January 2015

The relationship between coaching environment and athlete attributional style

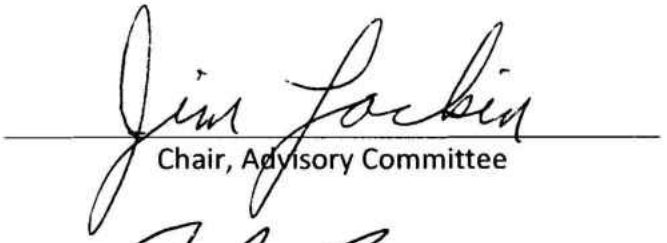
Una Britton
Eastern Kentucky University

The Relationship between Coaching Environment and Athlete Attributional Style

By

Úna Britton

Thesis Approved:



Chair, Advisory Committee

Member, Advisory Committee

Member, Advisory Committee

Dean, Graduate School

STATEMENT OF PERMISSION TO USE

In presenting this thesis in partial fulfillment of the requirements for MSc in Physical Education – Exercise & Sport Science degree at Eastern Kentucky University, I agree that the Library shall make it available to borrowers under rules of the Library. Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of the source is made. Permission for extensive quotation from or reproduction of this thesis may be granted by my major professor, or in [his/her] absence, by the Head of Interlibrary Services when, in the opinion of either, the proposed use of the material is for scholarly purposes. Any copying or use of the material in this thesis for financial gain shall not be allowed without my written permission.

Signature Tina Britton

Date 04/15/15

THE RELATIONSHIP BETWEEN COACHING ENVIRONMENT AND ATHLETE ATTRIBUTIONAL STYLE

By

Úna Britton

Bachelor of Science

University of Limerick,

Limerick, Ireland,

Eastern Kentucky University
Richmond, Kentucky
2013

Submitted to the Faculty of the Graduate School of
Eastern Kentucky University
in partial fulfillment of the requirements
for the degree of
MASTER OF SCIENCE
May, 2015

The Relationship between Coaching Environment and Athlete Attributional Style

Britton, Ú.

Department of Exercise & Sport Science

This study examined the relationship between attributional style and perceived coaching behaviors in collegiate cross-country/track and field athletes in the USA and Ireland. Participants included seventy-three collegiate athletes (Ireland: n = 24 male, n = 18 female, mean ± SD age: 20.39 ± 1.61 years. USA: n = 9 male, n = 22 female, mean ± SD age: 21.02 ± 2.18 years). Participants completed the Sport Attributional Style Scale (SASS; Hanrahan et al., 1989) and the Leadership Scale for Sport (LSS; Chelladurai & Selah, 1980) to assess attributional style and perceived coaching behaviors. Explanatory pessimism, total internality, stability, and globality were calculated from the SASS for both countries. Total dimension scores for five coaching behaviors (training/instruction, democratic, autocratic, social, and positive feedback) were calculated from the LSS. Significant differences were not found between countries for attribution dimensions (p > .05). Mean explanatory pessimism was 111.29 ±13.2 and 106.42 ± 10.7 for Ireland- and US-based athletes respectively (p = .948; p > .05). A significant difference was found for perceived democratic behavior between countries (p = .0006; p < .05). Significant positive correlations (p < .05) were found in the Ireland group for training/instruction and stability, and in the USA group for social and stability, and positive feedback and stability. Significant negative correlations (p < .05) were found in the Ireland group for democratic and internality, and autocratic and stability. Significant between-country differences (p < .05) were found for democratic and internality, autocratic and stability, and positive feedback and stability. Marginal between-country differences (p < .10) were seen for training/instruction and stability, training/instruction and globality, and autocratic and internality. Ireland-based athletes had higher perceptions of democratic behaviors than US-based athletes. There were no differences in attributional dimension scores between countries. Significant differences between countries for relationships between coaching behaviors and attribution dimensions existed.

References: Chelladurai & Selah, 1980, Hanrahan et al., 1989

Key Words: attributional style, perceived coaching behaviors, collegiate cross-country/track and field

DEDICATION

This thesis is dedicated to my family (and my EKUDC family!)
for their unwavering support.

ACKNOWLEDGMENTS

Thank you to my committee chair, Dr. Jim Larkin, for his guidance and help throughout this project. Thank you also too Dr. Jonathan Gore, and Dr. Joel Cormier for their input, guidance, and help over the past year. Thank you to my family for encouraging me in my studies and athletics no matter what. Finally, I would like to acknowledge my EKU track/cross-country teammates who successfully distracted me from the stresses of writing a thesis when I needed it!!

TABLE OF CONTENTS

LIST OF TABLES

TABLE PAGE

LIST OF FIGURES

FIGURE PAGE

CHAPTER 1 INTRODUCTION

1.1 Need for the Study

Causal attributions influence future behavior (Rotter, 1966). This link between attributions and behavior is mediated by causal dimensions, the general properties that underlie causal attributions (McAuley, Duncan, & Russell, 1992). Throughout the sport psychology literature, a number of important causal dimensions have been identified including the dimensions of locus of causality, stability, controllability, globality, and intentionality (Weiner, 1979; McAuley et al., 1992). Optimism and pessimism have been defined in terms of causal attributions (Seligman, 1990). Attributions of negative events to internal, stable and global causes are defined as pessimistic, while attributions of negative events to external, unstable and specific causes are optimistic (Seligman, 1990)

Past sport environment research has examined, among others, how athletes' attributional tendencies affect future performances (Ball, 2013; Hamilton & Jordan, 2000), sport self-efficacy (Gernignon & Delloye, 2003), mental toughness (Parkes & Mallett, 2011), and emotion (Graham, Kowalski & Crocker, 2002). There is however a paucity of research on how the social environment affects how athletes make causal attributions.

Research has shown that the social environment can influence attributional style in university students (Serin, Serin & Sahin, 2012). It is interesting to establish how the social environment in a sport setting may influence athletes' attributional style. In this study, two different coaching environments were identified – collegiate cross-country/track & field in the USA versus collegiate cross-country/track & field in Ireland. Whereas collegiate sport in the USA borders on semi-professional, collegiate sport in Ireland is run on a more voluntary basis and is more similar in organisation and structure to intramural sports at American colleges. Coaches and team staff at many National

Collegiate Athletic Association (NCAA) institutions are paid staff members. In contrast, many coaches of college sports teams in Ireland are voluntary, or paid a nominal fee for their coaching services. In Ireland, college teams are generally run by the students for the students, with student-athletes taking responsibility for most of the administrative work. In the USA, many collegiate sports teams have numerous staff assigned to them to complete administration and organisational work.

As a result of the different environmental contexts within which the coaches of American and Irish collegiate sports teams operate, their coaching styles may be different. Whereas coaching at an Irish college may be more of a collaborative effort between athletes and coach, with both taking responsibility for the team, coaches at American colleges are paid employees, resulting in a very different outlook. This research sought to identify how athletes in both environments perceive their coaches' behavior, and whether perceptions of coaching behavior have an effect on the athletes' attributional style.

