back (Mann et al., 2007). A risk that develops from frequent and recurrent dieting is 'weight cycling', recurring weight loss followed by gain (National Task Force on the Prevention and Treatment of Obesity, 1994). Women who have a history of weight cycling demonstrate higher BMI, higher percent body fat mass, greater waist circumference, lower resting metabolic rates, greater disinhibition (associated with disordered eating) and lower body esteem (Strychar, et al., 2009). Relative to men, women suffer a disproportionate burden of disease attributable to being overweight and obese, mostly because of differences in health-related quality of life (Muenning, Lubetkin, Jia, & Franks, 2006).

### **Causes of Weight Gain - Physiologic**

Fat is stored when energy intake exceeds energy expenditure. Energy expenditure results from the energy required for the body's heat production in response to metabolic requirements. Energy sources are needed for vital organ functions as well as the body's response to food intake

and physical activity (Ravussin & Gautier, 1999). The body needs a certain amount of energy supplied from food for basic life functions; food intake in the simplest sense is driven by hunger and satiety cues and is influenced by a multitude of complex factors.

Basically, body weight is maintained in a state of energy balance when caloric intake equals the energy expenditure required to maintain life and support physical activity. Weight gain is the normal physiologic response that occurs when energy intake exceeds energy expenditure. Central brain centers involving the hypothalamus and brain stem are involved in the regulation of food intake and energy balance, along with peripheral transmission to fat stores. These processes are mediated by the sympathetic nervous system and modified by genetic structures.

### **Causes - Interactions Between Physiology and Environment**

Complex interactions between genetic, environmental, and psychosocial factors contribute to body weight and body composition (Spiegelman & Flier, 2001). Environments that minimize the opportunity for energy expenditure and maximize the opportunity for energy intake can contribute to maladaptive phenotypic expression, leading to excess fat storage and an increased risk for disease (Chung & Leibel, 2008). Behavioral risk factors such as eating patterns or low levels of physical activity are considered risk factors for weight gain and obesity (McCrorry, Suen, & Roberts, 2002), and there are a multitude of variables that impact these behaviors. As there is a trend for increasing weight over the life course and as weight management is an important contributor to health promotion, there is a need for approaches to the prevention and management of obesity across the life course (Orzano & Scott, 2004).

## Life Course Approach

Life course health development frameworks serve to explain how health trajectories develop over an individual's lifetime and how this knowledge can guide new approaches to policy and research (Halfon & Hochstein, 2002). Epidemiologic and medical approaches to lifespan assessment have been proposed. Eckel et al. (2002) recommended the identification of common critical periods and plausible determinants of obesity in order to improve overall treatment and prevention of overweight/obesity over the lifespan. Critical periods are referred to as specific periods of development when an insult has lasting effects on the structure or function of organs, tissues, and body systems. Insults are proposed to come from a range of determinants including societal, lifestyle, biological, and genetic factors. Eckel, et al. (2002) proposed that these factors often act in concert with one another and referred to the following: higher birth weight, early childhood, adiposity rebound, and adolescence life phases. Woodward-Lopez, Ritchie, Gerstein, & Crawford (2006) modified the narrow 'critical period' concept to a lifespan perspective that encompasses *accumulating and interacting risks that manifest from prenatal life onward*. The authors propose the following life stages: intrauterine growth and birth weight, adiposity rebound, early puberty, pregnancy, postpartum, and menopause as contributors to cumulative risk for obesity.

In light of these contributions to the literature regarding physiologic critical periods for the development of obesity, the following discussion offers a brief overview of the development of *normal changes in fat mass* designed to preserve health and to sustain growth and reproduction. Each section will include observations from epidemiologic studies in order to reveal population trends during these periods across the life course. In addition, limits to the nature of data revealed from epidemiologic research and studies cited in support of physiologic

critical periods for the development of obesity will be addressed. This review is provided in order to support suggestions offered in the conclusion of the paper both for refinement in the concept of critical periods for the development of obesity and a translational approach that can be applied to weight management in individuals.

### **Childhood - Prenatal, Birth Weight, Early Growth, Adiposity Rebound**

During the prenatal period the supply of energy and nutrients from the mother's diet, the mother's nutritional stores (from healthy adipose tissue storage), and the placental function all provide for necessary fetal nutrition, which fuel healthy fetal growth, development, body mass, and composition. During the subsequent early post-natal growth, in the first six months of life, healthy infants will accumulate fat mass approaching 25% of their body weight. This normal gain in adiposity is necessary in large part for the provision of thermal insulation and metabolic activity of the brain, which consumes 50-60% of infants' total metabolic expenditure in the first year of life (Zafron, 2007).

Although there have been data proposing a correlation between higher birth weight and later life obesity, a review of publications originating from 1966 demonstrated that epidemiologic evidence has not drawn conclusive evidence of this correlation, primarily due to issues surrounding measurement (Rogers, 2003). The rate of early growth in infancy has been proposed to impact the development of obesity later in life. It has been further hypothesized that those infants who experienced growth restriction in-utero will compensate for their early underweight status by rapidly gaining weight considered 'catch-up growth' in both linear growth and adiposity. Longitudinal studies of infants exposed to famine in prenatal and early life have demonstrated an influence on later body weight and body composition (Dietz, 1994). The Dutch

famine studies demonstrated that males who were exposed to famine in-utero during the first two trimesters were at increased risk for obesity at age 19, whereas those exposed during the third trimester or in the early postnatal period were not (Ravelli, Stein, & Susser, 1976). Wang, Wang, Yuhua Zhang, & Zeng (2010) studied famine in the Chongqing Chinese population and evaluated longitudinally the body habitus of children born before, after, or during a period of famine from 1959 to 1961. Although the results indicated no impact on males, females who were exposed to the famine during the first three years of life, as compared to in-utero, were at greater risk of being obese. Results of these famine studies demonstrated some trends in longitudinal outcomes based on early life exposure to famine; however, it is clear that findings on the impact of timing of the exposure, gender, region, and ethnicity vary between the studies.

Adiposity rebound refers to the proposed growth trajectory that has been identified after the first year of life, in which BMI declines and then begins to increase again. The time in the life trajectory when the body BMI is lowest is during the early growth trajectory; this also is the beginning of adiposity rebound. Early adiposity rebound has been associated with an increased risk of later elevated BMI (Rolland-Cachera, Deheeger, Maillot, & Bellisle, 2006). The term ‘adiposity rebound’ technically is inaccurate because research in this area has been based on BMI rather than adiposity. Taylor, Goulding, Lewis-Barned, & Williams (2004) identified from their sample of 39 females an increase in fat mass based on dual-energy X-ray absorptiometry (DXA) scans (which measure body composition including total body fat) yearly for two years from age three to six and then four to six years later. Their results indicated a greater fat mass and BMI in those who underwent adiposity rebound at less than five years of age. Rolland-Cachera et al. (2006) discussing adiposity rebound cite Taylor’s (2004) study of a sample of 39 children, stating: “Children undergoing early adiposity rebound gained fat at a faster rate than

children who rebounded at a later age, from this observation it is justified to go on using adiposity rebound rather than BMI rebound” (p. S13). Similar to measurement issues regarding birth weight and early growth, the BMI as a measure has been challenged in the case of adiposity rebound (Freedman, Kettel, Serdula, Srinivasan, & Berenson, 2001).

Although birth weight and early growth have been suggested as critical periods, investigation of the studies focusing on medical and epidemiologic approaches to critical periods (Eckel et al., 2002, Woodward-Lopez et al, 2006) reveal issues of measurement. These studies have not established causal links for the development of obesity longitudinally that can be generalized to individuals.

### **Puberty**

With the onset of *puberty* - the appearance of secondary sexual characteristics in both females and males - there is a normal increase in lean body mass. Specifically, it is a healthy indication of normal development for females to experience an increase in fat mass during this time in order to promote reproduction. The general trend reveals an increased prevalence of obesity for both genders at this phase of life. In the United States an increasing trend among adolescents aged 12 to 19 years has been observed; obesity increased from 5.0% to 18.1% from 1976-1980 to 2007-2008 (CDC, 2010). Likewise, among girls, there is evidence that those who enter puberty with heavier body weights will experience greater increases in fat mass during puberty than those of normal weight (Biro, Huang, Morrison, Horn, & Daniels, 2010). Among girls who are either overweight or obese before puberty, an earlier onset of puberty has been identified (Davison, Susman, & Birch, 2003). There is evidence that earlier maturation is associated with increased risk for obesity during adolescence and into adulthood (Adair, 2001),

and that pre-menarchal weight is more likely the contributing factor to later obesity rather than the timing of menarche (Freedman, Khan, Serdula, Dietz, Srinivasan, & Berenson., 2003; Must, Naumova, Phillips, Blum, Dawson-Hughes, & Rand, 2005). Therefore, based on these data, it appears that girls who demonstrate greater weight in early life tend to mature earlier, and that it is the extent of overweight in earlier life that has been linked to later obesity rather than the timing of menarche, per se. Again, it is the purpose of this discussion to underscore that these observational studies reveal trends but do not explain *causes* of weight gain; and further, they suggest a de-emphasis in the role of menarche as a direct cause of weight gain during puberty.

### **Pregnancy/Postpartum**

Pregnancy and the postpartum period are times of rapid physiological adjustment for women. Maternal weight gain during pregnancy is naturally associated with fetal growth. The healthy components of this gain include infant weight, placenta, and amniotic fluid. Likewise, there is an expected increase in necessary adipose tissue stores in order to secure energy to support maternal and fetal well-being and lactation.

Guidelines have been developed by the World Health Organization and the National Heart, Lung, and Blood Institute in order to minimize negative health consequences for the mother and fetus. Ranges of recommended weight gain for women in pregnancy include: underweight (28-40lb.), normal weight (25-35lb.), overweight (15-25lb.), and obese (11-20lb.) (Rasmussen, Catalano, & Yaktaine, 2009). Nearly 60% of overweight and 40% of normal weight women gain more weight during pregnancy than is recommended (Chu, Callaghan, Bish, & D'Angelo, 2009). There is also an association between the experience of multiple pregnancies



and the development of greater maternal body weight gain over time (Kim, Stein, & Martorell, 2007; Harris, Ellison, & Holliday, 1997). Excessive gestational weight gain has been associated with an increase in long-term maternal BMI (Linne, Dye, Barkeling, & Rössner, 2004; Mamun et al., 2010). These observational studies provide relevant information that women gain a greater amount of weight than IOM recommendations, that multiple pregnancies are associated with increased body weight over time, and that excessive maternal weight gain is associated with long-term weight retention.

### **Menopause**

Menopause is a natural developmental process whereby a woman's menses cease to occur. It is the event in a woman's life indicating the end of the reproductive cycle and is defined as one year after the cessation of menses. The transitional period prior to and ending with menopause is often referred to as peri-menopause. The usual time in a woman's life when this peri-menopausal phase occurs is between the ages of 45 and 55, with the average being 51 years of age (Keller et al., 2010). Several physiologic factors that contribute to obesity have been associated with midlife and changes in the menopausal transition. A key hormonal change associated with menopause includes decreased serum estradiol, a factor that may contribute to the accumulation of fat (Mayes & Watson, 2004). A decrease in resting metabolic rate at this time has also been noted (Day, Gozansky, VanPelt, Schwartz, & Kohrt, 2005). It has been hypothesized by one author that these post-reproductive phase changes in aging are adaptive and may help with the saving of energy (food) that may be required for the growth of younger family members (Zalfon, 2007).

The epidemiological data using cross-sectional examination of the population demonstrates a higher prevalence of obesity in women between 40 years to 59 years of age. The 1999-2008 NHANES data show a 38.2% rate of obesity ( $BMI \geq 30 \text{ kg/m}^2$ ) from the 40 years to 59 years of age, compared to a 34% rate in the earlier age range studied (20-39 years) and a 33.6% in women  $\geq 60$  years of age. This evidence informs us that there is a trend in increased weight during the peri-menopausal years of a woman's life, even if it does not account specifically for the cause (Flegal, et al., 2010).

### **Discussion**

From the foregoing review of weight gain across the life course up to menopause, it is perhaps worth noting that the current approach to critical periods could be misinterpreted to suggest that normal physiologic developmental phases of a woman's life (just reviewed) are, per se, critical for excess adiposity development given their role in the functioning of the normal physiologic mechanisms for healthy fat mass. It is important to underscore, however, that specific mechanisms for the development of obesity are not determined from epidemiologic evidence, and even when phase-specific factors have been identified in the research literature, the complex interrelationships of the multiple variables remain to be clarified.

A large body of investigation encompassing a variety of research designs has explored the complex causes of obesity, including environmental and behavioral factors with physical activity and nutrition playing a critical role in the causes of and solutions to its treatment (Sallis & Glanz, 2009). Behavior factors related to eating have been studied as contributing to weight gain and obesity management (Adam & Epel, 2007; Fassino, Leombruni, Piero, Abbate-Daga, &

Rovera, 2003; Hill, 2007; Zellner et al., 2006). Psychosocial and emotional contributors such as the motivation to engage in physical activity have been investigated as factors associated with weight and the treatment of overweight and obesity (Cohen-Mansfield & Marx, 2003; Evenson, Moos, Carrier, & Siega-Riz, 2009; Myers & Roth, 1997; Neumark-Sztainer, Story, Hannan, Tharp, & Rex, 2003). Socio-economic contributions to behavioral patterns across the life course have also been identified as contributing to the development of obesity (McCurdy, Gorman, & Metallions-Katsaras, 2010; Olson, Bove, & Miller, 2007; Sherman, Fowler-Brown, Raghunathan, & Van Hoewyk, 2006). Any number of these behaviors and conditions tend to occur in combination within individuals (Berrigan, Dodd, Troiano, Krebs-Smith, & Ballard Barbash, 2003; Pronk et al., 2004).

Keller et al. (2010) specifically in their review of menopausal obesity, including life course contributions to weight gain, stressed that delineating the individual contributions of normal aging, associated behavioral changes and the hormonal milieu contributions to obesity is difficult in both cross-sectional and longitudinal studies. Understanding the complex interplay of diet and physical activity along with psychosocial factors that influence them over time (from prenatal development through old age) and their relationship to obesity is needed (Agurs-Collins et al., 2008). No one study can meet all of these requirements, nor is it likely that any one study can be generalized to the entire population. Instead, there is a need to gather information from various approaches to research in order to inform our understanding of the development of obesity in individuals. There is also need for research applications that can be translated specifically to clinical practice and that can account for individuals' weight histories, interpersonal, psychosocial, and environmental contexts that contribute to obesity and its associated health conditions.

A life course approach offered by Liehr & Smith (2007) is one such alternative research application, in which chronicity can be seen as a process of “human developmental potential, transformational and self-transcendent capacity for health and healing” (Reed, 1995, p. 78). This approach calls for recognizing developmental histories and their contexts as well as “the use of new tools, methods (and) technologies” (Reed, 1995, p. 37). In this light, there is a need for techniques that integrate normal development, observations from epidemiologic studies and evidence regarding risk factors that contribute to weight gain across the life course. These integrative techniques can then serve to help clinicians and their patients recognize critical patterns that contribute to obesity and its associated health risks.

### References

- Adam, T. C., & Epel, E. S. (2007). Stress, eating and the reward system. *Physiology & Behavior*, 91(4), 449-458.
- Adair, L.S., & Gordon-Larsen, P. (2001). Maturation timing and overweight prevalence in US adolescent girls. *American Journal of Public Health*, 91(4), 642-644.
- Agurs-Collins, T., Khoury, M. J., Simon-Morton, D., Olster, D. H., Harris, J. R., & Milner, J. A. (2008). Public health genomics: Translating obesity genomics research into population health benefits. *Obesity*, 16, S85-S94.
- Annis, N. M., Cash, T. F., & Hraboski, J. I. (2004). Body image and psychosocial differences among stable average weight, currently overweight, and formerly overweight women: The role of stigmatizing experiences. *Body Image*, 1(2) 155-167.
- Berrigan, D., Dodd, K., Troiano, R. P., Krebs-Smith, S. M., & Ballard Barbash, B. (2003). Patterns of health behaviors in U. S. adults. *Preventive Medicine*, 36(5), 615-623.

- Biro F. M., Huang B., Morrison J. A., Horn P. S., & Daniels S. R. (2010). Body mass index and waist-to height changes during teen years in girls are influenced by childhood body mass index. *Journal of Adolescent Health, 46*(3), 245-250
- Cohen-Mansfield, J., Marx, M. S., & Guralnik, J. M. (2003). Motivators and barriers to exercise in an older community-dwelling population. *Journal of Aging and Physical Activity, 11*(2), 242-253.
- Chu, S.Y., Callaghan, W. M., Bish, C. L., & D'Angelo, D. (2009). Gestational weight gain by body mass index among US women delivering live births, 2004-2005: Fueling future obesity. *American Journal of Obstetrics and Gynecology, 200* (3), 271e1-271e7.
- Chung, W. K., & Leibel, R. L. (2008). Considerations regarding the genetics of obesity. *Obesity, 16*, S33-S39.
- Davison, K. K., Susman, E. J., & Birch, L. L. (2003). Percent body fat at age 5 predicts earlier pubertal development among girls at age 9. *Pediatrics, 111*, 815-821.
- Day, D. S., Gozansky, W. S., Van Pelt, R. E., Schwartz, R. S., & Kohrt, W. M. (2005). Sex hormone suppression reduces resting energy expenditure and {beta}-adrenergic support of resting energy expenditure. *The Journal of Clinical Endocrinology and Metabolism, 90*(6), 3312-3317.
- Dietz, W. (1994). Critical periods in childhood for the development of obesity. *American Journal of Clinical Nutrition, 59*, 955-959.
- Eckel, R. H., York, D. A., Rössner, S., Hubbard, V., Caterson, I., Sachiki, T., ... Blair, S. N. (2004). Prevention conference VII: Obesity, a worldwide epidemic related to heart disease and stroke: executive summary. *Circulation, 110*, 2968-2975.