1.2 Statement of the Problem

The purpose of this research was to examine athletes' perceptions of the coaching environment in two different athletic settings (USA and Ireland), and to identify if a relationship exists between perceived coaching behavior and athletes' causality attributions. Autonomy fulfilment, or lack thereof, can influence how an athlete makes attributions for the outcomes of their behavior (Deci & Ryan, 2002). As such, this research was framed by a focus on autonomy-supportive versus controlling coaching behaviors, and how the frequency of these behaviors affected causal attributions in athletes from both environments.

1.3 Assumptions

It was assumed that all participants answered the questionnaires used in the study truthfully. It was also assumed that conversion of the questionnaires from paper and pencil format to electronic format did not alter the reliability and validity of these tools. When comparing online and traditional paper and pencil questionnaires in sport psychology Lonsdale, Hodge and Rose (2006) found no significant difference between factorial structure, mean results, and reliability for both formats.

1.4 Hypotheses

Hypothesis 1: Athletes who perceive their coach to display higher levels of autocratic behavior and lower levels of democratic behavior will demonstrate use of a pessimistic attributional style i.e. attribute negative events to internal, stable, and global causes and attribute positive events to external, unstable and specific causes.

Hypothesis 2: Athletes who perceive their coach to frequently use training and instruction behaviors will score higher on explanatory pessimism.

Hypothesis 3: Student-athletes in American colleges will perceive more use of autocratic coaching behaviors, more training and instruction, and less social support from coaches than student-athletes in Irish colleges. Student-athletes in Irish colleges will perceive more use of democratic coaching behaviors.

1.5 Delimitations

The scope of this research was limited to cross-country/track & field athletes at those colleges that were contacted by the researchers and that chose to participate. Only colleges in Ireland and the USA were contacted.

1.6 Limitations

Both measurement instruments were self-report questionnaires. Therefore responses may have been subject to some degree of bias.

1.7 Definition of Terms

Causal attributions: The interpretation of a relationship between an individual's actions and the ensuing events.

Causal dimensions: General properties that underlie causal attributions and serve as the link between attributions and behavior.

Causal Dimensions

1. *Locus of causality:* Whether an individual attributes causality to internal or external factors.

2. *Stability*: How variant or invariant a cause is over time.

3. *Control*: How much power the individual perceives they have to alter their situation.

4. *Globality*: How one's attributions carry from one situation to another.

5. *Intentionality*: Whether reinforcement is attributed to intentional or unintentional behaviors.

Optimism (in terms of causal attributions): Attributing causality for negative events to external, unstable and specific causes.

Pessimism (in terms of causal attributions): Attributing causality for negative events to internal, stable and global causes.

Attributional style: A relatively stable manner in which an individual is predisposed to making causal attributions for outcomes of behavior.

Autonomy: One of three needs outlined in Deci & Ryan's (2000) self-determination theory, autonomy refers to an individual's need to be the master of their own behavior.

Explanatory pessimism: Attributing negative events to internal, stable, and global causes and attributing positive events to external, unstable and specific causes.

CHAPTER 2 LITERATURE REVIEW

2.1 Causal Attributions and Dimensions

Causal attributions for events that occur in one's life can impact greatly on subsequent behaviors. Individuals interpret relationships between their actions and ensuing events. This association has an impact on the individual's future behavior (Rotter 1966). Causal dimensions are the general properties that underlie causal attributions and serve as the link between attributions and behavior (McAuley et al., 1992). According to Rotter (1966), causality attributions are one-dimensional and are either internal or external. Thus, when a person attributes a behavioral reinforcement to luck, chance, or the influence of powerful others they are said to have an external locus of control. Conversely, when a person attributes behavioral reinforcements as reliant on their own behavior, they are identified as having an internal locus of control (Rotter, 1966).

Following on from Rotter's locus of control research, Weiner (1979) developed an attributional model for achievement motivation which has guided many social psychology researchers. According to Weiner (1979), locus and control are two different causal dimensions, and must be separated. Weiner's (1979) research focused on dimensions of causality, which included three categories; locus, stability and control. Locus of causality refers to Rotter's (1966) one-dimensional theory of whether the causes of reinforcement are within (internal), or external to the individual (McAuley et al., 1992). Stability refers to how variant or invariant a cause is over time (McAuley, Duncan & Russell, 1992). Finally, control refers to how much power the individual perceives they have to alter the situation. Control exists on a continuum from totally controllable, to totally uncontrollable.

While these three dimensions were identified as the primary dimensions of causality, it has been discussed that other subordinate dimensions do exist, such as globality and intentionality (Weiner, 1979; Hanrahan & Grove, 1990). Globality is the term used to describe how one's attributions carry from one situation to another (Hanrahan & Grove, 1990). For example, an individual may attribute causality of failure in a track race to lack of effort (internal, controllable, and unstable). However, for the same individual, failure in a mathematic exam may be attributed to an innate lack of ability in the subject area (internal, uncontrollable, and stable). Intentionality has been included by some researchers in defining the dimensions of causality (Hanrahan & Grove, 1990). This dimension refers to whether reinforcement is attributed to intentional or unintentional behaviors (Hanrahan & Grove, 1990) and has been used to differentiate between mood and effort (Weiner, 1979). Seligman (1990) defined optimism and pessimism in terms of causal attributions. Individuals who attribute causality for negative events to internal, stable and global causes are deemed pessimistic, while those who attribute causality for negative events to external, unstable and specific causes are considered optimistic.

Many studies have looked at locus of control as a one-dimensional concept, identifying only whether a person attributes a performance to internal or external causes. Attributing causes to internal factors is seen as a positive characteristic in sport situations. Falby, Hassmen, Kentta and Durand-Bush (2006) used Rotter's internal-external locus of control scale to examine the relationship between locus of control, mental skills, and sense of coherence in individual elite athletes. Athletes with better mental skills demonstrated a more internal locus of control, along with a higher sense of coherence (Falby et al., 2006). A study examining the adaptive and maladaptive processes related to perfectionism in female soccer players found that when perfectionism appeared as an adaptive process, it was strongly correlated with internal attributions of success (Stoeber & Becker, 2008). Conversely, when perfectionist tendencies appeared as maladaptive (negative reaction to imperfection) they were strongly correlated with an external locus of causality (Stoeber & Becker, 2008). The

authors of this study noted that their research was limited as only the internal-external dimension (locus) of attribution was assessed, leaving out other important dimensions such as stability and controllability.

The Causal Dimension Scale (CDS) was created as a tool to assess a person's causal explanations for an event, *and* the person's own perceptions of the causes they have stated (Russell, 1982). The CDS is used to determine the causal dimensions in which the individual places their attributions. A weakness in research relating to attributions and behavior is the measurement of causal dimensions identified by the attributor themselves (Russell, 1982). Many causal attribution tools rely on the researcher, rather than the subject, to place attributions in particular causal dimensions. However, Russell (1982) identified a serious flaw with this technique. Differences in how the individual perceives a cause compared to how the researcher *believes* the individual has perceived this cause can lead to the erroneous placing of attributions into causal dimensions. Because causal dimensions underlie causal attributions, it is imperative that causal dimensions are measured correctly (McAuley et al., 1992). Russell's (1982) CDS adopted Weiner's (1979) approach, including three dimensions of causal attribution, namely locus of causality, stability, and controllability (Russell, 1982). This tool was later revised by McAuley et al (1992) to produce the Causal Dimension Scale – II (CDS-II). The controllability items were deleted and replaced by two new subscales; personal control, and external control.

While the CDS-II adopts Weiner's perspective on the dimensions of causality, another tool, the Sport Attributional Style Scale (SASS) includes globablity and intentionality along with the dimensions of control, locus, and stability (Hanrahan, Grove & Hattie, 1989). Similar to the CDS-II, the SASS allows respondents to classify their own attributions into dimensions, thus removing this responsibility from the researcher (Horn, 2008). In comparison to the CDS-II, the SASS measures attributional *style,* a trait measure, rather than a state measure (Horn, 2008). The SASS assesses athletes'attributional styles for hypothetical events (Hanrahan, Grove, & Hattie, 1989),

while the CDS-II assesses attributions made immediately after real-life events (McAuley et al., 1992).

Attribution research in sport psychology has examined how causal attributions may influence athlete self-efficacy (Gernignon & Delloye, 2003), emotion (Graham, Kowalski & Crocker, 2002), mental toughness (Parkes & Mallett, 2011) and performance (Ball, 2013; Hamilton & Jordan, 2000). In a manipulated feedback study on national-level sprint athletes Gernigon & Delloye (2003) examined the relationship between negative and positive performance feedback, self-efficacy and causal attributions. In terms of causal attributions, stability for males ($p < .05$), and personal control for females ($p < .05$), significantly predicted self-efficacy from one performance to the next. Stability attributions, for males, acted as a mediator between feedback and self-efficacy. The authors found that stability was a positive attribute in the athletes as it increased athletes' confidence for attaining their goals (Gernigon & Delloye, 2003). Stability and personal control were also identified as attributional dimensions that interact with emotion in youth soccer players (Graham et al., 2002). Athletes who experienced positive emotion were more likely to expect success in similar situations. However, no link was found between individual emotions and specific causal dimensions.

Attributional style has been linked to mental toughness, particularly the optimism construct of mental toughness. In a study on rugby players, Parkes and Mallett (2011) used the SASS to assess attributional style before and after an attributional style retraining intervention. The researchers proposed that mental toughness is a result of the pattern of cognitions which athletes demonstrate in response to both negative and positive events. Thus, by measuring attributional styles, the researchers were able to determine players' mental toughness via the optimism construct. Significant improvements ($p < .05$) were seen for locus of causality for negative events following the intervention, with players attributing set-backs to external rather than internal causes (Parkes & Mallett, 2011).

Performance in sport has been linked to attributional tendencies. According to Ball (2013) athletes who attribute negative performances to stable and internal causes

are more likely to enter into a downward spiral of negative performances as they perceive the causes of a poor performance as being unchangeable (stable) and as a result of their own lack of ability (internal). The relationship between performance and attributions appears to be a cyclical one, with previous performance affecting how athletes make their attributions. For high school athletes successful performances were attributed to controllable, internal and stable factors, compared to less successful performances (Hamilton & Jordan, 2000).

It is evident that causal attributions are important in predicting future behavior in athletes. Certain causal attributions are more beneficial to athlete performance than others. Generally speaking, athletes who attribute success to internal, stable and controllable factors, and failure to external, unstable, and controllable factors, are more likely to be motivated to continue putting forth effort.

A review of attribution research in sport psychology (Rees, Ingledew, & Hardy, 2005) recommended that future research regarding attribution and sport should focus on the social context within which athletes shape their attributions. While attributional style has been linked to mental toughness (Parkes & Mallett, 2011), persistence (LeFoll, Rascle, & Higgins 2006) and performance level (Hamilton & Jordan, 2000), there is little research examining the effect of the social environment in shaping athletes' attributional style. An athlete does not attribute causality for a particular behavioral outcome in a vacuum. Many factors combine to have an impact on how athletes form their particular attributions, not least the coaching environment. Thus, the present research not only focuses on athletes' attributional styles, it also seeks to evaluate two different coaching environments to establish whether there is an association between the coaching environment and the athlete's attributional style.

2.2 Coaching Environment

A number of variables may affect attributional style, not least the environment within which an individual finds themselves. As Rees et al. (2005) alluded to, individuals do not make attributions in a vacuum. The social context, and behaviors of significant others have an impact on how attributions are made. In university students, Rotter's (1966) internal-external locus of control scale was used to measure how a number of variables affected students' causal attributions (Serin, Serin, & Sahin, 2010). The researchers found gender ($p < .001$) and perceived socioeconomic status ($p < .01$) had a significant effect on locus of control. Place of accommodation also had an effect on locus of control. Students who remained living in their family home had a higher internal locus of control, compared to students who lived in dormitories who reported higher external locus of control. In seeking to explain how place of accommodation could have this impact on attributions, the researchers suggested that parents may enhance children's control by giving them more responsibilities as they become adults in their own right while living in the family home (Serin et al., 2012). The researchers suggested that parents' attitudes should be assessed to determine how they influence the locus of control of their children. In a sport setting, this theory could be applied to coaches who act as a significant figure of authority in the life of an athlete (Bartholomew, Ntoumanis, & Thogersen-Ntoumani, 2009). If parental attitudes help to shape children's locus of control, how do coach's attitudes and behaviors affect athletes' formation of attributions?

A person's coaching style shapes the coaching environment. Two dominant coaching styles have been identified in the literature; autonomy supportive style and controlling interpersonal style (Vallerand & Losier, 1999). Coaches who foster an autonomy supportive coaching style allow athletes opportunities to use their own initiative (Bartholomew et al., 2009). Choices are given to the athletes, and coaches tend to explain the rationale behind their practices. On the other hand, controlling interpersonal style coaching is characterised by authoritarian coaches who use pressure

and coercion in their coaching methods (Bartholomew et al., 2009). According to Deci & Ryan (2002), coaches who use controlling coaching methods can change an athlete's locus of causality from internal to external. While the coach may ultimately elicit the desired behavior, the athlete essentially believes that the only reason they carried out the behavior is because they were compelled to do so. Thus, the coaching environment has affected what the athlete attributes their actions to.