- Evenson, K. R., Moos, M. K., Carrier, K., & Siega-Riz, A. M. (2009). Perceived barriers to physical activity among pregnant women. *Maternal & Child Health Journal, 13*(3), 364-375.
- Fassino, S., Leombruni, P., Piero, A., Abbate-Daga, G., & Rovera, G. G. (2003). Mood, eating attitudes, and anger in obese women with and without binge eating disorder: *Journal of Psychosomatic Research, 54*(6), 559-566.
- Flegal, K. M., Carroll, M. D., Ogden, C. L., & Curtin, L. R. (2010). Prevalence and trends in obesity among US adults, 1999-2008. *Journal of the American Medical Association, 303*(3), 235-241.
- Forster, J. L., & Jeffrey, R. W. (1986). Gender differences related to weight history, eating patterns, efficacy expectations, self-esteem, and weight loss among participants in a weight reduction program. *Addictive Behaviors, 11*(2), 141-147.
- Freedman, D. S., Kettel, K. L., Serdula, M. K., Srinivasan, S. R., Berenson, G. S. (2001). BMI rebound, childhood height, and obesity among adults in the Bogalusa Heart study. *International Journal of Obesity Related Metabolic Disorders, 25*, 543-549.
- Freedman, D., Khan, L., Serdula, M., Dietz, W., Srinivasan, S., & Berenson, G. (2003). The relation of menarcheal age to obesity in childhood and adulthood: The Bogalusa heart study. *BMC Pediatrics, 3*(1), 3.
- Halfon, N., & Hochstein, M. (2002). Life course health development: An integrated framework for developing health, policy, and research. *Milbank Quarterly, 80*(3), 433-479.
- Harris, H. E., Ellison, G. T. H., & Holliday, M. (1997). Is there an independent association between parity and maternal weight gain? *Annals of Human Biology, 24*(6), 507-519.

Healthy People 2020. (2011). Nutrition and Weight Status. Retrieved from:

<http://healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=29>

Hill, A. J. (2007). Obesity and eating disorders. *Obesity Reviews*, 8 (Suppl. 1), 151-155.

Keel, P. K., Baxter, M. G., Heatherton, T. F., & Joiner Jr., T. E. (2007). A 20-year longitudinal study of body weight, dieting, and eating disorder symptoms. *Journal of Abnormal Psychology*, 116(2), 422-432.

Keller, C., Larkey, L., Distefano, J. K., Boehm-Smith, E., Records, K., Robillard, A., ...O'Brian, A. M. (2010). Perimenopausal Obesity. *Journal of Women's Health*, 19(5), 987-996.

Kim, S. A., Stein, A. D., & Martorell, R. (2007). Country development and the association between parity and overweight. *International Journal of Obesity*, 31, 805-812.

Liehr, P., & Smith, M. J. (2007). A neomodernist perspective for researching chronicity. *Archives of Psychiatric Nursing* 21(6), 345-346.

Linne, Y., Dye, L., Barkeling, B., & Rössner, S. (2004). Long-term weight development in women: A 15-year follow-up of the effects of pregnancy. *Obesity Research*, 12(7), 1166-1178.

Lowry, R., Galuska, D. A., Fulton, J. E., Burgeson, C., & Kann, L. (2005). Weight management goals and use of exercise for weight control among U.S. high school students, 1991-2001. *Journal of Adolescent Health*, 36, 320-326.

McCrary, M. A., Suen, V. M., & Roberts, S. B. (2002). Biobehavioral influences on energy intake and adult weight gain. *The Journal of Nutrition*, 132(12), 3830S-3834S.

- McCurdy, K., Gorman, K.S. & Metallions-Katsaras, E. (2010). From poverty to food insecurity and child overweight: A family stress approach. *Child Development Perspectives, 4*(2), 144-151.
- Mamun, A. A., Kinarivala, M., O'Callaghan, M. J., Williams, G. M., Najamn, J. M., & Callaway, L. K. (2010). Associations of excess weight gain during pregnancy with long-term maternal overweight and obesity: Evidence from 21 year postpartum follow-up. *American Journal of Clinical Nutrition, 91*(5), 1336-1341.
- Mann, T., Tomiyama, A. J., Westling, E., Lew, A. M., Samuels, B., & Chatman, J. (2007). Medicare's search for effective obesity treatments - Diets are not the answer. *American Psychologist, 62*(3), 220-233.
- Mayes, J., & Watson, G. (2004). Direct effects of sex steroid hormones on adipose tissues and obesity. *Obesity Reviews, 5*(4), 197-216.
- Muennig, P., Lubetkin, E., Jia, H. M., & Franks, P. (2006). Gender and the burden of disease attributable to obesity. *American Journal of Public Health, 96*(9), 1662-1668.
- Must, A., Naumova, E. N., Phillips, S. M., Blum, M., Dawson-Hughes, B., & Rand, W. M. (2005). Childhood overweight and maturational timing in the development of adult overweight and fatness: The Newton Girls Study and its follow-up. *Pediatrics, 116*(3), 620-627.
- Myers, R. S., & Roth, D. L. (1997). Perceived benefits of and barriers to exercise and stage of exercise adoption in young adults. *Health Psychology, 16*(3), 277-283.
- National Institute of Health (1998). Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults--The evidence report. *Obesity Research, 6 Suppl 2*, 51S-209S.



- National Task Force on the Prevention and Treatment of Obesity. (1994). Weight Cycling. *JAMA*, 272(15), 1196-1202.
- Neumark-Sztainer, D., Story, M., Hannan, P. J., Tharp, T., & Rex, J. (2003). Factors associated with changes in physical activity - A cohort study of inactive adolescent girls. *Archives of Pediatrics & Adolescent Medicine*, 157(8), 803-810.
- Norgan, N. G. (1997). The beneficial effects of body fat and adipose tissue in humans. *International Journal of Obesity Related Metabolic Disorders*, 21, 738-746.
- Olson, C. M., Bove, C. F., & Miller, E. O. (2007). Growing up poor: Long-term implications for eating patterns and body weight. *Appetite*, 49(1), 198-207.
- Orzano, A. J., & Scott, J. G. (2004). Diagnosis and treatment of obesity in adults: An applied evidence-based review. *Journal of the American Board of Family Practice*, 17(5), 359-369.
- Pronk, N. P., Anderson, L. H., Crain, A. L., Martinson, B. C., O'Connor, P. J., Sherwood, N. E., Whitebird, R. R. (2004). Meeting recommendations for multiple healthy lifestyle factors: Prevalence, clustering and predictors among adolescents, adult and senior health plan members. *American Journal of Preventive Medicine*, 27(2S), 25-33.
- Rasmussen, K. M. Catalano, P. M., & Yaktine, A. L. (2009). New guidelines for weight gain during pregnancy: What obstetrician/gynecologists should know. *Current Opinion in Obstetrics & Gynecology*, 21(6), 521-526.
- Ravelli, G. P., Stein, Z. A., & Susser, M. W. (1976). Obesity in young men after famine exposure in utero and early in infancy. *New England Journal of Medicine*, 295(7), 349-353.

- Ravussin, R., & Gautier, J. F. (1999). Metabolic predictors of weight gain. *International Journal of Obesity*, 23 (Suppl. 1), 37-41.
- Reed, P. G. (1995). A treatise on nursing knowledge development for the 21<sup>st</sup> century: Beyond postmodernism. *Advances in Nursing Science*, 17(3), 70-84.
- Rogers, I. (2003). The influence of birth weight and intrauterine environment on adiposity and fat distribution in later life. *International Journal of Obesity*, 27, 755-777.
- Rolland-Cachera, M. F., Deheeger, M., Maillot, M., & Bellisle, F. (2006). Early adiposity rebound: Causes and consequences for obesity in children and adults. *International Journal of Obesity*, 30(Suppl 4), S11-17.
- Sallis, J. F., & Glanz, K. (2009). Physical activity and food environments: Solutions to the obesity epidemic. *Milbank Quarterly*, 87(1), 123-154.
- Scott, K. M., Bruffaerts, R., Simon, G. E., Alonso, J., Angermeyer, M., de Girolamo, G., ... VonKorff, M. (2008). Obesity and mental disorders in the general population: Results from the world mental health surveys. *International Journal of Obesity*, 32, 192-200.
- Sherman, J. A., Folwer-Brown, A., Raghunathan, T. E., & Van Hoewyk, J. (2006). Life course socioeconomic position and obesity in African American women: The Pitt county study. *American Journal of Public Health*, 96(3), 554-560.
- Slevec, J.H., & Tiggemann, M. (2011). Predictors of body dissatisfaction and disordered eating in middle-aged women. *Clinical Psychology Review*, 31(4), 515-524.
- Spiegelman, B. M., & Flier, J. S. (2001). Obesity and the regulation of energy balance. *Cell*, 104(4), 531-543.

- Strychar, I., Lavoie, M. E., Messier, L., Karelis, A. D., Doucet, □, Prud'Homme, D., ...Rabasa-Lhoret, R. (2009). Anthropometric, metabolic, psychosocial, and dietary characteristics of overweight/obese postmenopausal women with a history of weight cycling: A Montreal Ottawa New Emerging Team study. *Journal of the American Dietetic Association, 109*(4), 718-724.
- Taylor, R. W., Goulding, A, Lewis-Barned, N. J., & Williams, S. M. (2004). Rate of fat gain is faster in girls undergoing early adiposity rebound. *Obesity Research, 12*(8), 1228-1230.
- Wang, Y., Wang, X., Yuhan, K., Zhang, J. H., & Zeng, Q (2010). The great Chinese famine leads to shorter and overweight females in Chongqing Chinese population after 50 years. *Obesity, 18*(3), 588-592.
- Weiss, E. C., Galuska, D. A., Kettel Kahn, L, & Serdula, M. K. (2006). Weight-control practices among U.S. Adults 2001-2002. *American Journal of Preventive Medicine, 31*(1), 18-24.
- Williamson, D. F., Serdula, M. K., Anda, R. F., Levy, A., Byers, T. (1992). Weight loss attempts in adults: Goals, duration, and rate of weight loss. *American Journal of Public Health, 82*(9), 1251-1257.
- Woodward-Lopez, G., Ritchie, L. D., Gerstein, D. E., & Crawford, P. B. (2006). Critical periods. In Woodward-Lopez, G., Ritchie, L. D., Gerstein, D. E., & Crawford, P. B. (Eds.) *Obesity: Dietary and developmental influences*. (pp. 13-29). Boca Raton, FL: Taylor & Francis.
- World Health Organization. (2000). Obesity: Preventing and managing the global epidemic - Introduction. In *Obesity: Preventing and Managing the Global Epidemic - Report of a World Health Organization Consultation, 894*, 1-253).

Zafron, C. (2007). Oscillations in total body fat content through life: An evolutionary perspective. *Obesity Reviews*, 8, 525-530.

Zellner, D. A., Loaiza, S., Gonzalez, Z., Pita, J., Morales, J., Pecora, D. & Wolf, A. (2006). Food selection changes under stress. *Physiology & Behavior*, 87(4), 789-793.

## **CHAPTER THREE: REVIEW OF THE LITERATURE - STORY THEORY**

This article examines the literature on the foundations of storytelling and the philosophical underpinnings of story theory. Concepts and empirical applications of story theory are examined, along with a review of qualitative research studies that used story theory to collect, organize, and analyze story data.

### **Historical Perspectives**

Storytelling is one of the oldest features of world cultures. Stories have been used to communicate meaning and imbue cultural identity and values in preliterate societies. World religions relied on the oral tradition to transmit historical events in the form of stories for centuries before these were put in written narratives. Stories are a valuable source of experiential knowledge and wisdom and have been applied to research inquiry in multiple disciplines including the academic disciplines of history, anthropology, psychology, sociology, sociolinguistics as well as professions including law, medicine, nursing, psychiatry, psychoanalysis, social work, and education. In the literature, the concept of ‘Story’ is sometimes referred to in other terms. Life stories, biographies, and narrative are all approaches that have been explored in multiple disciplines in order to explore life events and their meaning. Riessman, a professor emerita of social work at Boston University, in her paper on narrative analysis (1993) discusses the study of narratives, which has its origins in the disciplines of sociology and anthropology. She describes the progressive use of narrative in the human sciences, beginning with sociologists in Chicago who used qualitative ethnographic approaches to study the lives of urban males from 1930 to 1940. Tzvetan Todorov, a Franco-Bulgarian philosopher of literary and culture theory coined the term ‘narratology’ in 1969 to elevate narrative “to the status of an object of

knowledge for a new science” (as cited in Riessman, 1993, p. 1). Over the decades, analysis of narratives or stories in the social sciences has come to include semiotics, hermeneutics, conversational and discourse analysis, and other textual approaches to documents (Riessman, 1993).

### **Story and Narrative in Nursing**

Authors Smith and Liehr (2008) stress that listening has always been important to nurses, reaffirming that use of story articulates implicit wisdom within the discipline. They review the foundational work of modern nursing, beginning with Florence Nightingale, and describe the benefits of story and its use in several extant nursing theories. They quote Nightingale (1946) who called for a “... rejection of mindless chattering and a devotion to listening to the patient: He feels what a convenience it would be, if there were any single person to whom he could speak simply and openly... to whom he could express his wishes and directions” (p. 46). The authors further note that stories are a component of Hildegard Peplau's (1991) theory of interpersonal relations, as the nurse's focus is the client and through active listening and posing questions the nurse prompts client's descriptions and personal stories that are pertinent to the individual and his or her condition. In Rosemarie Rizzo Parse's theory of human becoming (1981) story is described in the context of relating as persons.

Patricia Benner (1984) initially developed her novice-to-expert model using nurses' narratives. Her work has continued to use stories and narrative to understand the complex dynamics of delivering patient care in interdisciplinary care settings. Margarete Sandelowski (1991) supports the merits of narratives in theory and practice and proposes its potential for research. She (1994) stresses that nursing practice mandates developing expertise in the skills of

narrative analysis and (re)construction, skills that help the nurse to recapture what is essentially human in health care.

In Margaret Newman's (1999) theory of health as expanding consciousness, story is described as a means of communicating and conveying what is meaningful in the lives of patients for whom nurses care. The conceptualization in Newman's theory is that of story as a means to communicate an unfolding pattern of a phenomenon in the life of an individual. The telling of a story reveals patterns of organization or disorganization in a person's life and offers a context for the sequence of events. She suggests that if a pattern of disorganization is noted, the nurse's role is to support the individual to form a more organized pattern relative to the phenomenon.

Chinn and Kramer (1999) draw on Mattingly's (1994) principles related to the creation of story lines, describing story as an aspect of aesthetic knowledge. They describe aesthetic knowing as follows:

Aesthetic knowing in nursing is that aspect of knowing that connects with the deep meanings of a situation and calls forth inner creative resources that transform experience into what is not yet revealed but possible. It is the dimension of knowing that connects with depths of human experience that are common but expressed and experienced uniquely in each instance (Chinn & Kramer, 1999, p.183).

They propose that "aesthetics presents unique challenges that bring concerns of being (ontology) and knowing (epistemology) together and can open doors for the experience of the whole"(Chinn & Kramer, 1999, p. 206).

Banks-Wallace (2002) reviews the history of storytelling within the oral tradition of African American culture. She articulates a research methodology for the collection and analysis of multiple interviews. Essentially, Banks-Wallace's approach was grounded in her direct

experience with African American traditions along with her formal nursing research education. She emphasized that an individual's culture shapes a story, both as researcher and as researched, and thus, should be considered for both research and practice. In their textbook focusing on spirituality, Burkhardt & Nagai-Jacobson (2002) review the literature on story within the disciplines of nursing and healthcare and noted that the narrative story approach served as a means of transmitting wisdom for self-nurturing and healing.

### **Story: A Middle Range Theory**

Story is a component of the nursing discipline and has been discussed in its literature from the time of the earliest writings of its foundational scholars. Narrative, storytelling, and textual analysis have been used as approaches to knowledge development in the academic and professional disciplines including nursing. Post-modernism has been influential in these applications of story and narrative. Post-modern social constructions are inclusive and promote diverse approaches to ways of knowing, including philosophical, theoretical and empirical with an emphasis on cultural relativity. Smith and Liehr (1999) sought to more clearly articulate but not simplify the approach to story and advocate that story be considered as middle range theory. The intent of middle range theory is to offer a usable structure of ideas that emerge from the focus of a discipline (Smith & Liehr, 2003). Smith and Liehr's seminal work with story theory organizes the complexity of the philosophical, theoretical, and empirical/ methodological applications into a structure with utility for scholarly practice. Developing story theory as a middle range theory contributes to the scholarly development of the discipline's knowledge and practice. Applying story as a middle range theory, stories of individuals can enhance scholarly discourse to improve health care while informing further research efforts.



## **Levels of Abstraction**

As story theory involves philosophical, theoretical, and empirical elements, Smith and Liehr (2003) propose use of a conceptual ladder of abstraction in an effort to organize the complexity of the levels of the theory. This model depicts a ladder having three rungs. The three rungs represent differing ways of approaching knowledge development and provide a framework for connecting these various approaches. The highest ladder rung represents philosophical beliefs and assumptions. The middle ladder rung represents symbols, ideas, and theoretical concepts. The bottom ladder rung represents methodological applications and empirical data, which can be observed by the senses, including perceptions, descriptions of symbolic meanings, self-reports observable behavior, biological indicators, and personal stories (Ford-Gilboe, Campbell, & Berman, 1995).

Applying levels of abstraction to story theory, Smith and Liehr propose that the top rung of the ladder represents the philosophical foundation, which includes phenomenology and the assumptions from the worldview in which it is situated. The middle rung represents the theoretical concepts of the theory which integrate disciplinary concepts and professional practices from philosophy, psychology, mythology, and bio-medical studies. The lowest rung of the ladder represents the empirical level, the application of the theory including methods to collect and analyze story data. The next section reviews the literature for the three levels of story theory, specifically, its philosophical underpinnings, theoretical concepts, and methodologies.

## **Philosophical Underpinnings**

### **Phenomenology: A Precursor to Story Theory**

Story theory as a method of inquiry has its philosophical roots in phenomenology (Smith and Liehr, 1999). Phenomenology has been described as both a philosophical movement and an approach to human science research; it illuminates the way people make sense of their situations and yields knowledge and understanding of subjective lived experience. Phenomenology was developed as a means of understanding human experience as a response to the limits of exploration in the natural sciences (Earle, 2010).

Two views of phenomenology arise from German philosophers Edmund Husserl (1859-1938) and Martin Heidegger (1889-1976). These include descriptive phenomenology (from the school of thought of Husserl) and interpretive phenomenology (from the school of thought of Heidegger). A central component of descriptive phenomenology is the concept of ‘bracketing,’ which defines as essential the task of the researcher to shed all prior personal assumptions in an attempt to grasp ‘essences’ of phenomena. Husserl’s descriptive phenomenological approach assumes that there are features common to all persons who have a particular experience and that ‘essences’ can be generated; the accurate perception of this is what defines ‘correct.’ In this view, reality is considered to be objective and independent of history and context as such; this philosophical view is aligned with positivism.

Interpretive phenomenology, applying Heidegger’s approach, involves the interpretive, hermeneutic tradition. Hermeneutics endeavors to go beyond description of objective reality and attends to concepts that illuminate the subjective meanings embedded in phenomena. It is not pure content or objectively conceptualized essences of human experience that are sought but,

rather, it is what is implied about what is experienced subjectively. Instead of the researcher bracketing prior knowledge regarding understanding phenomena, this is itself assumed to be a valuable guide to inquiry.