When a coach uses controlling strategies an athlete's need for autonomy is often overlooked. According to self-determination theory (SDT) individuals have three basic psychological needs; autonomy, relatedness, and competency (Deci & Ryan, 2000). According to their research, when individuals experience a controlling environment they are motivated to seek autonomy in order to satisfy a basic psychological need. In order for individuals to be intrinsically motivated and perceive they are competent, they must attribute locus of control to internal factors (Deci & Ryan, 2000). Choice and opportunities for self-regulation result in greater perceptions of autonomy (Deci & Ryan, 1985). The need for autonomy is also undermined by coaching practices where there is an overreliance on instructional feedback (Hollembeak & Amorose, 2005). When the coach provides too much instruction, and the athlete has little input, the need for autonomy is not met. Thus athletes can perceive the coach's actions to be the cause of their behavior, rather than attributing causality to internal factors within their control. As discussed previously, research has indicated that adaptive causal attributions are those that attribute success to internal, stable and controllable factors, and failure to external, unstable, and controllable factors. Therefore, by adopting a specific coaching style, coaches can create an environment that enhances how athletes attribute their behaviors, or that promotes negative attributional tendencies (i.e. attributing failure to internal, stable and global factors and success to external, unstable and specific factors (Seligman, 1990).

2.3 Scholarships and the Coaching Environment

While choice and opportunities for self-regulation result in greater perceptions of autonomy, imposed goals and threats, as well as tangible external rewards, are conducive to a perceived external locus of control (Deci & Ryan, 1985). The provision of athletic scholarships in American universities can be deemed a tangible reward which may influence both the coaching environment, and athletes' locus of causality. Research findings are equivocal in terms of the effect of extrinsic rewards on participation and motivation. Lepper, Greene and Nisbett (1973) studied a group of children to determine the effect of external rewards on intrinsic motivation. Children who initially showed intrinsic motivation for the study's target activity were chosen to participate. One experimental group was offered a reward incentive for the already intrinsically interesting activity, while another group was given an unexpected reward following participation. The third group received no reward. The researchers found that children who expected the offered reward had decreased intrinsic motivation for the activity following the intervention. Therefore, this early research indicates that offering external rewards for an already interesting activity may serve to decrease intrinsic motivation.

In the applied sport setting, research has been conducted to examine the relationship between extrinsic rewards and motivational processes (Amorose & Horn, 2000; Cremades, Flournoy & Gomez, 2012; Medic, Mack, Wilson & Starkes, 2007). Collegiate athletic scholarships are forms of extrinsic rewards that are given to students who meet certain athletic requirements in their particular sport. This culture of athletic scholarships is most prominent in the United States of America, where high college tuition fees make obtaining some form of scholarship funding a necessity for many young people who wish to achieve a higher level of education. Thus, the drive to pursue a college athletic career can often be motivated by external factors such as financial pressure, as well as parental and personal expectations.

Coaching behaviors can be highly influential in how athletes perceive external rewards such as scholarships. A study on collegiate swimmers found that coaching behavior can interact with scholarship status to influence perceived competence (Matosic, Cox, & Amorose, 2014). The interaction between scholarship status and the athletes' perceptions of controlling coaching behaviors served to predict perceptions of competence in these swimmers. Those swimmers who perceived their coach's behavior as less controlling showed a positive relationship between scholarship status and perceived competence. Athletes who had more controlling coaches did not display this relationship (Matosic et al., 2014). In accordance with SDT, a coach can play a role in determining whether external rewards are sources of extrinsic motivation or of intrinsic motivation. Coaching behaviors which are perceived as controlling results in less self-determined forms of motivation, as the individual's basic psychological needs for autonomy and competency are not being met (Deci & Ryan, 2000). Thus, a scholarship-type sport setting may reduce athletes' perceptions of autonomy thereby resulting in athletes attributing causality to external factors.

2.4 Background of College Athletics: USA v Ireland

Collegiate athletic programmes in the United States of America operate in a vastly different environment than collegiate athletic programmes in Ireland. Intercollegiate athletic competition in the USA began in 1840 (Smith, 2000). Just over a century later, the National Collegiate Athletics Association (NCAA), the organisational body responsible for collegiate level athletics in North America, negotiated its first television contract, valued in excess of one million US dollars (Smith, 2000). In the present day, colleges in NCAA Division I schools take in and spend vast sums of money on their athletic programmes. Coaching staff are paid employees of the college, while many student-athletes receive scholarships which cover the cost of their tuition, room, and board. In the most lucrative of NCAA sports, top football head coaches receive salaries in excess of five million US dollars (€3,870,628) (Berkowitz, Upton, Schnaars, &

Dougherty, 2013). In comparison, college athletic programmes in Ireland are generally run by the students, for the students. Coaches are often student volunteers, or members of the community who receive a nominal fee for their services (http://www.studentsport.ie/). Thus, the environmental contexts within which Irish student-athletes and American student-athletes participate in are vastly different.

2.4.1 Extrinsic Rewards – How they shape the environment

Extrinsically motivating factors exist in all sporting environments, both in scholarship- and non-scholarship-type environments. External rewards and incentives are inherent in the world of sport. Winners of all ages and abilities receive numerous rewards for their efforts, be they ribbons, medals, money, sponsorship deals, or recognition. However, in comparison to a more amateur sports setting, such as is found in intercollegiate sport in Ireland, the incentives which exist in scholarship-type collegiate sport environments in the USA are much greater, both for the athletes, and the coaches. Coaching staff can often be extrinsically motivated by the monetary rewards, prestige, and recognition that are received when their team is successful. Head coaches are paid high salaries for their services (Berkowitz et al., 2013). Bonuses are often offered to NCAA coaches for winning conference or regional championships, or qualifying their team or athletes to the national championships (Steinbach, 2009). Such extrinsic rewards are not available to the same extent in College and University Sports Association of Ireland (CUSAI) sports.

2.5 Gap in the Literature

According to SDT, individuals seek to satisfy three essential needs for psychological well-being, namely autonomy, relatedness, and competency (Deci & Ryan, 2000). Environmental factors, as well the manner in which individuals attribute causality to events, can impact on how the psychological need for autonomy is satisfied.

Most of the literature pertaining to locus of causality focuses on motivation and how one's locus of causality can affect motivation (intrinsic or extrinsic). Similarly, research on coaching behavior and the coaching environment has addressed the issue of how these two factors can affect athlete behavior and motivation. There is a paucity of research examining the link between the coaching environment and its influence on causality attributions. To the author's knowledge, research comparing a scholarship-type environment with a non-scholarship-type environment in two different countries, USA and Ireland respectively, does not exist.

CHAPTER 3 METHOD

3.1 Recruitment of Participants

Participants were recruited primarily via email (Appendix A). These email were sent to head coaches of NCAA Division I cross-country/track and field teams, and to captains of CUSAI cross-country/track and field teams. Each member of the participating teams was sent an email containing the Survey Monkey link for the requisite surveys, along with a study information sheet (Appendix B). Participants were required to provide consent at the beginning of the survey, without which they could not continue to begin the survey questions.

3.2 Participant Characteristics

Seventy-three cross-country and/or track & field student athletes were recruited from colleges in Ireland [*n* = 42 (*n* = 24 male and *n* = 18 female), mean ± SD age: 20.39 ± 1.61 years] and NCAA Division I colleges in the USA [*n* = 31 (*n* = 9 male and *n* = 22 female), mean ± SD age: 21.02 ± 2.18 years]. Student-athletes ranged across athletic discipline (sprints & hurdles, middle distance, long distance, walks, jumps, throws) and academic year (freshman, sophomore, junior, senior, graduate student).

3.3 Data Collection

Survey Monkey was used to create electronic versions of both the Sport Attributional Style Scale (SASS; Hanrahan et al., 1989) and the Leadership Scale for Sport (LSS; Chelladurai & Selah, 1980). A comparison of online and traditional paper and pencil questionnaires in sport psychology showed no significant difference between

factorial structure, mean results, and reliability for both test administration formats (Lonsdale et al., 2006). These tools were then emailed to all participants for completion.

3.4 Measures

***Attributional Style*:** A shortened form of the SASS (Hanrahan & Grove, 1990) was used to assess athlete attributional style. The SASS (Appendix C) is a relatively reliable tool (mean test-retest reliability: 0.60) which comprises ten items assessing participant's causal attributions. It allows the participant to analyse attributions across five causal dimensions; internality, stability, globality, controllability, and intentionality (Hanrahan, Grove & Hattie, 1989). The mean reliability coefficient for the five scales of the SASS is 0.71. A high correlation coefficient (0.93) was found when comparing the full and shortened versions of the SASS (Hanrahan & Grove, 1990). Ratings for each dimension were summed across all ten items to produce a dimension-specific subscale score for each participant (Hanrahan & Grove, 1990). Explanatory pessimism was calculated by summing the internality, stability, and globality ratings for the five negative items to create an explanatory pessimism score for negative events. Internality, stability and globality ratings for positive events were reverse-scored and added to produce an explanatory pessimism score for positive events. Inter-item reliability coefficients for positive and negative items were 0.74 and 0.72 respectively (Hanrahan et al, 1989). Negative and positive event scores were then added to give an overall explanatory pessimism score, ranging between 30 and 210, with higher values indicating greater pessimism (Hanrahan & Grove, 1990).

***Perceptions of Coaching Behavior*:** The LSS (Chelladurai & Selah, 1980) was used to evaluate athletes' perceptions of coaching behavior (Appendix D). The LSS is deemed a reliable tool for measuring coaching behavior (test-retest reliability; 0.71-0.82). It comprises five dimensions of coaching behavior; training/instruction, democratic behavior, autocratic behavior, social support, and positive feedback

(Chelladurai & Selah, 1980). Internal consistency ranged from 0.45 to 0.93. Responses were summed across dimensions and divided by the number of items in the dimension to give a score out of five for each specific dimension. Mean (± SD) dimension scores were calculated by country.

3.5 Statistical Analyses

IBM SPSS Statistics 22 software was used to perform descriptive and correlational analyses on the data. Inter-country means and standard deviations were computed for attributional style, explanatory pessimism, and perceived coaching behavior dimensions. SAS 9.3 software was used to conduct a multivariate analysis of variance (MANOVA) to determine relationships between causal attributions and country, and between perceived coaching behaviors and country. A stepwise discriminant analysis was used to identify in which dimensions any differences between countries occurred. Separate correlations were calculated between explanatory pessimism and the autocratic, democratic, and training /instruction dimensions of coaching behavior. Finally, mean scores for Irish athletes and American athletes on all dimensions of both the SASS and the LSS were correlated to compare relationships between perceived coaching behaviors and causal dimensions in Irish-based and US-based student athletes.

.

CHAPTER 4 RESULTS

4.1 Attributional Style

Both countries showed similar attributional style trends among their cross-country/track & field student athletes, with a MANOVA showing no significant differences between countries for any of the attributions (p = .42; p > .05). Table 1 displays mean (± *SD*) scores for Irish- and US-based student athletes on all five attributions of the Sport Attributional Style Scale.

Table 1. Mean (± SD) attributional style dimension scores for Irish and US athletes

Attributional Dimension	**All (*N* = 73)**	**Ireland (*n* = 42)**	**USA (*n* = 31)**
Internality	39.52 (5.68)	39.81 (4.97)	39.13 (6.59)
Stability	34.29 (6.17)	35.07 (6.55)	33.23 (5.55)
Globality	35.32 (6.48)	36.24 (6.81)	34.06 (5.88)
Controllability	51.60 (9.91)	51.93 (9.31)	51.16 (10.79)
Intentionality	40.49 (7.55)	39.76 (6.89)	41.48 (8.38)

4.1.1 Explanatory Pessimism

Irish athletes scored higher on total explanatory pessimism than their American counterparts (see Figure 1). Mean explanatory pessimism for student athletes based in Ireland was 111.29 ±13.2 compared to 106.42 ± 10.7 for US-based athletes. However, this difference was not statistically significant (p = .948; p > .05).

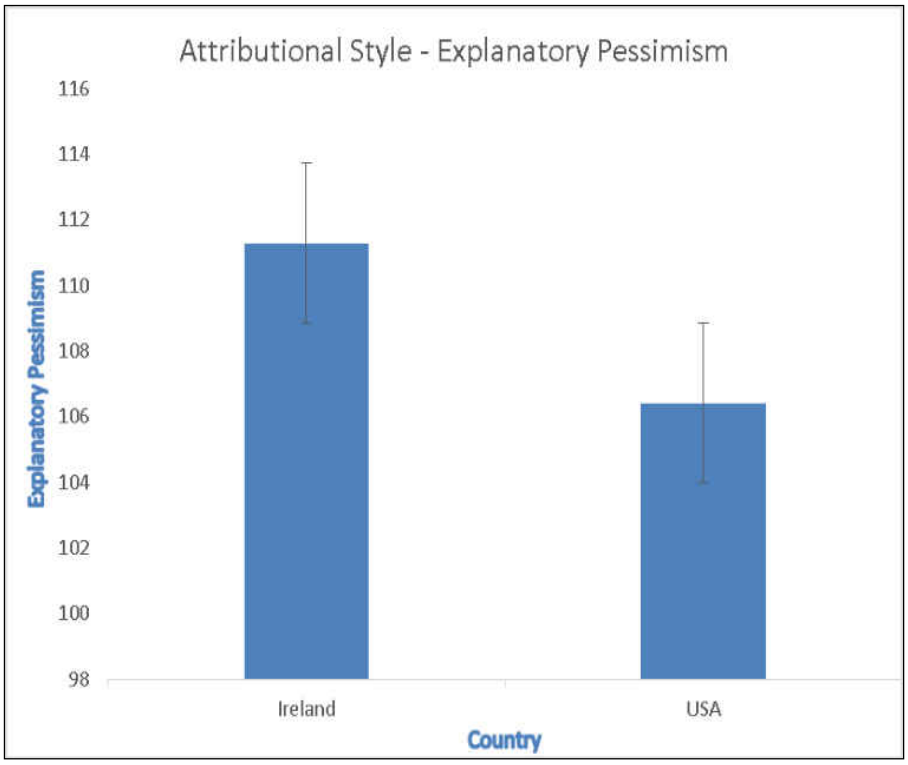


Figure 1. Mean explanatory pessimism relative to country

Explanatory pessimism correlated positively with perceived autocratic, democratic, and training /instruction coaching behaviors for the entire group (see Table 2). However, none of the three correlations were statistically significant at the $p < .05$ level (see Table 2).