Initial publications in phenomenology were philosophical in nature, and its original authors did not make attempts at developing strict sets of rules or procedures for conducting phenomenological research. For phenomenology to be of value for science, research methodologies have been implemented (van Manen, 1990; Giorgi, 1970). As story theory evolved from phenomenology, they share some common characteristics. Research with story theory includes the perspective of the investigator as he or she is in relationship with the person telling their story and interprets the story from the perspective of the nursing discipline; therefore it is the interpretive tradition of phenomenology that story theory shares. The question arises then how research with story takes place from a nursing perspective.

### **Nursing Knowledge Development and Worldview**

Nursing involves the phenomena of human health and healing processes and has a disciplinary body of knowledge that integrates knowledge from the physical and social sciences as well as the health professions. As such, there is often a merging of boundaries that occurs in knowledge development in the approach to human health and healing as this is relative to other disciplines and professional practices. This is where a meta-narrative of the discipline of nursing serves to allow for integration of ideas while maintaining a disciplinary perspective. A meta-narrative provides a base for examining knowledge as related to the context of a given discipline (Waugh, 1992). Nurses approach science by adopting the meta-narrative of: “the human developmental potential, transformational, and self-transcendent capacity for health and healing,

and recognition of the developmental histories of persons and their contexts” (Reed, 1995, p. 78).

This meta-narrative is situated in the perspective of the developmental-contextual worldview. Within this worldview the leading metaphor for human experience is the historic event. That is to say, the individual always is understood to be embedded in a temporal context that is dynamic and where change and meaning is experienced in an inter-relationship with the world. The individual and the environment are dynamic and undergo innovative development through the process of interaction. Change occurs not as a result of the person’s reaction to or action on the environment but through a dialectic and interactive relationship with the environment (Reed, 1995). In both the human and the environment, change is seen as developmental and occurs through patterns of increasing complexity accompanied by increasing organization and integration (Werner, 1948).

### **Assumptions**

The assumptions of story theory and its approach to nursing are situated in the developmental-contextual worldview. Story theory’s underlying assumptions include that a person: 1) lives in an expanded present; 2) changes as he/she interrelates with the world; and 3) experiences meaning. Smith and Liehr (1999) cite Austrian born philosopher Martin Buber’s (1878-1965) philosophy of dialogue and the I-Thou relationship as central to the philosophical underpinnings of the story theory. He argued that I-it relations had been constructed within scientific rationalism and abstract philosophical thought, and this view of relations had overlooked the existential problem of being human. These issues were of significant concern in science and in the political trauma of his country during the 1940s. I-Thou relations take place in dialogue as persons engage with each other not as objects, but as subjects (Buber, 1965). The

meaning of dialogue is found in neither one nor the other person, nor in the simple sum of both, but in the synergistic interchange co-created moment-to-moment.

### **Theoretical Concepts**

The concepts of story theory stem from thinkers from disciplines as diverse as philosophy, psychology, mythology, and bio-medical studies. Essentially, story theory consists of three overarching concepts, each having two dimensions: 1) intentional dialogue (true presence and querying emergence); 2) self-in relation (personal history and reflective awareness); 3) creating ease (re-membering disjointed story moments and flow in the midst of anchoring). These concepts can be useful to describe the application of story in dialogue that takes place between a nurse and another person in the context of nursing care. In order to account for the complexity of human interaction, the theory is dynamic and non-linear. The theory attempts to represent the flow of energy between the nurse and person *in the space* where story emerges. The relationships between the various concepts of story theory have not yet been systematically tested. The authors state: “We are called to fit language to relationships among the concepts as best we can, recognizing simplicity necessary for models conflicts with the complexity recognized in most nursing phenomena” (Smith & Liehr, 2003, p. 174). The next few paragraphs describe the applications of the concepts as presented by Smith and Liehr in their expository publications on story theory.

#### **Intentional Dialogue: Querying Emergence in True Presence**

When using story theory, the nurse engages in intentional dialogue, a process wherein the nurse offers herself in true presence while querying the emergence of a story about a

complicating health challenge. True presence includes being nonjudgmental and withholding assumptions; it is being open to what was, is, and can be, in order to provide the personal environment of trust where sharing can take place.

Smith and Liehr's discussions of intentional dialogue draw from American psychotherapist Carl Rogers' (1902-1987) formulation of client centered therapy (Rogers, 1951). Rogers hypothesized that psychotherapeutic personality change is fostered as the client perceives the relational atmosphere of unconditional positive regard and empathetic understanding. Smith and Liehr, quoting Rogers, observe that in giving full attention to the other the nurse "conveys to the speaker that his contribution is worth listening to, that as a person he is respected enough to receive the undivided attention of another" (Rogers, 1951, p. 34). In true presence, the nurse queries the emergence of an unfolding story. Querying the emergence of story requires consideration of a beginning, middle, and end (or movement toward resolution) of a health challenge. The conceptualization of a timeline provides a ground for the complex dynamics that occur in the discussion of a health event between nurse and patient.

Smith and Liehr (2000) cite French philosopher Paul Ricoeur (1913-2005) who brought together Aristotle's theory of plot and Augustine's theory of time (Ricoeur, 1988). Smith and Liehr (2000) also cite American psychotherapist, Ira Progoff (1912-1998), whose research developed and refined the Intensive Journal Method in the mid-1960s and 1970s. Progoff's work includes the pragmatic metaphoric reference to use of 'steppingstones', which serve as markings significant in reconstructing the movements of life (Progoff, 1975).

In summary, intentional dialogue stems from philosophical conceptualizations of time and plot as well as the concepts relating to the processes of psychotherapy. Intentional dialogue

involves the active inquiry and attentive listening of the nurse. Subsequently, intention on the part of a nurse shapes the environment for the emergence of a person's story, conceptualized along a timeline.

### **Self-in Relation: Reflective Awareness on Personal History**

Connecting with self-in-relation, as used in story theory, is clarified as the active process of recognizing self as related with others in a story plot and includes the dimensions of personal history and reflective awareness. Smith and Liehr define reflective awareness as the opposite of taking life for granted. Reflective awareness is being in touch with bodily experience, thoughts, and feelings, and it relates to engagement with one's view of and place in the world. These formulations draw on the work of Jon Kabat-Zinn, a biomedical scientist and developer of Mindfulness Based Stress Reduction. Essentially, Mindfulness Based Stress Reduction incorporates the principles of mindfulness meditation, rooted in the Theravada tradition of Buddhism. Mindfulness cultivates awareness and focused attention to the present moment; and, encourages detached, non-judgmental observation or witnessing of thoughts, perceptions, sensations and emotions, which provide a means of self-monitoring and regulating one's arousal with detached awareness (Kabat-Zinn, 1994). Smith and Liehr posit that "reflective awareness enables thoughtful observation of the self so that bodily experience, thoughts, and feelings are recognized for what they are: separate and distinct entities rather than personal defining qualities" (Smith & Liehr, 2008 p. 211).

Identification of personal history occurs as the storyteller is guided to uncover from where they have come, where they are in the present moment, and where they are going in life. The influence of American psychologist Abraham Maslow (1908-1970) is incorporated into the

theory. Smith and Liehr follow Maslow's description of the desire to know and the simultaneous fear of knowing: "It is certainly demonstrable that we need the truth and we love to seek it. And, yet, it is just as easy to demonstrate that we are also simultaneously afraid to know the truth" (Maslow, 1967 p.167). Maslow expressed that our strongest resistance is not to knowing the most despicable in ourselves but to knowing the highest. In other words, resistance to self-knowledge can be the result of fear of feeling vulnerable and this resistance can interfere with personal development and creative potential. Smith and Liehr integrate Maslow's description of the fear of knowing and his insistence that psychological insight facilitates the understanding and activation of human potential in the presence of a caring other. "Self is affirmed in recognition and acceptance of nuances, faults, and strengths, as well as in an understating of how one has lived and how one envisions future hopes and dreams" (Smith & Liehr, 2003, p. 171).

Essentially, story theory's concept of self-in-relation draws from biomedical science and psychology. Employing this concept using story theory, the nurse encourages reflective awareness on the part of the person telling their story to the active process of self-in-relation, that is, an individual's relation to his or her personal history as it relates to persons and events surrounding a complicating health challenge. This process "enlivens one's connection with self-in-relation to others and the world; it establishes an environment for creating ease" (Smith & Liehr, 2003, p. 172).

### **Creating Ease: Re-membering Disjointed Story Moments with Flow in the Midst of Anchoring**

Disruption in everyday life occurs due to health challenges, and as a result the person's thoughts, feelings, and memories can become disorganized. The process of re-membering disjointed story moments entails the nurse constructing a time line and listening to a person's



thoughts, feelings, and memories surrounding their health challenge. The nurse engages true presence while “*staying in and staying out*”; there is an all-at-once staying close to the story rhythm from the perspective of the client while simultaneously distancing to discern patterns of connectedness (Smith & Liehr, 2008, p. 210). The nurse listens for story moments and important events and grounds or *anchors* these story moments to a time line consisting of a beginning, middle, and an end or movement toward resolution. The ‘movement toward resolution’ aspect of the theory has been addressed by the authors who state: “All people do not attentively embrace their story even when given the opportunity for story-sharing with someone who truly cares to listen. Readiness for embracing story and experiencing ease [in its use] varies from individual to individual” (Smith & Liehr, 2008, p. 206).

The nurse listens for and reflects back to the person the story moments in a narrative structure (re-membering). Facilitation of an integration of disconnected feeling states and memories by giving them language in the temporal context of story is described as “flow in the midst of anchoring” (Smith & Liehr, 2008). “*Flow* is the way people describe their state of mind when consciousness is harmoniously ordered, and they want to pursue whatever they are doing for its own sake” (Csikszentmihalyi, 1990, p.6). This concept was elaborated by Hungarian-born psychologist Mihaly Csikszentmihalyi, noted mostly for his work in the study of happiness, creativity, and positive psychology. His doctoral work involved the study of artists and the quality of subjective experience and intrinsic motivation. Csikszentmihalyi (1990) describes the harmony that ensues when one ‘anchors to meaning,’ a concept that captures purposeful unity and focus on life direction. He provides descriptions of individuals who used changing health situations to achieve clarity of purpose, noting that “a person who knows how to find flow from

life is able to enjoy even situations that seem only to allow despair” (Csikszentmihalyi, 1990, p. 600).

The influence of Csikszentmihalyi’s concept of flow is prominent in Smith and Liehr’s (2008) formulation: “Disjointed moments come together as a whole; there is a simultaneous anchoring and flow through recognizing meaning and attentively embracing when one is in the moment of a life story. When story-sharing becomes a vehicle for healing, ‘embracing story’ happens. Embracing story energizes release from the confines of a disjointed story, where story moments are scattered making it difficult to discern a plot” (p.213). Ease, in contrast, is the subjective experience of a “resonating energy” that can bring vision even if for only a moment, a powerful moment for creating possibilities for human development (Liehr & Smith, 2008, p. 213). The concept of *flow*, like other concepts in the theory, is drawn from the discipline of psychology and is applied to story theory as a part of the process of the nurse-person dialogue surrounding a complicating health challenge.

Essentially, the process of story theory is described as follows: the nurse listens in true presence; she uses reflective awareness to query the emergence of an unfolding story about a health challenge. The story about the health challenge involves the person’s description, considered an active process of reflective awareness on personal history. In other words, it is awareness of their self-in-relation to the persons and events included in their story. The nurse queries the emergence of the story along a time line and listens for story moments. These story moments, anchored to a time line, are then re-membered and reflected back to the person telling the story. The storyteller’s self is affirmed and upon receiving the nurse’s re-membering of the story moments the storyteller may experience new insight from this unification of separate or disjointed events and experiences; this is considered flow in the midst

of anchoring. This process serves to create ease for the person telling the story. The creation of ease then allows for the opportunity and potential for future personal development.

### **Methodological/Empirical Applications**

The grounding of philosophical and theoretical concepts occurs at the empirical rung of Smith & Liehr's metaphorical ladder of abstraction where practice and research take place. This section reviews the suggested strategies for research application of story theory, specifically qualitative data, using story plot for data collection and qualitative analysis strategies. A critique of the proposed method for research inquiry and the strengths of the use of story theory are then presented. Smith and Liehr (2008) outline five steps to guide research inquiry using story theory:

1. Gather story (ies) about a complicating health challenge using a meaningful, consistent structure to encourage story-sharing.
- 2) Begin deciphering the complicating health challenge with a focus on "what matters most" for the person sharing the story.
- 3) Describe the developing story plot, noting critical moments (high points, low points, turning points) that carry the unfolding story forward.
- 4) Identify movement toward resolving, recognizing that there will be a range in the "resolving" activity.
- 5) Synthesize findings to address the research question.

Although these five steps are a proposed strategy, Smith and Liehr (2008) note: "To some extent, we ourselves, our students, our colleagues, and anyone who uses story theory to guide research is

pushing the edge of understanding about how nursing practice stories collected through research can best be gathered and analyzed to access their inherent wisdom” (p. 216).

## **Review of Qualitative Literature**

Qualitative, descriptive, and exploratory research wherein data is generated using a story plot technique as the primary method of data collection has been the most frequently cited research design with story theory. The following describes the five published qualitative research applications using story theory. This will be followed by a discussion of Smith & Liehr’s proposed steps for analysis using examples from the published work with the theory in order to highlight and further explicate qualitative applications of the theory, specifically interviewing and analytic strategies.

Williams (2007) published research on the dynamics of informal care giving for caregivers of those receiving blood marrow transplantation. Data were collected by asking each caregiver (n=40) nine open-ended questions. Participants were invited to tell of their experience as a story, first focusing on the present, then reflecting on the past, and finally, exploring hopes and dreams for the future. The interviews ranged from 20-60 minutes in length. A blank piece of paper was used to draw a story plot with marks of important dates and events in the story. The transcribed dialogues were analyzed using an adaptation of the descriptive, exploratory method described by Parse, Coyne, & Smith (1985). An analysis template based on the definitions of commitment, expectation, and negotiation from Williams’ (2003) model of informal care giving dynamics was used. This approach enabled the researcher to code the dialogues into statements representing these definitions as well as other statements about care giving. Themes were identified and synthesized to produce a data-based definition of Informal Caregiver Dynamics.

Smith (2008) used story theory to gather stories of (n=3) adolescents who were obese and who had completed an intervention that included nutrition and exercise as part of a structured program. Participants were asked to begin the story at the time when they first experienced themselves as overweight and then to describe the unfolding events related to their experience of being overweight, leading to the present. Each 60-minute interview was tape recorded and transcribed. Van Manen's phenomenological approach (1990) was used for the data analysis, and six themes were identified: 1) knowing of self as overweight that surfaces in everyday living; 2) a persistent struggle to exercise and eat right that brings little change in weight; 3) facing ridicule and embarrassment in relationships that is without end; 4) a yearning for a close relationship with a peer of the opposite sex that is not fulfilled; 5) a desire to push being overweight to the background and focus on manageable personal strength; and 6) a feeling of comfort and closeness with family despite moments of upheaval. Each theme is followed by a quotation from one of the participants as an exemplar of the theme. The thematic presentation was followed by a discussion of the rhythm of normalcy and extraordinary pressures lived in the human connections of the adolescents. From this, the authors suggested that the data from these stories helped to support core nursing values related to human connectedness, well-being, and professional accountability, as well as practice implications that augment standard diet and exercise education.

Liu and Liehr (2009) published a descriptive exploratory qualitative study examining the stories of nurses in Beijing, China (n=6) who cared for patients with SARs. A story plot approach to data collection was employed, where first the present experience was queried with attention to past experiences that contributed to the present, as well as to hopes and dreams for the future. Although story plot was used in this study, structured interview questions were also

asked of the participants. Chinese and American investigators communicated via e-mail to conduct a content analysis, which was used to analyze the data collected via voice recordings. Their article provided a description of this process: 1) identify descriptive expressions; 2) group the descriptive expressions with a similar spirit together and label the grouping; 3) synthesize preliminary statements (first level) expressing the essence of each sub-group of descriptive expressions; 4) synthesize the statements generated in the first-level synthesis into a single descriptive statement; and 5) consider the synthesized statement and organize them to address the study purpose of developing an instructive message for use in future epidemics. Content analysis of the data revealed the three themes: personal challenge, essence of care, and self-growth. A description of each theme was then presented, which included discussion of the context of care along with quotations from the stories. Following the presentation of each theme, an instructive message for future epidemics was then provided.

Jolly et al, (2007) used story theory to inform the concept of adolescent voice. The authors provided background literature on the use of the concept of voice, as a means to affect risky behavior, focusing on the Brazilian philosopher Paulo Freire's explorations of oppression. This review was undertaken in an effort to frame the discussion surrounding open dialogue and active listening. Sally, an adolescent who thought that she might be pregnant, was asked "Who do you talk to when something really matters?" Story theory was used to guide the questions in Sally's story, which was then synthesized with background literature into a model of adolescent voice, described as the power to express self through dialogue with a non-judgmental listener who gives and receives feedback. Research implications suggested the use of the concept for group research with adolescents in order to promote health.

Gobble (2008) used story theory to describe the author Cynthia Denise Gobble's journey in coming to understand the importance of attending to the patient's story in the delivery of advanced practice nursing. The paper presented the reconstructed story of a woman who attended a primary care clinic in rural Appalachia and who inconsistently adhered to the prescribed treatment. First, the participant, Molly, wrote about her life in a rural Appalachian coal mining community. Then, her story was further developed through dialogue in the clinic visits. The synthesized story revealed a woman's experience with her spirituality and the relationships that mattered most to her, including her mother and God. An understanding of Appalachian spirituality and healing was reviewed by the author and helped to foster understanding of a patient's inconsistent adherence to primary care interventions. The narrative uncovered the woman's moment of realizing that she did not understand why her mother, a spiritual healer in her Church and whose healing she had witnessed, would preach and practice faith healing while insisting that her own daughter obtain modern health care. This informed the nurse, fostered the nurse-patient relationship, and created a supportive atmosphere for giving voice to the patient's internal conflicts of understanding; the patient's adherence to primary care interventions also improved. Along with the synthesized story, Gobble's exposé provided insights about Appalachian culture and religious practices and included a summary of story theory. The article concludes with a discussion of practice application using story theory and the connection between the theory, the story as told, and the nurse's experience with the patient in light of the review of Appalachian culture.

## **Application of Story Theory**

Story theory has been applied to a variety of nursing contexts, and the nature of the results generated has included thematic analysis (Williams, 2007; Smith & Perkins, 2008; Liu & Liehr, 2009) and re-constructed synthesized stories (Gobble, 2008; Jolly, 2007). The first step using the theory involves gathering stories. Williams (2008) described used a blank piece of paper to draw a story line and marked important dates and events on the line during the collection of stories. William's work with the theory began with the present then moved into the past and then future. Smith & Perkins (2008) and Liu & Liehr (2009) described collecting the story using a past, present, future approach. Several studies used story plot as a guide to the interview along with other questions relevant to the research question (Williams, 2007; Liu & Liehr, 2009).

The second step of the process proposed by Smith & Liehr is to begin deciphering the complicating health challenge with a focus on "what matters most" for the person sharing the story. Jolly (2007) began the interview with the adolescent participants in her study with: "Who do you talk to when something really matters?" Following the opening statement, the remainder of the interview used a personal story format. Other publications using the theory have not explicated the analytic step of "deciphering what matters most" in describing the interview or the analytic approach. As research using the theory involves a dialogue and is interpretive, the researcher's subjectivity is an integral part of the research process and shapes the nature of the results. What matters most is shaped both by the investigator and the person(s) interviewed regardless of whether this step is explicitly made.



The third step in Smith & Liehr's process is to describe the developing story plot, noting critical moments (high points, low points, turning points) that carry the unfolding story forward. The use of collecting data along a time line considering a story structure allows for discernment of the story moments; this can be used in the analytic strategy, particularly when re-constructing a story. Both Jolly (2007) and Gobble (2008) present re-constructed stories but the process is not described in their publications.

Smith & Liehr's fourth step in the process is to identify movement toward resolving, recognizing that there will be a range in the "resolving" activity. This step in the analysis has not been explicitly discussed in research published with the theory. However, in Gobble's (2008) study, during the process of collecting Molly's story the author, Gobble, expressed her understanding of Molly's inconsistent adherence to primary care interventions. This could be interpreted as a movement toward resolution for her relationship with Molly. Jolly (2007), in telling Sally's story was able to convey the meaning of adolescent voice. The article concludes with Sally identifying and naming the interpersonal situations in which she felt listened to, which provided some resolution to the health challenge of not being heard.

The fifth step according to Smith & Liehr's synthesis of the story (ies) is to answer the research question. There is to some extent categorization of data that takes place when analyzing the transcript of a complete story, and this is where commonly used qualitative analytic strategies have been implemented such as content analysis (Hain, 2006; Liu & Liehr, 2009), Parse's descriptive exploratory method (Williams, 2007), and Van Manen's (1990) phenomenological analysis of themes (Smith & Perkins, 2008). Gobble (2008) and Jolly (2007) presented synthesized, re-constructed stories; the details of the process of reconstructing a story were not explicated in these publications, yet there was a logical connection between the literature and the

story, which offered an expanded understanding of the material. Regardless of whether the data analysis was reported as themes or stories, the synthesized analysis of story-gathered data served to address the intent of the research and the results offered contextualized interpretations.

From a methodological perspective, story theory offers a structure for systematically collecting stories allowing for the consideration of “the unfolding story qualities, critical moments, and turning points that contribute to the health challenge” (Liehr & Smith, 2007, p. 121). Using an interpretive analytic approach to story-generated data, synthesis involves either a thematic analysis or a reconstructed story. The presentation of research results using a story approach offers a comprehensive understanding beyond that of research generated involving the de-contextualized, mechanistic-deterministic worldview. Narrative has been studied in its application to psychotherapy, and persons who are able to construct narratives demonstrate improved psychological and physical health (Pennebaker, 2000) as well as identity stability (Pasupathi, 2001). Smith & Liehr (2003) cite Pennebaker’s conclusion that building a narrative is critical in reaching understanding (p.184).

A reflection on this process for individuals regarding mental health may have a parallel function in the presentation of research results. Research data presented using a narrative structure offers comprehensive and contextualized results. As story is a universally shared human phenomenon, it offers a ground from which dialogue can be generated within and amongst disciplinary perspectives and knowledge advanced. The use of story theory considers a relationship; the storyteller’s relationship with others in the recalled story, to the nurse, and with the environment (physical, the social, and spiritual). By listening attentively to a story, meanings

gradually take shape for both storyteller and listener; these meanings provide opportunities for healing and the activation of human potential for those in relation to the story itself.

In summary, this article highlighted historical literature on storytelling and reviewed narrative and storytelling in nursing as well as the theory's roots in phenomenology. The early authors who generated the concepts of story theory were discussed and the process described by the concepts were reviewed. Methodological applications, including select research studies that used story theory to collect, organize, and analyze qualitative data were presented along with a discussion of these applications.

### References

- Banks-Wallace, J. (2002). Talk that talk: Storytelling and analysis rooted in African American oral tradition. *Qualitative Health Research*. 12(3), 410-426.
- Benner, P. E. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Menlo Park, CA.: Addison-Wesley Pub. Co., Nursing Division.
- Buber, M. F. M. (1965). *The knowledge of man: A philosophy of the interhuman*. New York, NY. George Allen & Unwin Ltd.
- Burkhardt, M. A., & Nagai-Jacobson, M. G. (2002). *Spirituality: Living our connectedness*. Albany, NY: Delmar/Thomson Learning.
- Chinn, P. L. & Kramer, M. K. (1999). *Theory and nursing: Integrated knowledge development* (5<sup>th</sup> ed.). St. Louis, MO: Mosby Inc.

- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience* (1st ed.). New York, NY: Harper & Row.
- Earle, V. (2010). Phenomenology as research method or substantive metaphysics? An overview of phenomenology's uses in nursing. *Nursing Philosophy, 11*(4), 286-296.
- Ford-Gilboe, M., Campbell, J., & Berman, H. (1995). Stories and numbers: Coexistence without compromise. *Advances in Nursing Science, 18*(1), 14-26.
- Giorgi, A. (1970). *Psychology as a human science: A phenomenologically based approach*. New York, NY: Harper & Row.
- Gobble, C. D. (2009). The value of story theory in providing culturally sensitive advanced practice nursing in rural Appalachia. *Online Journal of Rural Nursing and Health Care, 9*(1), 94-105.
- Hain, D. J. (2008). Cognitive function and adherence of older adults undergoing hemodialysis. *Nephrology Nursing Journal, 35*(1), 23-29.
- Jolly, K., Weiss, J. A., & Liehr, P. (2007). Understanding adolescent voice as a guide for nursing practice and research. *Issues in Comprehensive Pediatric Nursing, 30*(1-2), 3-13.
- Kabat-Zinn, J. (1994). *Wherever you go, there you are*. New York, NY: Hyperion.
- Liehr, P., & Smith, M. J. (2000). Using story theory to guide nursing practice. *International Journal for Human Caring, 4*(2), 13-18.
- Liehr, P., Meininger, J. C., Vogler, R., Chan, W., Frazier, L., Smalling, S., Fuentes, F. (2006). Adding story-centered care to standard lifestyle intervention for people with Stage 1 hypertension. *Applied Nursing Research, 19*(1), 16-21.

- Liehr, P., & Smith, M. J. (2007). Story inquiry: A method for research. *Archives of Psychiatric Nursing, 21*(2), 120-121.
- Liu, H. & Liehr, P. (2009). Instructive messages from Chinese nurses' stories of caring for SARS patients. *Journal of Clinical Nursing, 18* (20), 2880-2887.
- Maslow, A. H. (1967). Neurosis as a failure of personal growth. *Humanitas, 8*, 153-169.
- Mattingly, C. (1994). The narrative nature of clinical reasoning. In C. Mattingly, M. H. Fleming (Eds.), *Clinical reasoning: forms of inquiry in a therapeutic practice*. Philadelphia, PA: FA Davis.
- Newman, M. A. (1999). The rhythm of relating in a paradigm of wholeness. *Image: Journal of Nursing Scholarship, 31*(3), 227-230.
- Nightengale, F. (1946). *Notes on nursing: What it is and what it is not*. Philadelphia: J.B. Lippincott.
- Parse, R. R. (1981). *Man-living-health: A theory of nursing*. New York, NY: Wiley.
- Parse, R.R., Coyne, A.B., & Smith, M.J. (1985). *Nursing research: Qualitative methods*. Bowie, MD: Brady Communications Co.
- Peplau, H. E. (1991). *Interpersonal relations in nursing: A conceptual frame of reference for psychodynamic nursing*. New York, NY: Springer Pub. Co.
- Progoff, I. (1975). *At a Journal Workshop: The basic text and guide for using the Intensive Journal*. New York, NY: Dialogue House Library.

- Reed, P. G. (1995). A treatise on nursing knowledge development for the 21st century: Beyond postmodernism. *Advances in Nursing Science*, 17(3), 70-84.
- Ricoeur, P. (1988). *Time and narrative*. Chicago, IL: University of Chicago Press
- Riessman, C. K. (1994). *Narrative analysis*. Newbury Park: CA: Sage Publications.
- Rogers, C. R. (1951). *Client-centered therapy, its current practice, implications, and theory*. Boston, MA: Houghton Mifflin.
- Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy*. Boston, MA: Houghton Mifflin.
- Sandelowski, M. (1991). Telling stories: Narrative approaches in qualitative research. *Image: Journal of Nursing Scholarship*, 23(3), 161-166.
- Sandelowski, M. (1994). We are the stories we tell: Narrative knowing in nursing practice. *Journal of Holistic Nursing*, 12(1), 23-33.
- Smith, M. J., & Liehr, P. (1999). Attentively embracing story: A middle-range theory with practice and research implications... including commentary by Reed PG. *Scholarly Inquiry for Nursing Practice*, 13(3), 187-210.
- Smith, M. J., & Liehr, P. R. (2003). The theory of attentively embracing story. In M. J. Smith & P. R. Liehr (Eds.), *Middle range theory for nursing*. New York, NY: Springer Publishing Company.
- Smith, M. J., & Liehr, P. R. (2008). Story theory. In M. J. Smith & P. R. Liehr (Eds.), *Middle range theory for nursing* (2nd ed.). New York, NY: Springer Publishing Company.

- Smith, M.J., & Perkins, K. (2008). Attending to the voice of adolescents who are overweight to promote mental health. *Archives of Psychiatric Nursing*, 22(6), 391-393.
- Van Manen, M. R. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. London: Althouse Press.
- Werner, H. (1948). *Comparative psychology of mental development*. New York: International Universities Press.
- Williams, L.A. (2003). Informal caregiving dynamics with a case study in blood and marrow transplantation. *Oncology Nursing Forum*, 30, 679-686.
- Williams, L. A. (2007). Whatever it takes: Informal care giving dynamics in blood and marrow transplantation. *Oncology Nursing Forum*, 34(2), 379-387.

## CHAPTER 4: EXPLORING WOMEN'S LIFE COURSE EXPERIENCES WITH WEIGHT USING STORY THEORY

### Abstract

This chapter describes a qualitative study that used story theory and a life course framework to explore the subjective accounts of the weight-related experiences of female participants who had gone through the menopausal transition. The goal of the present research is to add to the body of knowledge concerning weight gain across the life course by application of a novel, integrated middle range theory (story theory). Story theory was used to collect women's life course stories and, from these, to interpret critical themes and patterns of their weight gain. Stories were elicited during personal interviews with a convenience sample of ten women recruited from a weight loss and exercise program in Central Florida. Content analysis procedures, guided by story theory and an open ended interview guide, were used to analyze the data. Themes that emerged as contributors to weight gain included: changes associated with emotional and physical health; eating patterns associated with multiple and/or changing roles/relationships; and changing environments. The discussion includes a composite story, of *Jessica*, that integrates brief excerpts from the participants' interviews to exemplify life events and associated contextual factors that contributed to changes in lifestyle patterns associated with subsequent changes in weight. Implications for research, policy, education, and clinical practice are suggested, along with limitations of the study.

*Key words:* weight, women, life course, story theory



## Introduction

Obesity is fat mass in excess of normal body requirements. It is defined as abnormal or extensive fat accumulation that negatively affects health (World Health Organization, 2000). Being overweight is associated with increased risks for a complex array of multi-system physical health issues (Kopelman, 2007) as well as psychological complications (Scott et al., 2008). For the purposes of classification and terminology, obesity is defined as Body Mass Index (BMI), which is weight in kilograms divided by height in meters squared. Overweight is considered as a BMI 25-29.9 kg/m<sup>2</sup>, while obesity is defined as BMI  $\geq$  30kg/m<sup>2</sup> (Flegal, Carroll, Ogden, & Curtin, 2010).

In the United States, according to data collected from the National Health and Nutrition Examination Survey (NHANES) from 2007-2008, the combined prevalence of overweight and obesity (BMI  $\geq$  25) was 68% among adults in the United States (Flegal et al., 2009). Worldwide, more than 200 million men and about 300 million women were described as being overweight or obese in 2008 (World Health Organization, 2011).

Fat is stored when energy intake exceeds energy expenditure. Complex interactions between genetic, environmental, and psychosocial factors contribute to body weight and body composition (Spiegelman & Flier, 2001). Environments that minimize the opportunity for energy expenditure and maximize the opportunity for energy intake can contribute to maladaptive phenotypic expression, leading to excess fat storage and an increased risk for disease (Chung & Leibel, 2008). Behavioral risk factors such as eating patterns or low levels of physical activity are considered risk factors for weight gain and obesity (McCrary, Suen, & Roberts, 2002), and there are a multitude of variables that impact these behaviors.

Findings from the National Health and Nutrition Examination Survey also revealed a higher obesity rate among women than among men. More specifically, the age-adjusted prevalence of obesity among a sample of adult women in the United States was 35.5%, compared to 32.2% of men; women also demonstrated a higher prevalence of grade 2 (BMI  $\geq$  35) and grade 3 (BMI  $\geq$  40) obesity than men, 17.8% versus 10.7% and 7.2% versus 4.2%, respectively (Flegal et al., 2010). Women who are overweight also experience more burden of disease and decreased quality of life compared to males (Muennig, Lubetkin, Jia, & Franks, 2006).

Most individuals who are obese attempt weight loss multiple times throughout life. National surveys have demonstrated that between 2001-2002, 51.3% of adults reported trying to lose weight, with women demonstrating a greater prevalence of weight loss efforts 47.9% than males 33.8% (Weiss, Galuska, Kettel Kahn, & Serdula, 2006). Long-term follow-up studies document that the majority of individuals regain virtually all of the weight that was lost during treatment (Mann et al., 2007). One risk that develops from frequent and recurrent dieting is 'weight cycling', recurring weight loss followed by gain (National Task Force on the Prevention and Treatment of Obesity, 1994). Women who have a history of weight cycling have demonstrated higher BMIs, higher percent body fat mass, greater waist circumference, and lower resting metabolic rates as well as greater disinhibition (associated with disordered eating) and lower body esteem (Strychar et al., 2009).

The process of weight gain and weight loss is complex, and scientific literature and clinical approaches on the subject are extensive and vary widely (Bacon & Aphramor, 2011). One approach to understanding obesity is to explore critical periods across the life course that place people at risk for weight gain. An understanding of critical periods when weight gain is

more likely to occur serves to inform preventative strategies. For females, hormonal changes associated with puberty, pregnancy, and menopause have been considered as physiological critical periods for weight gain (Eckel et al., 2002; Woodward-Lopez, Ritchie, Gernstien, & Crawford, 2006).

There have been qualitative reports focusing on women's subjective accounts as to the causes of weight gain (Allan, 1998; Throsby, 2007), life course accounts including women's weight orientations and lifestyle practices through pregnancy and the postpartum period (Devine, Bove, & Olson, 2000), as well as women's accounts of appearance concern and body control (Johnston, Reilly, & Kremer, 2004). Lacking, however, are qualitative studies that explore the nature of critical periods for obesity that account for individuals' weight histories, interpersonal, psychosocial, and environmental contexts in order to help clinicians together with their patients recognize critical times and patterns.

The goal of the present research is to add to the body of knowledge concerning weight gain using a novel middle range theory (story theory) in order to answer the research question: What do women's life course stories of their weight experiences reveal as critical to weight gain? The Institutional Review Board (IRB) at the University of Central Florida (UCF) approved this study (Appendix A).

## **Methodology**

### **Design**

This exploratory qualitative study used story theory and a life course framework. Story theory is a middle range theory for nursing that stems from the philosophical/research tradition

of phenomenology and offers a structure for collecting stories in both nursing practice and research (Smith & Liehr, 2008). Phenomenology focuses on the person's lived experience relative to the phenomenon of interest, and generally in-depth interviews with participants are the principle means of obtaining data in such studies. For this study, rather than focusing on in-depth meaning of participants' 'lived experiences' associated with obesity, a story framework was chosen to conceptualize and guide the women's stories (interviews) surrounding their weight experiences of weight gain and loss along their life course, that is, the use of a story plot, described as "the unfolding story qualities, critical moments, and turning points that contribute to the health challenge" (Liehr & Smith, 2007, p. 121).

## **Participants**

Participants were recruited for the interviews from a group of women who had reached menopause, who were obese, and who had participated in a weight loss and exercise program. Participant inclusion criteria included currently or previously overweight or obese women with Body Mass Index (BMI) of 25 to 40 kg/m<sup>2</sup>, postmenopausal (one year without menses), less than 65 years of age with a sedentary lifestyle. Participants enrolled in this weight loss and exercise program were informed about and invited to participate in the study. The researcher sent an electronic mail message to all of the women who expressed an interest in the study that included contact information. Those who responded were subsequently contacted by the investigator. A mutually convenient time and location were established for a face-to-face, digitally recorded interview.

Following introductions and offering more detailed information about the expectations of the study, participants signed an informed consent (Appendix B). The signed consent forms are

maintained in a locked file cabinet at the UCF College of Nursing. Confidentiality was assured through the use of pseudonyms and a numerical code for each participant and all corresponding data sources. Interviews were conducted in private settings, including an office within the facility where the weight loss and exercise program was conducted and in other quiet locations that were convenient for the participant. Interviews averaged 45 minutes in length.

Sample size for qualitative research is not predetermined by the researcher; rather, the number of participants in a study is established after data saturation occurs (Munhall, 2008). Moreover, in qualitative studies, generalizability of the findings is not an expectation. Rather, sample size is guided by the phenomena of interest and eliciting data that has the potential to be transferred to a corresponding phenomenon in similar contexts (Grbich, 1999). Data saturation in this study was achieved with 10 participant interviews. To assure confidentiality pseudonyms that were used for the participants were sequenced alphabetically beginning with a name that started with the letter 'A' and ending with a name that begins with the letter 'J' (i.e., Adeline, Bernadette, Diana, Elizabeth, Frances, Gabby, Helen, Isabelle, and Joy).