Table 2. Relationship between explanatory pessimism and coaching behaviors for all athletes (n=73)

	Explanatory Pessimism	
	Pearson Correlation	*p-value*
Autocratic	0.058	0.314
Democratic	0.163	0.084
Training	0.033	0.390

When correlational analyses based on country were carried out on explanatory pessimism and perceived autocratic, democratic, and training/instruction behaviors, substantial differences were seen in the nature of these relationships (see Table 3). Irish-based student athletes displayed a positive relationship between explanatory pessimism and level of perceived democratic behavior (r = .20), while US-based athletes displayed the opposite relationship (r = - .02). A negative correlation existed between explanatory pessimism and perceived training/instruction behavior (r = -.14) among Irish-based student athletes. Conversely, US-based athletes showed a positive correlation (r = .07) between these two constructs (Table 3).

Table 3. ***Correlations between explanatory pessimism and coaching dimensions in Irish (n = 42) and USA (n = 31) student-athletes, respectively***

	Autocratic		Democratic		Training	
	Ire	USA	Ire	USA	Ire	USA
Explanatory Pessimism	0.04	0.24	0.20	-0.02	-0.14	0.07

Note. Bold & italicised numbers indicate substantial differences between countries.

4.2 Perceptions of Coaching Behavior

Table 4 displays the mean (± *SD*) scores for dimensions of perceived coaching behaviors. A significant between country difference was identified for coaching dimensions using a MANOVA (p = .0016; p < .05). A stepwise discriminant analysis follow-up found the democratic training dimension to account for this significant difference between countries (p = .0006; p < .05). Irish-based athletes perceived significantly higher levels of democratic behaviors from coaches (3.52 ± 0.71) in comparison to US-based athletes (2.80 ± 0.98) (see Table 4).

Table 4. Mean (±SD) perceived coaching behavior dimensions relative to country

	All (n=73)	Ireland (n-42)	USA (n=31)
Training	3.74 (0.98)	3.95 (0.69)	3.46 (1.23)
Democratic	3.21 (0.90)	3.52 (0.71)	2.80 (0.98)
Autocratic	2.19 (0.93)	1.93 (0.73)	2.54 (1.06)
Social	2.89 (0.85)	2.98 (0.82)	2.77 (0.89)
Positive Feedback	3.90 (0.91)	4.17 (0.70)	3.54 (1.05)

4.3 Perceived Coaching Behaviors & Attributional Style: Cultural Differences

Significantly different relationships between perceived coaching behaviors and attributional style were noted between student athletes in Ireland (n = 42) and in the USA (n = 31) (see Table 5).

Training & Instruction: In Irish-based student athletes, perceptions of training and instruction coaching behaviors were positively correlated with globality (r = .18) and stability (r = .35) attributions, with the stability correlation proving statistically significant ($p < .05$). In comparison, US-based student athletes' perceptions of training and instruction coaching behaviors were negatively correlated with globality (r = -.21; $p > .05$). In addition, the positive correlation between training and instruction behaviors and stability in US-based athletes was much weaker (r = .18) than in the Ireland-based group (r = .35). Hierarchical linear regression analysis revealed a significant difference between countries for the relationship of training and instruction with stability (β = -.33; $p < .10$) and with globality (β = -.34, $p < .10$).

Democratic: For student athletes in Ireland, perceived democratic coaching behaviors were significantly and negatively correlated with internality (r = -.35; $p < .05$). A negative, but non-statistically significant correlation was found between democratic behaviors and globality (r = -.02; $p > .05$), while democratic behaviors correlated positively with globality in this group (r = .01; $p > .05$). Opposing trends were found for student athletes in the USA. Perceived democratic coaching behaviors were positively

associated with internality (r = -.11; p > .05) and stability (r = .26; p > .05), and negatively correlated with globality (r = -.10; p > .05). Hierarchical linear regression analysis revealed a significant difference between countries for the relationship of democratic behaviors with internality (β = .34, p < .05).

Autocratic: Contrasting relationships were found between perceptions of autocratic coaching behaviors and athlete attributions between countries. Autocratic behaviors were negatively correlated stability and globality (r = - .33; p < .05 and r = -.09; p < .05), and positively correlated with internality (r = .15; p > .05) in student athletes in Ireland. The opposite was true for US-based student athletes, with autocratic behaviors correlating positively with stability (r = .03; p > .05) and globality (r = .08; p > .05), and negatively with internality (r = - .20; p > .05). Hierarchical linear regression analysis revealed a significant difference between countries for the relationship of autocratic behaviors with both internality (β = -.26, p < .10) and stability (β = .34, p < .05).

Social: Perceived social coaching behaviors correlated negatively with internality (r = -.03; p > .05) and globality (r = .12; p > .05) for student athletes in both countries. Positive correlations between social coaching behaviors and stability existed for both the Ireland sample (r = .04; p > .05) and the USA sample (r =.30; p < .05), with this correlation in the USA group reaching statistical significance. Hierarchical linear regression did not reveal any statistically significant differences between countries for any of these correlations.

Positive Feedback: Contrasting relationships were identified between countries in terms of the impact of perceived positive feedback on attributions. Irish-based athletes showed negative relationships between positive feedback and internality (r = -.21; p > .05) and stability (r = -.13; p > .05) compared to their American-based counterparts who showed a positive relationship between positive feedback and internality (r =.09; p > .05) and stability (r = .40; p < .05). Both groups showed similarly negative correlations between positive feedback and globality. Hierarchical linear

regression revealed a significant difference between countries for the relationship of positive feedback with stability (β = .37, $p < .05$).

Table 5. Correlations between perceived coaching behaviors and attributional dimensions in Irish (n=42) and USA (n=31) student-athletes, respectively.

	Training		**Democratic**		**Autocratic**		**Social**		**Pos. Feedback**	
	Ire	USA	Ire	USA	Ire	USA	Ire	USA	Ire	USA
Internality	-0.04	0.02	***-0.35****	***0.11***	***0.15***	***-0.20***	-0.03	-0.02	-0.21	0.09
Stability	***0.35****	***0.18***	-0.02	0.26	***-0.33****	***0.03***	0.04	0.30*	***-0.13***	***0.40****
Globality	***0.18***	***-0.21***	0.01	-0.10	-0.09	0.08	-0.12	-0.12	-0.18	-0.04

* $p < .05$.