## **Data Collection**

Data were collected via a personal interview with women who met the inclusion criteria using an interview guide that was developed by the researcher (Appendix C). A life course framework and a 'story plot' approach was used to conceptualize open-ended interview questions in order to answer the research question and help the participants focus on their life course experiences of weight gain. The open ended questions facilitated the natural flow of a conversation, encouraging thoughtful recollection by participants of their life course experiences with weight. Variability was anticipated as to the manner in which each woman recalled her

weight history; precise age and exact weight details or changes were not the focus of the interview.

The interview was designed to investigate each participant's experience with weight, focusing on the contextual dimensions that occurred at each particular point in her life experience. Next, the investigator reflected the participant's story moments as she understood the woman's accounting of her story. Then, the researcher guided the interview forward to another period in the woman's life when she experienced weight gain and explored the contextual life experience that occurred during that time. In accord with story theory, this strategy is considered re-membering disjointed story moments and is part of the dialogue process using the theory. While the investigator guided the woman's story forward in time, the flexible structure of the interview offered opportunities for the woman to return and further reflect on previous life experiences. The open ended interview with participants focused on the following life dimension categories:

- Intrapersonal life, that is, the thoughts, feelings, and/or any other reactions about participant's personal experience of weight.
- Interpersonal life, that is, the nature of participant's social relationships.
- Community setting, that is, where the participant was living and her recollection of what was occurring within the surrounding community at particular points in her life course.

Field notes were recorded by the researcher to address auditability of the procedures and also to provide other more subtle details that were observed during the interview. At the conclusion of the interview, referencing her field notes, the researcher reflected back to the participant her reported weight-related life course story along with associated contextual details. Participant

feedback was sought to confirm, correct, and amplify the investigator's summarized information. This strategy, referred to as member checking, reinforces data trustworthiness (Mays & Pope, 2000).

## **Data Analysis**

The investigator transcribed the 10 digitally audio-recorded interviews. Next, a preliminary reading of all the transcripts was undertaken by the researcher to glean an overall impression of the reported experiences of weight gain/loss in the women's stories. Subsequently, the researcher re-read each individual transcript, comparing the interview narrative with her corresponding notations in the field notes. To document each participant's story a timeline with critical points, representing times of weight gain or loss along with descriptions of the corresponding contextual factors was developed.

In order to further refine the analytic technique, the researcher proceeded with a systematic and focused content analysis of each individual narrative. The categories intrapersonal, interpersonal and community were used to guide the content analysis. Through iterative reviews of the transcripts, field notes, and participants' life course timelines, verbatim quotes illustrating experiences within each category were selected. From these verbatim examples, relevant and particular descriptions (descriptors) were highlighted. Use of descriptors and verbatim comments facilitated an extrapolation of general themes suggested from the data. A main theme was identified for each of the three categories. Then, as suggested in the literature on story theory (Liehr & Smith, 2007) the researcher synthesized what the storytellers shared by weaving together salient representative quotes, descriptors and themes in order to illustrate findings for the research question; on the basis of this a re-constructed story was developed .

## Findings

This section summarizes the findings obtained through content analysis of participants' interviews. Categories, descriptors and themes are summarized in (Table 1) and include the categories (intrapersonal, interpersonal and community) that guided the open ended interviews and the content analysis. Table 2, Table 3 and Table 4 highlight select descriptors and supporting exemplar quotes from the participants' stories. This summary will then be followed by the reconstructed composite story (*Jessica's*) which synthesizes the findings from the participants' stories. Story points are noted and discussed in Jessica's chronologically unfolding life course.

### Major Themes

#### *Intrapersonal*

The extrapolated theme from the interpersonal category was *changes associated with emotional and physical health*; the descriptors (and relevant quotes) for this category are represented in Table 2 and include tobacco cessation, pregnancy, back pain/ decreased activity/ depressed mood, and antidepressant medication.

Tobacco cessation, recognized as a contributor to weight gain, was considered a change in physical health. An example of how smoking cessation emerged in the women's stories is described in this quote from Adeline:

The next time that I [gained weight] was when I quit smoking. It wasn't until I gained more than 30 pounds that I realized that I had a problem and I thought maybe I should go back to smoking to get the weight off.



Gabby described the normal developmental physical health change of *pregnancy* as a time when she gained weight:

I gained a lot of weight with the pregnancy, I had read that I should only gain so much weight; I thought whoa, but it didn't bother me, I figured I could do something about it.

Another participant, Bernadette, revealed a series of health complications in one of her attempts to manage her weight. In particular, she described experiencing back pain that limited her ability to be physically active, which she described as contributing to further weight gain:

I was always doing some kind of exercise but when my back started really bothering me I had to quit and from there my weight went up again and that was getting to be just depressing.

Later in her story, Bernadette described an increase in her weight when she was put on an *antidepressant medication*. "I think that somewhere in there my doctor put me on Zoloft and that caused one of those surges in weight gain."

### ***Interpersonal***

The extrapolated theme for the interpersonal category was *eating patterns associated with multiple and/or changing roles/relationships*; the descriptors (and relevant quotes) for this category are represented in Table 3 and include new or excessive work schedules, change in maternal role, change in relationships (divorce/new relationship), and caretaking.

Women frequently brought up *eating when describing their maternal role and working lives*. Frances brought up eating in relation to her role of being a mother with young children and working full time:

I had two [children] in diapers, which you'd think you would lose weight but you don't... it's a lot of sitting and feeding babies and when you're feeding babies *you're eating*. I was working full time and I had these three kids and it was just...no time to think of anything besides working.

Helen recalled drinking milkshakes in reaction to the dual role changes of returning to work after the birth of her daughter. "The first time [of weight gain] was after I had my daughter and I had been back to work... and I told myself that I needed a milkshake for energy."

Another example of changes in relationship status that impacted eating behavior was evident in a quote from Isabelle who had started a new relationship after being divorced. "When we met [she and her new husband] I looked skinnier, not as skinny as I was all my life, but when I started going out with him, eating all of the time, I cannot (sic) lose the weight."

Several of the women described increased eating in response to changes required because of taking on the role of caregiver. An example of this is when Gabby described a change in her role at work in order to take care of her family and home, specifically her father who had become disabled.

I had to take time off of work and...um...trying to take care of him [her father]...I was the caregiver for him, trying to take care of my house, trying to take care of my husband, you know and stuff like that, and trying to keep some sort of sanity, you know, that I could...It was difficult, there was no way, I wasn't thinking about myself, I just forgot about myself, I ate if I felt hungry, I ate or I would eat because I knew I was going to get hungry, I had to do it in between times [of caretaking] I made sure my dad was being taken care of and that my husband had something to eat.

Women frequently experienced changes in roles that involved new environments, which were described as impacting their eating behaviors. Upon remembering the changing role related to starting a new job, Diana described eating the food available in her workplace:

I started working [states workplace] and it's like every day there is food here... there's always muffins there's always... sausage and biscuits, you know, and everything here, donuts...even though there's always salad around there's also barbeque chicken, you know. It's easy to eat here all day long, you catch yourself, and say "Ok, I'll just have a bite or just have a pinch"... [Weight] comes on pretty quickly this way.

Although changes in eating behaviors were the most important weight-related consequence of changing roles and relationships, Claire describes a decrease in physical activity in her new role as a student, which contributed to her weight gain. "When I first started school my weight went up. [I] increased a [dress] size in 3 years...when you are studying you tend to not exercise as much."

### ***Community***

The extrapolated theme from the category of community was *changing environments*; the sole descriptor (and relevant quote) for this category is represented in Table 3 and includes *relocation*. The example is Helen's description of a change in her healthy habit of walking after a move:

I realized that after we moved [from New York] to Georgia how inactive we were because we weren't walking anywhere. Any time I left my house I was backing out of the garage and driving [back] into the garage ...we didn't have sidewalks we were driving everywhere.

## **Synthesis of Content Analysis and Composite Story**

The content analysis was used to interpret from the women's stories contextual aspects of the participants' lives that contributed to weight gain. The researcher, based on a synthesis of the findings, developed a composite story, of 'Jessica', which includes excerpts from various participants' stories. This reconstructed story highlights the chronologic unfolding of Jessica's life course and includes story points. A discussion that examines the various themes follows each story point.

### **Jessica's Story**

#### ***Story Point One: Family influence on her body image, eating and physical activity.***

I've always been big. My sister Lucy, a year older, took after my mother; she is tiny and slim. My father is larger, tall, and husky; I take after him. I recall my parents telling me, "You are big-boned." Growing up, mom prepared all of our meals—breakfast, lunch, dinner! When we were sick, mom and dad were determined to get us healthy again. They drove across town to buy the most wonderful cream top milks. We had cream top milk with everything. I remember having cream on my cereal. As a kid, I don't remember ever going on a diet or trying to lose weight...that didn't seem important. Or, maybe children don't think they are in control. I don't know. To me, it just seems you are who you are as a child.

When reaching puberty, I was still heavy but grew a foot taller and slimmed down. My parents told me, "You grew out of your baby fat." I thought that was the natural way things happened. I was physically active. We lived in the country - a house by a lake. I swam in the lake almost every day; walked a mile and a half, to and from the lake; rode my bike and roller

skated a lot. We were encouraged to play. Back then, kids were encouraged to play outdoors - and I didn't think much about my weight during those years.

***Discussion: Story Point One***

Jessica didn't mention weight gain, but when asked the initial question: "When did your weight go up?" her response was, "I've always been big," identifying with her father. Her family gave her the message that this was normal for her. When she was asked about the nature of her social relationships in relation to her weight, she described memories of her family and their decisions about food choices. Her specific memory was that of being cared for with food, her parents' determination to get her healthy again when she was sick; she did not recall any attempts at weight loss when she was a child and she reinforced her earlier body image messages from her family ("you are who you are as a child"). Then during puberty, Jessica described herself as heavy but noted growing taller and growing out of her "baby fat." She recalled being encouraged to be physically active and not thinking about her weight during those years. In contrast to findings from epidemiologic data, puberty was not a time remembered for a weight increase for any of the women interviewed. Furthermore, two of the women who described being heavy as children recalled having lost some of their earlier body weight when they grew taller at this time in life.

***Story Point Two: Early adulthood; concerns about health, new relationships, multiple roles and life accomplishments.***

I recall gaining a lot of weight when I quit smoking; I had smoked since starting college. Then, my aunt was diagnosed with a lung disease; she was a very heavy smoker. I saw her being put on oxygen and strapped to this machine! I thought, "I am not going to let this happen to me"... I joined a quit smoking class at work. Then, my weight really started going up; my

clothes didn't fit anymore. I decided that I had to do something about this [weight gain]. I joined a women's fitness center and went to an aerobics class at a gym near my house; and lost some weight. It was then that I learned how to cook; I started preparing my own meals for the first time in my life. Before that, my mom always cooked for me. I met my husband Harry and we started dating; and eating all of the time! I put on some weight. My husband is a big guy; he has always struggled with his weight, too. My [girl] friend and her boyfriend lived near us and both were heavy as well. Often we got together and we went out to eat. I was surrounded by people who were, like - you know. We all know it [weight] matters but "we're happy - fine" - that kind of thinking. So, it was not like it [weighing too much] was on my mind all of the time.

Later, I decided to go back to school to get my master's degree, and I was working part time. Between working and studying, I wasn't exercising much - my weight shot up! A friend who was attending school with me suggested we try a weight loss program. When we walked in for the first time, a person in charge weighed us - in front of the room with all those people watching! That was embarrassing! I felt ashamed! The program involved a lot of counting and measuring - everything that goes into the mouth. I lost about 10 pounds; then stopped [that program]. [I think] that happened because I was so busy with school and work the thought of constantly writing down everything I ate wasn't for me. I gained more weight; in fact, was heavier than when I started the diet about 12 months earlier.

Immediately after graduating with my master's degree, I got pregnant; these were two wonderful things, and I remember this being a great time in my life. I remember that I gained a lot of weight with the pregnancy; I had read about it and knew that I should only gain so much weight, but I figured I could do something about it. After my daughter, Penny was born, I went back to work; that and adjusting to motherhood was too stressful! I told myself, "I need to eat for

more energy” and had a milkshake every evening. My weight went up again. Then, I started taking daily walks in the neighborhood; the weight went down, and I was feeling better.

***Discussion: Story Point Two***

The first time Jessica described a time of significant weight gain was when she quit smoking. This theme of change in physical health is relevant to findings that smoking cessation has been associated with weight gain (Flegel, Troiano, Pamuk, Kuczmarski, & Campbell, 1995), but not all who quit smoking gain weight (John et al., 2005).

Jessica’s story reveals eating patterns associated with changing roles and relationships. Jessica described that she gained weight when she met her husband and was eating out with him and their friends. A simultaneous change in her role and environment occurred when she took on the role of being a student again, attending graduate school while working part time. At this time, she described not being physically active and gaining weight. She joined a weight loss program with a friend and described her thoughts about the program, the difficulty that she had with being weighed in front of the class, and the measurement of everything that she ate. It didn’t work for her, and she described gaining more weight after being in the program. Jessica’s memory of this time underscores an aspect of dieting that can have negative implications for weight management. Dieting has been shown to contribute to chronic psychological stress and cortisol production (Bacon, 2011), as well as further overeating (Wardle, Steptoe, Oliver, & Lipsey, 2000) and weight cycling (recurring weight loss followed by gain) (National Task Force on the Prevention and Treatment of Obesity, 1994).

Jessica then graduated and became pregnant, which she described as being a great time in her life. Nonetheless, she recalled the stress of her adjustment to motherhood and return to work,

and she described drinking milkshakes (a highly palatable, energy dense food) for “extra energy.” This recollection is relevant to findings that women report more eating in response to stress than do men (Zellner et al., 2006) and that psychosocial stress is associated with unhealthy coping strategies, such as overeating and a preference for high-fat, high-calorie foods (Adam & Epel, 2007; Zellner et al., 2006).

This time in her life Jessica remembered her accomplishments as significant, many of which she described as positive life events. She described her decision to take care of herself and to quit smoking; she described meeting her husband, their friendships, her educational achievements, and becoming a mother. This positive dimension of her recollections underscores the importance in story theory of “what matters most” to the storyteller. Although the research question related specifically to the topic of weight gain, it is noteworthy that what mattered most to Jessica was not her weight but establishing relationships and the accomplishments during this time of her life.

In story point one, Jessica had recalled normalizing messages about her body from her family during childhood and adolescence; the internalization of these messages is revealed at story point two in her recollection that weight was not a great concern for her during the accomplishments of her young adulthood. This feature of Jessica’s story is relevant to literature on body image. Body image is a culturally bound phenomenon with increased preference for low body weight in Western cultures (Furnham, Alibhai, Furnham, & Alibhai, 1983). Societal influences including the media have an impact on women’s body image dissatisfaction across the lifespan (Bedford & Johnson, 2006). Although it wasn’t specifically explored in the interviews, Jessica’s account may reflect the conflict between normalizing messages that she received from



her family in early life and the cultural ideals associating health and thinness that appear to be manifest in her eventual dieting and concerns with weight.

***Story Point Three: Moving and adapting to new environments, roles and routines.***

A few years later my husband got transferred to a new job; then we moved. Immediately, he wanted to do what was necessary to get promoted, working 12-hour days. So we weren't eating dinner together as a family. I had been in the habit walking but the new neighborhood didn't have sidewalks and we had to drive everywhere. I also started a new job. I was always hungry at work and there was always food in the break room; I would have a little bite here and there; later I would have more of whatever was there. At that time, my daughter Penny started school. I would pick her up after school; she would be starving, and I was always hungry. We had an after-school routine; drive somewhere for a snack - Coke, French-fries...something. I was mostly eating out and the weight was going up again...

I enjoyed being with my daughter and her friends; involved in their activities. Having kids around... kept me feeling young. All of that kept me busy. Then I thought, "Maybe I'm too busy?" I found a park located near my house and started walking again with friends and feeling good. I don't recall if I lost weight, but I did stop gaining during that time.

***Discussion: Story Point Three***

At this story point, which occurs in Jessica's adulthood, the theme of changing environments and eating patterns in response to multiple and/or changing roles and relationships is particularly evident. She described some of the consequences of the relocation due to her husband's work, including not eating as a family and not having sidewalks in her new neighborhood, which impacted her walking routine. In addition, she started a new job and her

daughter started school. During these multiple and simultaneous changes in her environment and her roles/relationships (work and parenting) Jessica did not describe stress explicitly. In recalling those life transitions, she described her food intake (Coke and French fries) which are high-fat, high sugar, calorie-dense foods. Again, during this part of Jessica's story she referred to what is important in her life, namely the fact of being a parent, enjoying her daughter and her friends.

***Story Point Four: Becoming a caretaker and changing emotional and physical health.***

The next time that my weight went up was when my daughter Penny went away to college and wasn't home anymore; and at that same time, my mother broke her hip and needed to move in with us. My sister lived across the country [in another state]. Harry helped me but his job kept him away quite a bit. We decided that I would only work part time in order to care for her. I felt the need to make sure that she was entertained; taking care of her around the clock, laying out clean clothes, planning the meals - breakfast, lunch...those kinds of things. This was a very difficult time for me, for all of us. I wasn't thinking about myself - I just forgot about myself. If I felt hungry I ate; I would also eat just because I knew I was going to get hungry. I had to eat in between the times when I made sure my mom was being taken care of and that Harry had something to eat. I wasn't getting enough sleep at that time either. This situation with my mother lasted about a year; my weight really went up during that time. I knew that I had to do something.

A neighbor invited me to join an exercise class. I thought I'd try it because exercise worked for me in the past. Shortly after I started the class my back really started bothering me. I thought, "Why do I hurt so much? I must really be out of shape". I couldn't exercise like I had in the past. I went to the doctor and he sent me to a nutritionist. She [the nutritionist] had me

putting peanuts, raisins, and stuff, in snack packs. But, the “Ah-ha!” moment didn’t come. I started to get concerned, and I started making excuses, like, “Ok, I’ve gained so much weight; now I want to start smoking again”. I needed something as a crutch; needed something to do with that extra, “whatever it was”. I was mad at somebody but not sure who; I couldn’t be the problem. So I went back to a nutritionist and put the responsibility on her to get me under control. Here I was, not accepting responsibility for myself. So, I got angry with the nutritionist because the [weight loss] wasn’t working. I thought maybe I needed something more than a nutritionist. Maybe I needed a shrink. I didn’t know what the problem was, but I thought something was missing, you know. I went back to the doctor; he put me on an antidepressant medication. My mood was better, but my weight went up. I knew that I had to do something; I wanted to be healthy and feel good. I didn’t want to live the last 12 or 15 years of my life in poor health.

During this emotional turmoil someone called and invited me to attend this weight loss program. My comments were: “I am not ready. I don’t have time for this right now”. And, she was like...saying, “You are the right person”. That’s how I learned about the weight loss program. Someone called me and told me that I qualified, that I was a perfect candidate for the program.

***Discussion: Story Point Four***

Jessica’s daughter left for college, and she became the primary caregiver for her mother who had broken her hip. This was complicated by limited social support. Again, Jessica recalled being hungry and eating during this time of changing roles in relation to her family and her career (a switch to part-time work). She also described not getting adequate sleep. This memory supports findings for an association between shorter sleep duration and increased body mass

index (St. Onge et al., 2010) and findings related to sleep and its influence on metabolism and appetite regulation (Morselli, Leproult, Balbo, & Spiegel, 2010).

In her attempt to manage weight by joining an exercise class with her neighbor she experienced back pain; her doctor, focusing on her weight, sent her to a nutritionist, whom she described as not helping her with weight loss. Jessica expressed being angry, not knowing who she was angry at, and recognized that she was transferring this anger onto the nutritionist, externalizing her problem. It is perhaps noteworthy that this occurred at a time when the mothering role in relation to her mother was reversed. Although she expressed that she was angry, she displayed insight by identifying the issue and seeking help. She went back to her doctor and was put on an antidepressant medication, which she described as contributing to further weight gain.

This story point highlights Jessica needing to adapt to multiple and simultaneous transitions, which included a significant impact on her own physical and emotional health. Jessica's participation in an exercise class at this time in her life, manifesting her back pain, is relevant to the fact that often the cause of back pain, particularly in obese persons, is the result of osteoarthritis; persons with arthritis may avoid exercise because of joint symptoms and the fear of future exacerbations of pain (Hootman, Macera, Ham, Helmick, & Sniezek, 2003). Also, chronic back pain is often the result of physical deconditioning, and limiting physical activity can potentiate the issue (Covington, 2007). It is noteworthy as well that Jessica's account appears to reflect findings that pain is associated with depressed mood (Shi, Hooten, Roberts, & Warner, 2010). Antidepressant therapy, such as use of selective serotonin reuptake inhibitors, has been shown to produce short-term weight loss but long-term weight gain (Schwartz, Nihalani, Jindal, Virk, & Jones, 2004).

The fourth story point raises consideration of allostasis, which is a model that explains how stress may result in disease (McEwen & Seeman, 1999). Both predictable high-demand life stages and unpredictable challenges that require biobehavioral adjustments are considered in this approach. Allostasis is the process of achieving and maintaining stability through change in one's internal environment. It is a modification of the homeostasis concept, which considers maintenance of physiological states within set points. "As with homeostasis, allostasis is the process of achieving and maintaining stability in the internal environment. The difference is the recognition in the allostasis model that stability is achieved through change; physiological and behavioral states change in response to external environmental as well as developmental perturbations (Landys, Ramenofsky, & Wingfield, 2006); "these changes lead to a state of adaptation outside of the normal physiological ranges" (Groër, 2010, p. 184). "Allostasis allows organisms to be sufficiently flexible to respond to changing conditions and developmental stages" (Gröer et al., 2010, p. 184). When demands continue, they may produce allostatic load, the persistence of which over time may cause cumulative effects that contribute to disease and senescence (Stewart, 2006).

Jessica's story reveals compounding contextual issues occurring in her life. Nonetheless, she continued to seek solutions to her weight and even considered going back to her earlier habit of smoking in order to manage her weight. From an allostasis perspective, both smoking and eating behaviors (particularly highly palatable foods containing energy dense fat and sugar) activate the release of endogenous opioids, which act in part as a powerful defense mechanism against the detrimental effects of stress (Drolet et al., 2001). Although not ideal, because these coping adaptations contribute to negative health outcomes, in the short term they may help ward off the negative effects of unmanaged stress.

Also noteworthy in Jessica's story is the fact that although she recalled her contextualized life events as contributing to weight gain, they were not described as being addressed by the health care professionals to whom she went to for help. In other words, Jessica's perception was that her health was explored neither in the context of these psychosocial life events nor in terms of her emotional reaction to them; yet these were clearly significant to Jessica in relation to her weight gain.

From this recreated synthesized story, it is possible to note that the preponderance of critical moments in Jessica's story represent life changes or transitional life events, which resulted in corresponding changes in eating and activity that led to weight gain. Her story is a representation of the most frequent pattern of weight gain as recollected by the women in this study: changes in eating and physical activity seemed to occur during multiple and/or simultaneous transitional life experiences, most often during adulthood. The results of this study refine the approach to critical periods for the development of obesity. Instead of limiting the discussion to physiologic developmental changes, as has been emphasized in previous approaches (Allan, 1998a), the findings suggest that *transitional experiences* in women's lives - physiological, developmental, relational, or environmental - were critical in that they presented risk for behavior changes related to eating and physical activity. This research reveals that transitional experiences can be considered critical for the development of risk factors that contribute to weight gain and subsequent obesity.

## **Nursing Implications**

Use of story, that is to say, collecting narratives from people about experiences surrounding their health, can be used to examine seemingly paradoxical dimensions of a person's life. Revealing personal information using this form of interpretative research involves the active engagement of the investigator who "creates dialog between practical concerns and lived experience through engaged reasoning and imaginative dwelling in the participant's worlds" (Benner, 1994, p. 99). Use of story in this manner is different from what Taylor (1993) calls 'snapshot reasoning'. This type of reasoning (implemented in scientific experiments involving scientific judgments) attempts to capture all relevant criteria and essential characteristics at a particular point in time. "It freezes situations in time, abstracts them, and judges them according to the same fixed formal criteria" (Benner, 2010 p. 116). Instead, the use of story allows for an exploration of persons' lives in context and can assist in understanding individuals' priorities and decisions about health management strategies. Jessica's story, consolidating the stories of the women interviewed for this study, may shed new light regarding women and weight gain.

Nonetheless, it is particularly the process of the middle range application of story theory, as a usable structure to assess a person's health in the context of their unique life experiences that this study especially aims to highlight. Scientific judgments are useful and relevant to particular contexts and are integrated into a narrative approach. Research data presented using a narrative structure offers comprehensive and contextualized results. As story is a universally shared human phenomenon it offers a ground from which dialogue can be generated within and amongst disciplinary perspectives. The findings from this study focusing on the stories from women who are overweight or obese have implications for nursing research, education, practice, and policy.

Each of these areas will be examined in the next section.

## **Research**

Research on the prevention and management of obesity in primary care is needed for a better understanding of the clinical effectiveness of weight management strategies provided by primary care providers (Tsai & Wadden, 2009). The findings in this study offer information about critical periods for the development of weight gain. Future research using story theory to investigate protective factors, in other words, contexts of healthy weight management, is another approach to investigation of health and can serve to assist in strategies to promote health and weight management across the lifespan.

Story theory was used in this study and further developed the methodology involved in the collection and analysis of qualitative data obtained through personal interviews. Story theory, as a methodology, needs further refinement to differentiate it from other qualitative methods, specifically phenomenology and narrative inquiry. Additional studies are needed to refine story theory techniques, particularly explicating interpretive analytic strategies used in re-constructing stories to reveal findings. Findings from this research can add to this dimension of the theory. Likewise, findings from studies using the story approach need to be disseminated and integrative reviews undertaken in order to refine the processes of story theory and create a community of scholars who apply story theory in research and practice. Another approach to the application of story theory is that health stories are guided by an emphasis on *what matters most* to the storyteller. Overtime, collective stories with this intent could allow for expansion of the meaning(s) and theme(s) relative to weight gain or other health challenges faced by individuals.



Outcomes of story theory as a therapeutic clinical intervention need to be further explored as well.

## **Education**

While stories and storytelling have a long and rich tradition, health professionals for the most part are not familiar with the purpose or process. Storytelling techniques, for example, could be incorporated in health assessment courses and instruction on effective communication techniques. Also, the use of stories can be integrated into educating students, providing evidence related to health care in context of the persons' lived experiences. At more advanced educational levels, this approach could be included in research methodology courses as well as a clinical intervention when designing patient-centered care.

## **Practice**

Story theory has potential for practitioners who provide direct care to clients with chronic health conditions. Story theory provides a systematic approach to learning about an individual's perspective about the condition and also implements a patient-centered approach to communication. For instance, during an office visit, story theory could be used as an assessment technique to learn about the patients' successes and challenges in managing weight and simultaneously serve as a therapeutic intervention strategy. In this study, at the end of the interview when the researcher reviewed the story, several women noted a pattern of a context such as multiple stressful events or their behavioral pattern in their story. Stories and narratives in clinical practice can assist both the patient and a clinician to quantify the behaviors and outcomes of risk-incurring situational life events, for instance changing roles that could include

assumption of parental caretaking responsibilities, parenting responsibilities associated with developmental changes in children, relocation, and employment. Such contextual information can assist in modifying coping strategies, including an individual's eating and physical activities.

## **Policy**

The evidence from this research suggests that for women, weight increased each year from 20 years to 59 years of age. Throughout adulthood, individuals must contend with a variety of situational events that include employment and family responsibilities, along with dynamic interpersonal relationships. In addition, adulthood is the time women's lives when they may become pregnant and go through menopause later in life, both normal physiologic developments that co-exist within their other adult life experiences. There has been recent public health attention on the issue of childhood obesity (White House Task Force, 2010). While important, federal and state policies need to emphasize the promotion of health and weight management for persons throughout the life course. The United States Preventive Services Task Force (2003) recommends that clinicians screen all adult patients for obesity. For those who are overweight, this document recommends offering intensive counseling and behavioral interventions to promote sustained weight loss for obese adults. While this provides a solid beginning point, evidence-based policies that include practice recommendations are needed that address how to include individuals' preferences that are understood from their unique contexts that assist in the prevention of excessive weight gain and its associated health complications.

## **Limitations**

Limitations in this study included the fact that the participants lived in a particular geographical area; other populations residing in other regions of the nation might have different weight-related experiences. Also, all of the women participated in a formal weight loss and exercise program that included health-promoting education on nutrition, physical activity promotion, and weight loss. Thus, participants' recollections that were elicited for this study could have been influenced by content learned while enrolled in the program. Finally, the researcher's personal experiences and novice skills with qualitative research could have influenced both the depth and content of the interviews as well as the content analysis of the data. Further interviews with participants and enhanced experience on the part of the researcher might contribute to variations in the findings.

## **Summary**

In summary, this article presented an overview of the methodology and findings from an exploratory study involving interviews from 10 female participants who had progressed through the menopausal transition and who had been obese and sedentary. A life course framework and story theory guided the methodology and data analysis in order to learn about the women's perceptions of their experiences with weight changes. The findings suggest that *transitional experiences* in women's lives - physiological, developmental, relational, or environmental - were critical periods that presented risks for behavior changes related to eating and physical activity. Story plot offers a structure to integrate the complex realities of women's lives into the assessment of weight and its associated health risks. The information obtained using a story plot can be implemented in order to provide individualized, patient-centered lifestyle

recommendations for the prevention and management of unhealthy weight gain. Story theory offers an approach to interpretive research by revealing contextualized data in a narrative structure which can serve to promote dialogue within the nursing and interdisciplinary communities. Future research endeavors can be conducted in order to refine the processes and outcomes of the use of story in health care applications for weight and health.

**Table 1: Intrapersonal, Interpersonal, Community Categories: Select Descriptors & Themes**

<i>Category</i>	<i>Descriptors</i>	<i>Themes</i>
Intrapersonal	<p>Tobacco cessation</p> <p>Pregnancy</p> <p>Back pain-decreased activity-depressed mood</p> <p>Antidepressant therapy</p> <p>Exemplars provided in Table 2</p>	<p>Changes associated with emotional and physical health</p>
Interpersonal	<p>New or excessive work schedules</p> <p>Change in maternal role</p> <p>Change in relationships (divorce/new relationship)</p> <p>Caretaking</p> <p>Exemplars provided in Table 3</p>	<p>Eating patterns associated with multiple and/or changing roles/relationships</p>
Community	<p>Relocation</p> <p>Exemplar provided in Table 4</p>	<p>Changing environments</p>

**Table 2: Content Analysis: Intrapersonal Category: Select Descriptors, Theme, and Exemplars**

<i>Descriptors</i>	<i>Theme</i>	<i>Exemplars</i>
Tobacco cessation	Changes in emotional and physical health	<p>The next time that [gained weight] was when I quit smoking. It wasn't until I gained more than 30 pounds that I realized that I had a problem and I thought maybe I should go back to smoking to get the weight off.-<i>personal communication Adeline</i></p> <p>Then it was an uphill weight gain from there, a lot of things happened, somewhere in there I quit smoking.... It [weight] really spiked then.-<i>personal communication Elizabeth</i></p>
Pregnancy		<p>I gained a lot of weight with the pregnancy I had read that I should only gain so much weight; I thought whoa, but it didn't bother me, I figured I could do something about it.-<i>personal communication Gabby</i></p>
Back pain- decreased physical activity-depressed mood- antidepressant therapy		<p>I was always doing some kind of exercise but when my back started really bothering me I had to quit and from there my weight went up again and that was getting to be just depressing.-<i>personal communication Bernadette</i></p> <p>I think that somewhere in there my doctor put me on Zoloft and that caused one of those surges in weight gain.-<i>personal communication Bernadette</i></p>

**Table 3: Content Analysis: Interpersonal Category: Select Descriptors, Theme, and Exemplars**

<i>Descriptor</i>	<i>Theme</i>	<i>Exemplar</i>
New or excessive work schedules	Eating patterns associated with multiple and/or new/changing roles/relationships	<p>I started working [states workplace] and it's like every day there is food here... there's always muffins there's always... sausage and biscuits you know and everything here, donuts...even though there's always salad around there's also barbeque chicken you know. It's easy to eat here all day long, you catch yourself, and say ok I'll just have a bite or just have a pinch... [weight] comes on pretty quickly this way- <i>personal communication Diana</i></p> <p>I spent like 6 years in one job, my background was with county clubs I had lunches around and I didn't eat the healthiest. I was doing 80 hours a week I had 3 jobs at one point, I had food on the job whenever I wanted basically- <i>personal communication Joy</i></p> <p>we started a little business...I would spend sometimes 60 – 70 hours a week working, so the family life sort of fell apart, when you are self employed you don't count the hours necessarily...you don't eat well you don't prepare food well-<i>personal communication Claire</i></p>
Change in maternal role		<p>The first time [of weight gain] was after I had my daughter and I had been back to work... and I told myself that <b><i>I needed a milkshake for energy-</i></b> <i>personal communication Helen</i></p> <p>I went to work part time; I had always been [a] stay at home [mother] so that was a big change. I think at that time was <b><i>when we started eating more...</i></b> That was when my daughter was in school so you know... I would work during the time she was in school and then when she would get out [of school]...we'd run by a drive through to get a snack...but that really was when [we] started <b><i>eating out</i></b> the most and that's when it you know it [weight] just started coming on-<i>personal communication Diana</i></p>

Descriptor	Theme	Exemplar
Change in maternal role	Eating patterns associated with multiple and/or new/changing roles/relationships	My daughter, well she graduated from college... she was gone, and so my husband and I practically ate out every meal...because you know it was so much easier for us after work just to <b>go out to eat</b> , I really think that eating out you know is what has done it- <i>personal communication Diana</i>
Change in relationship (divorce/new relationship)		<b>Isabelle</b> describes being in a new relationship [after a divorce] in which she was eating more and gained weight... When we met [she and her new husband] I looked skinnier, not as skinny as I was all my life, but when I started going out with him, <b>eating all of the time</b> I cannot lose the weight- <i>personal communication Isabelle</i>
Caretaking		When he [husband] was on crutches he couldn't cook anymore. He was on crutches for over 3 months. It's hard to cook for him and not <b>eat it</b> - <i>personal communication Bernadette</i>  I had to take time off of work and...um... trying to take care of him [her father]...I was the caregiver for him, trying to take care of my house, trying to take care of my husband, you know and stuff like that, and trying to keep some sort of sanity you know that I could...It was difficult, there was no way, I wasn't thinking about myself, I just forgot about myself, <b>I ate, if I felt hungry I ate or I would eat because I knew I was going to get hungry</b> , I had to do it in between times [of caretaking] I made sure my dad was being taken care of and that my husband had something to eat- <i>personal communication Gabby</i>  I had two [children] in diapers, which you'd think you would lose weight but you don't... it's a lot of sitting and feeding babies and when you're feeding babies <b>you're eating</b> . I was working full time and I had these three kids and it was just, no time to think of anything besides working- <i>personal communication Frances</i>



**Table 4: Content Analysis: Community Category: Select Descriptor, Theme, and Exemplar**

<i>Descriptor</i>	<i>Theme</i>	<i>Exemplar</i>
Relocation	Changing environments	I realized that after we moved [from New York] to Georgia how inactive we were because we weren't walking anywhere. Any time I left my house I was backing out of the garage and driving [back] into the garage ...we didn't have sidewalks we were driving everywhere.- <i>personal communication Helen</i>

## References

- Adam, T. C., & Epel, E. S. (2007). Stress, eating and the reward system. *Physiology & Behavior*, 9(4), 449-458.
- Allan, J. (1998a). New directions for the study of overweight. (Weight Research Across the Lifespan). (Editorial). *Western Journal of Nursing Research*, 20(1), 7.
- Allan, J. (1998b). Explanatory models of overweight among African American, Euro-American, and Mexican American Women. (Weight Research Across the Life Span). *Western Journal of Nursing Research*, 20(1), 45-67.
- Bacon, L., & Aphramor, L. (2011). Weight science: Evaluating the evidence for a paradigm shift. *Nutrition Journal*, 10(9), 1-13.
- Bedford, J. L., & Johnson, C. S. (2006). Societal influences on body image dissatisfaction in younger and older women. *Journal of Women & Aging*, 18(1), 41-55.
- Benner, P. (1994). The tradition and skill of interpretive phenomenology in studying health, illness, and caring practices. In P. Benner (Ed.), *Interpretive phenomenology: Embodiment, caring, and ethics in health and illness* (pp. 99-126). Thousand Oaks, CA: Sage.
- Berney, L. R., & Blane, D. B. (1997). Collecting retrospective data: Accuracy of recall after 50 years judged against historical records. *Social Science & Medicine*, 45(10), 1519-1525.
- Bryczynski, K. A., & Benner, P. (2010). The living tradition of interpretive phenomenology. In Chan, G.K., Bryczynski, K.A., Malone, R. E., Benner, P. (Eds.). *Interpretive phenomenology in health care research*. Indianapolis, IN: Sigma Theta Tau International.