Note. Bold & italicised numbers indicate significant differences between countries.

CHAPTER 5 DISCUSSION

The purpose of the current study was to investigate cultural differences in attributional style and perceived coaching behaviors among student athletes, and to investigate if a relationship exists between environment and athlete attributional tendencies.

5.1 Attributional Style

According to the literature, a number of causal dimensions exist which can be used to describe an individual's attributional style, or tendency to account for event outcomes (Hanrahan & Grove, 1990). These causal dimensions include locus or internality, controllability, stability, globality, and intentionality. The Sport Attributional Style Scale (SASS; Hanrahan & Grove, 1989) which was used in the present study assesses all five of the aforementioned causal dimensions.

No significant differences were shown between countries for any of the five causal dimensions. The nature of the sport selected for the population used in the present study (*N* = 73 cross-country/track & field students) may have had some influence on the lack of differences in attributional style between countries. Cross-country/track & field is generally an individual sport, except for relay teams. Research has shown differences in psychological skills between athletes involved in individual and team sports (Jonker, Elferink-Gemser & Visscher, 2010). In their sample of male and female talented athletes (*N* = 222), it was found that individual sport athletes differed from team sport athletes in terms of self-regulatory skills such as planning and effort.

The requirements of particular sports may result in the development of particular psychological skills and coping mechanisms (Jonker et al., 2010) such as attributional style. This may in part explain the similarities among participants in the present study. In addition, the SASS asked participants to imagine certain situations in

sport, but did not specify whether the event related to college or club athletics (Hanrahan & Grove, 1990). In Ireland, there is a clear distinction between college and club athletics, and the type of subcultures that exist within these environments. In the USA, college athletics fosters a collectivistic culture within the wider individualistic culture of the country (Beyer & Hannah, 2000). In Ireland, college athletics remains a more individualistic in culture. It is possible that while completing the SASS, participants in Ireland focused more on their primary sports environment, the club environment, rather than the collegiate environment as desired by the researcher.

5.1.1 Explanatory Pessimism

The Reformulated Learned Helplessness model uses an attributional framework to describe the effect of uncontrollability on humans (Abramson, Seligman & Teasdale, 1978). This model contends that motivational and emotional parameters are negatively affected by a pessimistic explanatory style. If a person attributes negative events to internal, stable and global factors, and positive events to external, unstable and specific factors, they are more likely to experience helplessness in future situations. According to Abramson et al. (1978) this pessimistic explanatory style is detrimental to athletes in sporting contexts as it leads to a belief that success and failure are uncontrollable and independent of individual efforts, thus reducing motivation to put forth effort.

The Sport Attributional Style Scale (Hanrahan et al., 1989) assesses five attributional dimensions, three of which are used to calculate a composite index for explanatory pessimism – internality, stability and globality. In the current study, both Irish- and US-based athletes displayed medium levels of explanatory pessimism. No significant differences were noted between countries, with America-based student athletes reporting slightly lower, but non-significant, levels of explanatory pessimism. Explanatory pessimism as measured using the SASS can range from 30-210 (Hanrahan & Grove, 1990). In the present sample, Irish athletes had a mean score for explanatory pessimism of 111.29 ± 13.2, while US athletes scored a mean of 106.42 ± 10.7.

According to Martin-Krumm, Sarrazin, Peterson and Famose (2003), athletes high in explanatory pessimism tend to perform worse following a perceived failure than athletes who have a more optimistic explanatory style. Thus, lower explanatory pessimism is advantageous to athletes. Martin-Krumm et al. (2003) also found that individuals with higher explanatory pessimism had lower expectations of future success, and higher levels of anxiety. Participants in the current study reported neither noticeably high or low scores on explanatory pessimism, and no statistically significant differences were found based on country.

5.1.2 Explanatory Pessimism and Perceived Coaching Behaviors

Relationships between explanatory pessimism and democratic, autocratic, and training/instruction coaching behaviors were analysed. Interestingly, opposing interactions between explanatory pessimism and democratic behavior, and explanatory pessimism and training/instruction behavior were seen between countries. In the Ireland sample, greater democratic behavior was associated with greater explanatory pessimism, while the opposite was true in the USA sample, with greater democratic behavior associated with lower explanatory pessimism. In relation to training and instruction, a positive correlation was seen for the USA-based athletes and a negative correlation was found in the Irish-based athletes.

In Irish-based athletes explanatory pessimism was higher than in US-based athletes. Thus, when coaching behaviors are more democratic, and the athlete has greater input, their explanatory pessimistic style may prevail. In the USA group, greater democratic behaviors were associated with less explanatory pessimism, indicating that when these athletes are given greater responsibility and decision-making power they are less likely to attribute behaviors in a maladaptive manner. This relationship was in keeping with previous studies which have found that autonomy-supportive, or democratic coaching styles, enhance athletes' psychological wellbeing (Deci & Ryan, 2002).

5.2 Perceived Coaching Behaviors

Student athletes in the USA and in Ireland perceived similar levels of training/instruction, autocratic, social, and positive feedback behaviors. However, there was a significant difference between countries for perceived levels of democratic coaching behaviors. Ireland-based student athletes perceived significantly higher levels of democratic coaching behavior than their US-based counterparts. Coaches within the US collegiate system have different pressures and stressors than coaches in the Irish collegiate athletic system. The environmental context can impinge on the coach's behavior, which in turn affects the attributional style of the athletes. Factors such as job security (Stebbings, Taylor, Spray & Ntoumanis, 2012) and pressure from administrators (Rocchi, Pelletier & Couture, 2013) are factors which coaching staff in the USA have to contend with to a much greater extent than coaches in Irish collegiate sport due to the professional or administrative environment of NCAA sport. For example, in youth developmental sport basketball coaches (N = 303), pressure from administrators had a significantly negative effect ($p < .001$) on coaches' autonomy-supportive behaviors (Rocchi et al, 2013). Self-determination theory has identified autonomy as one of three needs an individual has for psychological fulfilment (Deci & Ryan, 2000).

5.3 Environment & Attributional Style

The development of a particular explanatory style has been attributed to various environmental factors. Qualitative data from a mixed methods study on NCAA Division I male head golf coaches (n = 8) and male golf players (n = 39) found that coaches credited the development of their athletes' explanatory style to environmental factors such as parents and previous coaches (Wilson, Hawkins & Joyner, 2015).
In the present study environmental factors, as measured by perceptions of coaching behaviors, interacted with attributional style for student athletes in both countries. In the Ireland-based athletes, significant negative correlations were found between

stability and autocratic behaviors (r = -.35; p < .05) and between internality and democratic behaviors (r = -.35; p < .05). Negative correlations were also found for positive feedback and stability (p = -.13; p > .05), while positive correlations were identified for training/instruction behaviors and globality (r = .18, p > .05) and autocratic behaviors and internality (r = .15; p > .05).