- Drolet, G., Dumont, E.C., Gosselin, I., Kinkead, R., Laforest, S., Trottier, J.F. (2001). Role of endogenous opioid system in the regulation of the stress response. *Progress in Neuro Psychopharmacology and Biological Psychiatry*, 25 (4), 729-741.
- Chung, W. K., & Leibel, R. L. (2008). Considerations regarding the genetics of obesity. *Obesity*, 16, S33-S39.
- Covington, E. (2007). Chronic pain management in spine disorders. *Neurologic Clinics*, 25, 539-566.
- Devine, C.M., Bove, C.F., & Olson, C.M. (2000). Continuity and change in women's weight orientations and lifestyle practices through pregnancy and the postpartum period: The influence of life course trajectories and transitional events. *Social Science & Medicine*, 50, 567-582.
- Eckel, R. H., York, D. A., Rössner, S., Hubbard, V., Caterson, I., Sachiki, T., ... Blair, S.N. (2004). Prevention conference VII: Obesity, a worldwide epidemic related to heart disease and stroke: executive summary. *Circulation*, 110, 2968-2975.
- Flegal, K.M., Carroll, M.D., Ogden, C.L., & Curtin, L.R. (2010). Prevalence and trends in obesity among US adults, 1999-2008. *Journal of the American Medical Association*, 303(3), 235-241.
- Flegal, K. M., Troiano, R. P., Pamuk, E. R., Kuczmarski, R. J., & Campbell, S. M. (1995). The influence of smoking cessation on the prevalence of overweight in the United States. *New England Journal of Medicine*, 333(18), 1165-1170.
- Furnham, A., Alibhai, N., Furnham, A., & Alibhai, N. (1983). Cross-cultural differences in the perception of female body shapes. *Psychological Medicine*, 13(4), 829-837.

- Grant, P.G., & Boersma, H. (2005). Making sense of being fat: A hermeneutic analysis of adults' explanations for obesity. *Counseling & Psychotherapy Research, 5*(3), 212-220.
- Grbich, C. (1999). *Qualitative research in health: An introduction*. London; Thousand Oaks, CA: Sage Publications.
- Gröer, M. and the women's health research group at the University of South Florida (2010). Allostasis: A model for women's health. In Kendell-Tackett, K. (Ed.) *The Psychoneuroimmunology of Chronic Disease*. American Psychological Association: Washington, DC.
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277-1288.
- John, U., Meyer, C., Rumpf, H.J., Schumann, A., Dilling, H., Hapke, U. (2005). No considerable long-term weight gain after smoking cessation: Evidence from a prospective study. *European Journal of Cancer Prevention, 14*(3), 289-295.
- Johnston, O., Reilly, J., & Kremer, J. (2004). Women's experiences of appearance control across the lifespan: Challenging accepted wisdom. *Journal of Health Psychology, 9*(3), 397-410.
- Kopelman, P. (2007). Health risks associated with overweight and obesity. *Obesity Reviews, 8* (suppl 1.), 13-17.
- Landys, M., Ramenofsky, M., & Wingfield, J. C. (2006). Actions of glucocorticoids at a seasonal baseline as compared to stress-related levels in the regulation of periodic life processes. *General and Comparative Endocrinology, 148*, 132-149.
- Liehr, P., & Smith, M.J. (2007). Story inquiry: A method for research. *Archives of Psychiatric Nursing, 21*(2), 120-121.

- McCrary, M.A., Suen, V.M., & Roberts, S.B. (2002). Biobehavioral influences on energy intake and adult weight gain. *The Journal of Nutrition*, 132(12), 3830S-3834S.
- McEwen, B., & Seeman, T. (1999). Protective and damaging effects of mediators of stress: Elaborating and testing the concepts of allostasis and allostatic load. *Annals of the New York Academy of Sciences*, 896, 30-47.
- Mann, T., Tomiyama, A. J., Westling, E., Lew, A. M., Samuels, B., & Chatman, J. (2007). Medicare's search for effective obesity treatments - Diets are not the answer. *American Psychologist*, 62(3), 220-233.
- Mays, N., & Pope, C. (2000). Qualitative research in health care: Assessing quality in qualitative research. *British Medical Journal*, 320, 50-52.
- Morselli, L., Leproult, R., Balbo, M. & Spiegel, K. (2010). Role of sleep duration in the regulation of glucose metabolism and appetite. *Best Practice & Research Clinical Endocrinology & Metabolism*, 24, 687-702.
- Muennig, P., Lubetkin, E., Jia, H. M., & Franks, P. (2006). Gender and the burden of disease attributable to obesity. *American Journal of Public Health*, 96(9), 1662-1668.
- Munhall, P. L. (1994). *Qualitative research. Proposals and reports: A guide*. National League for Nursing.
- Must, A., Phillips, S. M., Naumova, E. N., Blum, M., Harris, S., Dawson-Hughes, B., & Rand, W. M. (2002). Recall of early menstrual history and menarcheal body size: After 30 years, how well do women remember? *American Journal of Epidemiology*, 155(7), 672-679.
- National Task Force on the Prevention and Treatment of Obesity (1994). Weight Cycling. *JAMA*, 272(15), 1196-1202.

- Scott, K.M., Bruffaerts, R., Simon, G.E., Alonso, J., Angermeyer, M., de Girolamo, G., ... Von Korff, M. (2008). Obesity and mental disorders in the general population: Results from the world mental health surveys. *International Journal of Obesity*, 32, 192-200.
- Smith, M. J., & Liehr, P. R. (2008). Story theory. In M. J. Smith & P. R. Liehr (Eds.), *Middle range theory for nursing* (2nd ed.). New York, NY: Springer Publishing Company.
- Spiegelman, B. M., & Flier, J. S. (2001). Obesity and the regulation of energy balance. *Cell*, 104(4), 531-543.
- Stewart, J. (2006). The detrimental effects of allostasis. Allostatic load as a measure of cumulative stress. *Journal of Physiological Anthropology*, 25, 133-145.
- St-Onge, M. P., Perumean-Chaney, S., Desmond, R., Lewis, C. E., Yan, L. L., Person, S. D., & Allison, D.B. (2010). Gender differences in the association between sleep duration and body composition: The cardia study. *International Journal of Endocrinology*, 2010, 1-8.
- Strychar, I., Lavoie, M.E., Messier, L., Karelis, A.D., Doucet, □, Prud'Homme, D., ... Rabasa-Lhoret, R. (2009). Anthropometric, metabolic, psychosocial, and dietary characteristics of overweight/obese postmenopausal women with a history of weight cycling: A MONET (Montreal Ottawa New Emerging Team) study. *Journal of the American Dietetic Association*, 109(4), 718-724.
- Taylor, c. (1993). Explanation and practical reason. In M. Nussbaum & A. Sen (Eds.), *The quality of life* (pp. 208-231). Oxford: Clarendon.
- Throsby, K. (2007). "How could you let yourself get like that?": Stories of the origins of obesity in accounts of weight loss surgery. *Social Science & Medicine*, 65, 1561-1571.

- Tsai, A. G., & Wadden, T. A. (2009). Treatment of obesity in primary care practice in the United States: A systematic review. *Journal of General Internal Medicine, 24*(9), 1073-1079.
- U.S. Preventive Services Task Force. (2003). *Screening and interventions for overweight and obesity in adults*. (AHRQ Publication No. 290-97-0011, Task No. 3). Rockville, MD: Author.
- Waugh, P. (1992). *Postmodernism*. New York, NY: Routledge, Chapman and Hall.
- Wardle, J., Steptoe, A., Oliver, G., & Lipsey, Z. (2000). Stress dietary restraint and food intake. *Journal of Psychosomatic Research, 48*, 195-202.
- Weiss, E.C., Galuska, D.A., Kettel Kahn, L., & Serdula, M.K. (2006). Weight-control practices among U.S. adults 2001-2002. *American Journal of Preventive Medicine, 31*(1), 18-24.
- White House Task Force on Childhood Obesity. (2010). Solving the Problem of Childhood Obesity Within a Generation. retrieved from:  
[http://www.letsmove.gov/sites/letsmove.gov/files/TaskForce\\_on\\_Childhood\\_Obesity\\_May2010\\_FullReport.pdf](http://www.letsmove.gov/sites/letsmove.gov/files/TaskForce_on_Childhood_Obesity_May2010_FullReport.pdf).
- Woodward-Lopez, G., Ritchie, L. D., Gernstien, D. E., & Crawford, P. B. (2006). *Critical periods*. In *Obesity: Dietary and developmental influences*. Boca Raton, FL: Taylor & Francis.
- World Health Organization Consultation. (2000). *Obesity: Preventing and Managing the Global Epidemic*. (Technical Report Series, 894.)
- Zellner, D. A., Loaiza, S., Gonzalez, Z., Pita, J., Morales, J., Pecora, D., et al. (2006). Food selection changes under stress. *Physiology & Behavior, 87*(4), 789-793.





**APPENDIX A: IRB APPROVAL LETTER**



Office of Research & Commercialization

June 1, 2006

Karen Dennis, Ph.D., RN, FAAN and  
Allison Edmonds, MSN, ARNP  
University of Central Florida  
Weight Loss & Exercise Study  
Orlando, FL 32816-2213

Dear Dr. Dennis and Ms. Edmonds:

With reference to your protocol #06-3531 entitled, "**The stories of body weight trajectories among overweight and previously overweight postmenopausal women,**" I am enclosing for your records the approved, expedited document of the UCFIRB Form you had submitted to our office. **This study was approved on 5/31/06. The expiration date will be 5/30/07.** Should there be a need to extend this study, a Continuing Review form must be submitted to the IRB Office for review by the Chairman or full IRB at least one month prior to the expiration date. This is the responsibility of the investigator. **Please notify the IRB office when you have completed this research study.**

Please be advised that this approval is given for one year. Should there be any addendums or administrative changes to the already approved protocol, they must also be submitted to the Board through use of the Addendum/Modification Request form. Changes should not be initiated until written IRB approval is received. Adverse events should be reported to the IRB as they occur.

Should you have any questions, please do not hesitate to call me at 407-823-2901.

Please accept our best wishes for the success of your endeavors.

Cordially,

*Barbara Ward*

Barbara Ward, CIM  
UCF IRB Coordinator  
(FWA00000351 Exp. 5/13/07, IRB00001138)

Copies: IRB File

BW: jm

## **APPENDIX B INFORMED CONSENT**

---

**UNIVERSITY OF CENTRAL FLORIDA  
RESEARCH CONSENT FORM**

**Project Title:** The onset and critical periods of weight gain among overweight and obese postmenopausal women

**Investigators:** Karen E. Dennis, PhD, RN, FAAN      407-823-1823  
Professor, School of Nursing

Allison Edmonds, MSN, ARNP      407-823-1832  
Doctoral Student, School of Nursing

**PURPOSE OF STUDY:**

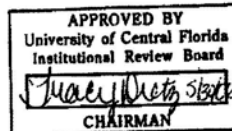
The purpose of this study is to collect and understand the stories of onset and critical periods in body weight gain among overweight and obese postmenopausal women.

**PROCEDURES:**

With your consent to participate in this study, you will be asked to discuss your weight gain experiences with a nurse practitioner. In these discussions, you will be asked to talk about the first time that you realized that you were gaining weight or were over-weight, and about other times during your life that you think weight gain may have increased. These interviews will be conducted face-to-face, and last no more than 15 minutes, probably less. The interview will take place in a quiet and private place that is mutually acceptable to both you and the interviewer. Examples of sites include your office, work conference room, or home; not in a public location such as a coffee shop. During the interview, the nurse practitioner will take hand-written notes and audio-tape the discussion. What you have to say regarding the topic of the study is important to us, and we want to make sure that we don't miss anything that you say, or write it down incorrectly. The audio-tapes will be destroyed in approximately one year, after we have completed the data collection and analysis, and have written the results of this work.

**RISKS / DISCOMFORTS:**

Risks include potential discomfort in talking about weight gain experiences. However, this is not expected to occur since women participating in the Weight Loss & Exercise Study have talked about a multitude of experiences and issues concerning previous weight gain, weight loss, weight re-gain....during that project. However, if at any time you are uncomfortable with your discussion during the interview, it is important for you to let the nurse practitioner know. The interview will be stopped immediately, and the nurse practitioner will ask whether you want to change the current topic, or totally terminate the interview.



**BENEFITS:**

Sometimes just the process of discussing a long-term health condition may help to increase your awareness of the issues contributing to it, and bring you a greater understanding of yourself, others, and environmental circumstances. It may help to make sense of this long-term condition, and have a positive effect on how you proceed in light of that.

**COSTS/COMPENSATION:**

There is no compensation for participating in this project.

**CONFIDENTIALITY:**

As the information is being collected, the research team will know some of the information (comments) that come from you. However, once collected and entered into the computer, all information will be coded with a number, not your name, and the coding system will be kept in a locked file in the investigator's office. Therefore after the information is collected and entered into the computer, the research team won't know which individual information came from which person. Only the investigators will have working access to the coded information, but not the code numbers. However, according to federal regulations, study records can be reviewed by federal agencies such as the Food and Drug Administration, National Institutes of Health, and the Institutional Review Board. Your name will not be used in any reports or publications. You will be told of any significant new findings that develop during the study.

**RIGHT TO WITHDRAW:**

Participation in this study is voluntary. You are not obligated to participate in this research. You are free to withdraw your consent at any time without penalty. For students, staff, or faculty, your academic standing or employment status will not be affected by your decision to participate or not participate in the study.

**STATE LIMITED LIABILITY STATEMENT**

If you believe you have been injured during participation in this research project, you may file a claim with UCF Environmental Health & Safety, Risk and Insurance Office, P.O. Box 163500, Orlando, FL 32816-3500 (407) 823-6300. The University of Central Florida is an agency of the State of Florida for purposes of sovereign immunity and the university's and the state's liability for personal injury or property damage is extremely limited under Florida law. Accordingly, the university's and the state's ability to compensate you for any personal injury or property damage suffered during this research project is very limited.

APPROVED BY  
University of Central Florida  
Institutional Review Board  
*Thany Outh Skelton*  
CHAIRMAN

Information regarding your rights as a research volunteer may be obtained from:

IRB Coordinator  
Institutional Review Board (IRB)  
University of Central Florida (UCF)  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: (407) 823-2901

**SIGNATURES**

\_\_\_\_ I have read this consent form and had it explained to me

\_\_\_\_ I voluntarily agree to participate in this study

\_\_\_\_ I have received a copy of this consent form

\_\_\_\_\_  
Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Investigator

\_\_\_\_\_  
Date

APPROVED BY  
University of Central Florida  
Institutional Review Board  
*Marybeth 5/30/06*  
CHAIRMAN

## **APPENDIX C INTERVIEW GUIDE**

---

*Interview guide*

The questions I am going to ask you are related to the experiences going on in your life with your community, social relationships and thoughts and feelings at the times in your life that you recall gaining weight up until the time that you joined the weight loss and exercise program.

Do you have any questions about the research or the informed consent form?

The first question is: when was the first time in your life that you noticed that you were gaining weight or that your weight may have increased?

Where were you living? What was going on in your community or life at the time? Prompts may include what country were you living in, state, town? Where were you working? You were going to school?

Who were you living with, or who were your close relations at the time?

What were your thoughts and feelings about your weight?

Did you do anything to lose the weight?

When was the next time that you noticed your weight going up, or a marked or notable weight change?

Repeat the following questions for the participant disclosed times of weight gain:

Where were you living? What was going on in your community or life at the time?

Who were you living with, who were your close relations at the time?

What were your thoughts and feelings about your weight?

Did you do anything to lose the weight?

These questions will be asked until the participant mentions the weight gain and the circumstances around this time point leading to the enrolling in the weight loss and exercise program.



## **APPENDIX D CURRICULUM VITAE**

---

**Allison R. Edmonds Poff, PhD, ARNP**

---

University of South Florida College of Nursing  
12901 Bruce B. Downs Boulevard MDC 22  
Tampa, FL 33612-4766

**EDUCATION**

<b>Year</b>	<b>Degree</b>	<b>Institution</b>	<b>Clinical Major</b>	<b>Role Preparation</b>
2011	PhD	University of Central Florida, Orlando, FL	Nursing	Research
1998	MS	University of South Florida, Tampa, FL	Nursing	Clinical
1993	BSN	Florida State University, Tallahassee, FL	Nursing	Clinical

**LICENSURE/CERTIFICATION**

ARNP                      Florida, ARNP 2752922

Family Nurse  
Practitioner              ANCC, 0335568

Family Psychiatric &  
Mental Health Nurse  
Practitioner              ANCC, 2008005442

**EMPLOYMENT**

***ACADEMIC APPOINTMENTS:***

01/03-Present            **Faculty Instructor**, University of South Florida College of Nursing, Tampa, FL  
08/02-12/02              **Adjunct Instructor**, University of South Florida College of Nursing, Tampa, FL  
1/10-Present              **Instructor**, Joint Appointment, University of South Florida College of Medicine, Tampa, FL

***CLINICAL APPOINTMENTS:***

09/00-2/11                **Family Nurse Practitioner**, University of South Florida, College of Medicine, Department of Family Medicine, Tampa, FL  
  
09/00-2/11                **Family Nurse Practitioner**, University of South Florida, College of Medicine, Public Sector Medicine Program, Tampa, FL  
  
4/00-6/00                 **Family Nurse Practitioner/Psychiatric Nurse Practitioner**, Consult Care, Tampa, FL  
  
8/98-4/00                 **Women's/Family Planning Nurse Practitioner**, Women's Health Care, Hillsborough County Health Department, Hillsborough County, FL  
  
1994-1999                 **Registered Nurse, Brandon Regional Medical Center, Women's Center**, Brandon, FL  
  
1993-1994                 **Registered Nurse, HealthSouth**, Tallahassee, FL

## **PUBLICATIONS**

### **REFEREED JOURNALS:** (\* Data-based articles)

Moody, L.E., Beckie, T., Long, C., Edmonds, A., Andrews, S. (2000). Assessing readiness for death in hospice elders and older adults. *The Hospice Journal, Physical, Psychosocial, and Pastoral Care of the Dying*, 15, 49-65.\*

### **NON-REFEREED JOURNAL ARTICLES OR PUBLICATIONS:** (\* Data-based articles)

Holm, G.B. & Edmonds, A.R. (2004). Managing pain in osteoarthritis and rheumatoid arthritis. *CE- Today for Nurse Practitioners*, 3 (7).

### **BOOK CHAPTERS:** (# Refereed)

Groer, M. (Ed), Beckie, T., Breiter, D., Burns, C., Canty-Mitchell, J., Crowell, S., Edmonds, A., Evans, M., Gonzalez, L., Jevitt, C., Lengacher, C., Webb, M. (2008). Allostasis: A Model for Women's Health. In K. A. Kendall-Tackett (Ed.), *The Psychoneuroimmunology of chronic disease: Exploring the links between inflammation, stress, and illness* (pp. 183-218). Washington, DC: American Psychological Association.

## **RESEARCH and GRANTS**

<b>Date</b>	<b>Role</b>	<b>Title</b>	<b>Agency</b>	<b>Type</b>	<b>Amount</b>
2004-2005	PI	Pedometer and Social Learning Intervention for 5th Grade Students at Bryan Elementary School in Plant City, Florida	University of South Florida Collaborative for Children, Families and Communities	Intramural	\$8,468.00
2006-2007	Contributor	Relations between Weight Status and the Food and Activity Choices of Adolescents	University of South Florida Collaborative for Children, Families and Communities	Intramural	\$9,900.00

## **PRESENTATIONS—NATIONAL/INTERNATIONAL**

<b>Date</b>	<b>Type</b>	<b>Title</b>	<b>Conference Title, City/State</b>	<b>Refereed/Invited</b>
June 2010	Poster	Stories of Body Weight Trajectories From Postmenopausal Women Who Sought a Weight-Loss Program. Edmonds, A., & Poff, M.	25th National Conference of the American Academy of Nurse Practitioners Phoenix, AZ	referred
October 2008	Poster	Dietary Supplement Use Among Low-income, Uninsured Patients Attending Public Sector Medicine Clinics. Kolar, S., Daley, E., Woodard, L., Fanning, J. P., Edmonds, A., & Ward, J.	136 <sup>th</sup> Annual Meeting & Exposition of the American Public Health Association San Diego, CA.	referred
November 2007	Poster	Risk for skin cancer may be higher among uninsured women: Screening and prevention behaviors among public sector patients in Central Florida. Mercado, M., Daley, E., Woodard, L., Fanning, J., Edmonds, A., Dyer, K., & Kolar, S.	135th Annual Meeting & Exposition of the American Public Health Association Washington, D.C.	referred

Date	Type	Title	Conference Title, City/State	Refereed/ Invited
November 2007	Poster	Reproductive screening behaviors among US-born and non-US-born women in public sector clinics: Higher rates exist among immigrant women. Daley, E., Mercado, M., Woodard, L., Edmonds, A., Fanning, J., Dyer, K., & Kolar, S.	135th Annual Meeting & Exposition of the American Public Health Association Washington, D.C.	referred
September 2007	Poster	Adaptation to Prostate Cancer. Powel, L., Harper, M., Decker, J., Edmonson, K., Moore, D., Velez, G., Edmonds, A., Knapp, S., Eden, C., Stark, L.	US Department of Defense Prostate Cancer Research Program Meeting: Innovative Minds in Prostate Cancer Today (IMPACT). Atlanta, GA	referred
June 2006	Poster	Low Bone Mass in Elite Female Athletes. Coris, E., Sahebzamani, F., Edmonds, A., & Zwygart, K.	International Osteoporosis Foundation, World Congress on Osteoporosis, Toronto, Canada	referred
June 2005	Poster	Social Learning and Pedometer Use as Physical Activity Interventions Among Fifth Grade Students	20 <sup>th</sup> National Conference of the American Academy of Nurse Practitioners Ft. Lauderdale, FL.	referred

#### PRESENTATIONS—LOCAL/REGIONAL/STATE

Date	Type	Title	Conference Title, City/State	Refereed/ Invited
February 2011	Poster (not attended)	Story Theory's Implications as a Psychotherapeutic Intervention in Obesity Prevention and Management in Women. Edmonds, A., & Poff, M.	25 <sup>th</sup> Annual Conference of the Southern Nursing Research Society Jacksonville, FL	referred
February 2010	Poster	The Historical 'Story' of Story Theory for Nursing Practice and Research with a Vision for the Next Chapter	24th Annual Conference of the Southern Nursing Research Society Austin, TX.	referred
February 2008	Poster	Dietary Supplement Use Among Low-income, Uninsured Patients Attending Public Sector Medicine Clinics. Kolar, S., Daley, E., Woodard, L., Fanning, J. P., Edmonds, A., & Ward, J.	18 <sup>th</sup> Annual University of South Florida Health Research Day Tampa, FL	referred
February 2008	Poster	Assessing the Mental Health Status of Uninsured Women Attending Public Sector Clinics. Blunt, H., Daley, E., Woodard, L., Edmonds, A., Fanning, J., & Dyer, K.	18 <sup>th</sup> Annual University of South Florida Health Research Day Tampa, FL	referred
April 2007	Podium	Symposium: Life Course Weight Gain, Risk Factors for Cardiovascular Disease, and Weight Loss Trajectories in Overweight or Obese Postmenopausal Women. Dennis, Karen, Edmonds, A., Weinstien,	15 <sup>th</sup> Annual Research Day, Sigma Theta Tau International, Theta Epsilon Chapter, Orlando, FL	referred

Date	Type	Title	Conference Title, City/State	Refereed/ Invited
		P., & Decker, J.		
February 2007	Poster	HIV Screening Beliefs among Hispanic and Non-Hispanic Women Attending Public Sector Medicine Clinics. Mercado, M., Daley, E., Woodard, L., Fanning, J., Edmonds, A., Kolar, S., & Blunt, H.	17 <sup>th</sup> Annual University of South Florida Research Day Tampa, FL	referred
February 2007	Poster	The Health Status of Marginalized Populations of Women Attending Public Sector Medicine Clinics. Vamos, C., Daley, E., Woodard, L., Fanning, J., Edmonds, A., Sahebzamani, F., Perrin, K., Jolles, E., & Albright, S.	17 <sup>th</sup> Annual University of South Florida Research Day Tampa, FL	referred
February 2007	Poster	An Assessment of Weight Perception Differences between Providers and Female Patients in Public Sector Clinics. Dyer, K., Daley, E., Woodard, L., Fanning, J., Edmonds, A., Kolar, S., & Blunt, H.	17 <sup>th</sup> Annual University of South Florida Research Day Tampa, FL	referred
2006	Podium	Pedometer and Social Learning Intervention for 5 <sup>th</sup> Grade students at Bryan Elementary School in Plant City Florida.	Conference on Community Based Research sponsored by the Children's Board of Hillsborough county Tampa, FL	invited
2006	Podium	Pedometer and Social Learning Intervention to Promote Physical Activity in 5th Grade Students.	Florida Association of Public Health Nurses at the Saint John's Convention Center Saint Augustine, FL	invited
February 2005	Poster	Social Learning and Pedometer Use as Physical Activity Interventions Among Fifth Grade Students	21 <sup>st</sup> Annual Conference of the Southern Nursing Research Society Atlanta, GA	referred
February 2005	Poster	Social Learning and Pedometer Use as Physical Activity Interventions Among Fifth Grade Students	15 <sup>th</sup> Annual University of South Florida Health Science Center Research Day Tampa, FL	referred

### **HONORS/AWARDS**

Date	Award	Organization/Group
2009	Ted and Marty Couch Dean's Award for Faculty Excellence	University of South Florida, College of Nursing

## **PROFESSIONAL ACTIVITIES & COMMUNITY SERVICE**

### ***PROFESSIONAL ORGANIZATIONS:***

<b>Date</b>	<b>Organization</b>	<b>Role</b>
1998-present	Sigma Theta Tau International, Delta Beta At Large Chapter	Member
2009-2010	Sigma Theta Tau International, Delta Beta At Large Chapter	Chapter Delegate
2005-2006	Sigma Theta Tau International, Delta Beta At Large Chapter	Leadership Succession Committee
2009-2010	Sigma Theta Tau International, Delta Beta At Large Chapter	Leadership Succession Committee Chairperson
2007-2009	Sigma Theta Tau International, Delta Beta At Large Chapter	Faculty counselor
2008-2009	Sigma Theta Tau International, Delta Beta At Large Chapter	Scholarship and Research Award Chairperson
2007-2008	Sigma Theta Tau International, Delta Beta At Large Chapter	Scholarship and Research Award co-chair
2002-present	National League of Nursing	Member
1998-present	American Academy of Nurse Practitioners	Member
2006-2010	National Organization of Nurse Practitioner Faculties	Member
2004-2010	Southern Nursing Research Society	Member
2007-2009	Council for the Advancement of Nursing Science	Member
2007-present	Florida Nurses Association	Member
2007-2010	The Obesity Society	Member
2007-2010	American Heart Association	Member
2010	American Psychiatric Nursing Association	Member

### ***MEDIA INTERVIEWS:***

<b>Date</b>	<b>Topic</b>	<b>Medium</b>
12-2-2004	Childhood Obesity-Report on Pedometer and Social Learning Study at Bryan Elementary School in Plant City, FL	Tampa bay Fox 13 News report

### ***COMMUNITY SERVICE:***

<b>Date</b>	<b>Organization</b>	<b>Role</b>
2007-2009	Florida Nurses Foundation	Scholarship reviewer
2006-2009	Tampa Bay Area Nursing Program Coordinating Council	College of Nursing representative
2009	Great American Teach In Sligh Middle School in Tampa, FL	Speaker
2009	Drexel University College of Nursing and Health Professions	Educational preceptor for Masters of Nursing Science in Nursing Education and

Date	Organization	Role
		Faculty Role
2009	Tampa Bay Work Force Alliance	Scholarship award presenter
March 2009	Robert Wood Johnson Lunch with Leaders Series	Speaker
April 2008	Mental Health America of Greater Tampa Bay USF Health/NBC's News Channel 8 Depression Awareness Phone Bank	Volunteer
May 2008	Florida International University faculty visit to USF College of Nursing, Consultation on the Clinical Collaborative Model	Coordinated faculty visit to St. Joseph's hospital, Tampa, FL
2007-2009	Saint Joseph's Hospital Clinical Excellence Award Ceremony	Award presenter
Fall 2007	Robert Wood Johnson Executive Nurse Fellows Program Identifying Innovative Partnerships in Clinical Education	Participant in discussion of University of South Florida College of Nursing Clinical Collaborative model
March 2007	St. Joseph's Hospital Research Committee	Presenter The Research Question: The Heart of the Research Process
2003, 2005, 2007	American Heart Association American Heart Walk	Participant
2006	Junior League of Tampa, Kids in the Kitchen Program	Speaker
March 2006	African American Men's Health Forum/Community Health Advocacy Partnership	Volunteer
2004-2005	National Youth Sports Physicals	Volunteer
2003	Bureau of Labor Statistics Study on Disability, National Co-Morbidity Survey Replication (UONIMH 60220-04). Ronald Kessler, Principal Investigator.	Data collection

### **UNIVERSITY ACTIVITIES**

#### ***UNIVERSITY SERVICE: (Cumulative)***

Date	Level	Committee	Role
2008-present	University	Library	Member
2010-present	College	Evaluation committee	Member
2006-present	College	Undergraduate curriculum committee	Member
2009-2010	College	Undergraduate curriculum committee	Chairperson
2009-2010	College	Executive council	Member
2006-2010	College	Appointment Tenure and Promotion Committee	Member
2009	College	Undergraduate program goals and outcomes task force for Southern Association of College and Schools Accreditation process	Member
2006-2009	College	Clinical Collaborative University of South Florida College of Nursing and St. Joseph's Hospital Tampa, FL	Team Coordinator
2008	College	Accelerated Nursing Program Task Force of the Undergraduate Curriculum Committee	Member
2008	College	Strategic planning Committee for	Member

Date	Level	Committee	Role
		College of Nursing Values development	
2008	College	Primary Care Faculty Search Committee	Member

***DISSERTATION / THESIS / RESEARCH PROJECT ADVISING:***

Dates	Student	Title	Level	Role
2011	Rachael Morrison	Nursing Students' Attitudes toward People with Mental Illness: Do they change after instruction and clinical exposure?	Honors college	Advisor
2007-2008	Shannon Calvin	Relation between Body Mass Index, Gender, and Breakfast and Lunch Consumption among 6th and 9th Graders	Honors college	Committee member

***COURSES TAUGHT:***

Semester	Course	Course Name	Enrollment	Role
Spring 2011	NUR 3535	Psychiatric and Mental Health Nursing	33	Instructor
	NUR 4636L	Community and Public Health Nursing Clinical	9	Instructor
	NGR 6202C	Primary Care of the Adult II	8	Clinical site visitor
	NGR 6343C	Primary Care of Women	2	Clinical site visitor
	NGR 6305L	Primary Care of Children and Adolescents Practicum I	9	Clinical site visitor
	NGR 6700C	Transitions	4	Clinical site visitor
Fall 2010	NUR 3535	Psychiatric and Mental Health Nursing	32	Instructor
	NUR 3535L	Psychiatric and Mental Health Nursing Clinical	11	Instructor
	NGR 6202C	Primary Care of the Adult II	4	Clinical site visitor
	NGR 6343C	Primary Care of Women	7	Clinical site visitor
	NGR 6305L	Primary Care of Children and Adolescents Practicum I	3	Clinical site Visitor
	NGR 6700C	Transitions	4	Clinical site Visitor
Summer 2010	NUR 6202C	Primary Care of the Adult II	49	Instructor
	NGR 6202C	Primary Care of the Adult II	2	Clinical site visitor
	NGR 6343C	Primary Care of Women	3	Clinical site visitor



Semester	Course	Course Name	Enrollment	Role
	NGR 6305L	Primary Care of Children and Adolescents Practicum 1	1	Clinical site visitor
	NGR 6700C	Transitions	1	Clinical site visitor
Spring 2010	NGR 6202C	Primary Care of the Adult II	54	Instructor
	NGR 6500	Theoretical Foundations of Advanced Psychiatric Nursing	4	Instructor
Fall 2009	NGR 6202C	Primary Care of the Adult II	41	Co-Instructor
	NUR 3535L	Psychiatric Mental Health Nursing Clinical	11	Instructor
Summer 2009	NGR 6215	Adult Health Management	5	Co-Instructor
	NUR 3535L	Psychiatric Mental Health Nursing Clinical	8	Instructor
	NUR 4935	Clinical study	1	Instructor
Spring 2009	NUR 6931	Selected Topics-Primary Care of the Adult II	45	Co-Instructor
	NUR 4948L	Preceptorship	8	Co-Instructor
	NGR 5680L	Accelerated Integrated Clinical II	11	Co-Instructor
Fall 2008	NGR 6931	Selected Topics-Primary Care of the Adult II	16	Co-Instructor
	NUR 4948L	Preceptorship	13	Instructor
Summer 2008	NUR 4948L	Preceptorship	1	Instructor
	NGR 5860L	Accelerated Integrated Clinical II	1	Instructor
Spring 2008	NUR 3525L	Psychiatric Mental Health Nursing Clinical	12	Instructor
	NUR 4948L	Preceptorship	13	Instructor
Fall 2007	NUR 3535L	Psychiatric Mental Health Nursing Clinical	11	Instructor
	NGR 5680L	Accelerated Nursing Clinical II	10	Co-Instructor
	NUR 4905	Independent Study	1	Instructor
	MEL 8266	Women's Health-A Lifespan Perspective	6	Co-Instructor
	NGR 6947	Nursing Education Practicum	1	Preceptor
Summer 2007	NUR 4948L	Preceptorship	12	Instructor
Spring 2007	NGR 5580L	Accelerated Integrated Clinical	9	Co-Instructor
	NUR 4905	Independent Study	2	Instructor
	NUR 3535L	Psychiatric Mental Health Nursing clinical	1	Instructor
	NGR 6947	Nursing Education Practicum	1	Preceptor

Semester	Course	Course Name	Enrollment	Role
Fall 2006	NUR 3026L	Fundamentals of Nursing Clinical	11	Instructor
	NUR 3535L	Psychiatric Mental Health Nursing Clinical	12	Instructor
	NUR 4948L	Preceptorship	1	Instructor
Summer 2006	NGR 6205	Primary Care Adolescents and Women	10	Co-Instructor
	NUR 4905	Independent study	1	Instructor
Spring 2006	NGR 6205	Primary Care of Adolescents and Women	11	Instructor
	NGR 6205L	Primary Care of Adolescents and Women Practicum	11	Instructor
	NGR 6905	Independent Study	1	Instructor
Fall 2005	NGR 6205	Primary Care of Adolescents and Women	19	Co-Instructor
	NGR 6205L	Primary Care of Adolescents and Women Practicum	16	Instructor
	NGR 6205L	Primary Care of Adolescents and Women Practicum	2	Clinical site visitor
	NGR 6931	Accelerated Integrated Clinical 1	10	Co-Instructor
Summer 2005	NGR 6205	Primary Care of Women and Adolescents	19	Co-Instructor
	NGR 6205L	Primary Care of Adolescents and Women Practicum	16	Co-Instructor
Spring 2005	NGR 6205	Primary Care of Women and Adolescents	13	Co-Instructor
	NGR 6205L	Primary Care of Adolescents and Young Adults Practicum	9	Instructor
Fall 2004	NGR 6205	Primary Care of Adolescents and Women	18	Co-Instructor
	NGR 6205L	Primary Care of Adolescents and Women Practicum	20	Instructor
	NUR 3535L	Psychiatric/Mental Health Nursing Clinical	11	Instructor
Summer 2004	NGR 6205	Primary Care Adolescents and Young Adults	16	Instructor
	NUR 4216	Medical Surgical Nursing Clinical II	10	Instructor
Spring 2004	NGR 6205	Primary Care Adolescents and Women	14	Instructor
	NUR 3525L	Psychiatric Mental Health Nursing Practicum	11	Instructor
	NUR 3076C	Fundamentals of Communication and Psycho-social Nursing	70	Co-Instructor

Semester	Course	Course Name	Enrollment	Role
Fall 2003	NGR 6305	Primary Care of the Child	7	Instructor
	NGR 6305L	Primary Care of the Child Practicum	7	Instructor
	NUR 3525L	Psychiatric Nursing Clinical	10	Instructor
	NUR 3076	Fundamentals of Community and Psychosocial Nursing	69	Co-Instructor
Summer 2003	NGR 6305	Primary Care of the Child	13	Instructor
	NGR 6305L	Primary Care of the Child Practicum	13	Instructor
	NUR 4216L	Medical Surgical Nursing Clinical II	11	Co-Instructor
Spring 2003	NGR 6305	Primary Care of the Child	10	Instructor
	NGR 6305L	Primary Care of the Child Practicum	10	Instructor
Fall 2002	NGR 6305	Primary Care of the Child	8	Adjunct Instructor
	NGR 6305L	Primary Care of the Child Practicum	8	Adjunct Instructor