In the US-based athletes negative correlations were found for training and instruction and globality (r = -.21; p > .05) and for autocratic behaviors and internality (r = -.20; p > .05). A significant and positive correlation existed between positive feedback and stability (r = .40; p < .05) for the US-based athletes. Democratic behaviors and internality (r = .11; p > .05), and autocratic behaviors and stability (r = .03; p > .05) were also positively correlated in the USA group. Interestingly, the correlational analysis showed how coaching behaviors had differing relationships with attributional dimensions according to country.

5.3.1 Autocratic Behaviors and Sub-Cultures in Collegiate Sport

Higher levels of autocratic behaviors were associated with an optimistic use of stability and globality attributions for US-based student athletes, but pessimistic use of these attributions for the Ireland-based athletes. Stability refers to how variant or invariant a cause is over time (McAuley et al., 1992), with a higher score on the stability construct in the SASS associated with an adaptive explanatory style (Hanrahan & Grove, 1990). Globality refers to how one's attributions carry from one situation to another (Hanrahan & Grove, 1990). Higher globality scores indicate an optimistic use of this dimension, while lower scores indicate a pessimistic use. According to attribution research, optimistic use of stability and globality occurs when an individual attributes positive events to stable and global causes, and negative events to unstable and specific causes (Seligman, 1990; Grove, n.d.).

Opposing relationships were also seen between countries for autocratic behavior and internality, with autocratic behaviors associated with a pessimistic use of internality in US-based athletes compared to an optimistic use of internality in Ireland-

based student athletes. Internality refers to whether the cause of a behavior comes from within the individual, or from something external to the individual (McAuley et al, 1992), with a higher score on the internality construct in the SASS associated with an adaptive explanatory style (Hanrahan et al., 1989).

Interestingly, for student-athletes in the USA, autocratic coaching behaviors were favourable for fostering the optimistic use of the stability and globality attributional dimensions, whereas autocratic behaviors were less favourably associated with an adaptive explanatory style in the Ireland group.

It would seem apparent that when a coach uses an autocratic coaching style, a maladaptive attributional style would be adopted by their athletes, as appeared to be the case in the Ireland-based group. However, research shows that culture can influence how attributions of causality are viewed (Iyengar & DeVoe, 2003). Two dominant culture-types have been identified, collectivism and individualism (Triandis, Bontempo, Villareal, Asai, & Luca, 1988). Collectivism was defined by Hui and Triandis (1986) as a type of culture in which individuals have concern toward others and act based on the bonds formed between group members. Conversely, individualistic cultures exist when bonds between individuals are infrequently perceived or acted on (Hui & Triandis, 1986). According to Triandis et al. (1988, p.324) "*an essential attribute of collectivist cultures is that individuals may be induced to subordinate their personal goals to the goals of some collective, which is usually a stable ingroup."* Thus, athletes in a collectivistic culture may consider the attitudes and opinions of significant others when making decisions (Iyengar & DeVoe, 2003). Intrinsic motivation then tends to be greater in individuals in a collectivistic culture when their choices coincide with the group norm. In a collectivistic culture, it was found that children were more intrinsically motivated when a significant other was involved, as collectivism fosters the idea of respecting significant others' views when making a decision (Iyengar & DeVoe, 2003). In contrast, children from individualistic cultures were more intrinsically motivated when they were given personal choice, rather than being influenced by a significant other (Iyengar & DeVoe, 2003). Therefore, an autocratic coaching style in a collectivistic

culture, as was seen in the USA group, may actually increase intrinsic motivation in athletes, and may not be as detrimental to an adaptive attributional style as one might initially think (Hagger & Chatzisarantis, 2005). In contrast, an autocratic coaching environment in an individualistic culture may increase the likelihood of athletes in this culture adopting a maladaptive attributional style (Iyengar & DeVoe, 2003).

In a country-wide societal sense, both Ireland and America are more individualistic in culture than collectivistic. However, in terms of the collegiate sporting environment, differing subcultures exist within Irish and American collegiate sports teams. Collegiate sport in the USA is organized primarily into team contests, even in individual sports such as cross-country/track & field (Beyer & Hannah, 2000). Sport, in and of itself, would appear to foster a more individualistic culture, whereby individuals strive to beat their competition. However, because of the team-based nature of college athletics in the USA, collectivistic cultures are more often than not developed among college teams (Beyer & Hannah, 2000). In addition, colleges in the USA are filled with groups of people seeking to affiliate to a certain group norm, be it sport, academia, or social. Many students in American higher education belong to some sports team or sorority/fraternity by which they define themselves. In a US collegiate sports team, the collectivistic culture tends to dictate that individuals subordinate their own goals to the group goal (Beyer & Hannah, 2000). In contrast, athletics in Irish colleges generally remains as an individualistic culture. Athletes in Irish colleges do not tend to define themselves by their membership of a certain collegiate sports team. In cross-country/track & field, individuals come together to compete as a group on average four times a year (www.iuaa.org), in comparison to cross-country/track & field athletes in the US who compete on a weekly or bi-weekly basis together. Often, Irish athletes are coached by a club coach, outside of their college, and merely come together to compete in college as a group of individuals. Thus, individual aims and goals are maintained, rather than sacrificed for a group goal. The sense of identity, affiliation and responsibility to the group which is apparent in the US collegiate system is much weaker in the Irish collegiate system. This focus on collectivism versus individualism may in part

explain the differing relationships between autocratic behaviors and attributional style in US- and Ireland-based student athletes.

5.3.2 Training and Instruction Behaviors

Similarly contrasting correlations were seen between countries for training and instruction behaviors and their associations with internality and globality. In the Ireland group higher training and instruction was associated with a concomitant decrease in internality, or pessimistic use of internality and an increase in globality, or an optimistic use of globality (Seligman, 1990). In comparison, in the USA group, higher training and instruction was associated with the optimistic use of internality, and the pessimistic use of globality.

Research has shown that input from coaches can be perceived as informational or controlling, depending on the environment created by the coach. Coaches who deliver an excess of instructional feedback can promote the development of a maladaptive attributional style in their athletes, depending on the environment in which the coach is operating (Hollembeak & Amorose, 2005). For Ireland-based student athletes, higher training and instruction had a negative impact on the internality dimension. Coaches who use controlling or autocratic coaching behaviors can foster a maladaptive attributional style in their athletes (Deci & Ryan, 2002). While the coach ultimately elicits the outcome they desired, the athletes sense of internality can be reduced (Bartholomew et al., 2009). Ultimately, the required response behavior occurs, but the athlete associates the outcome with something which is external to them, i.e. the coach, rather than something which is internal to them.

In contrast, training/instruction behaviors were associated positively with internality in the US-based student athletes. Again, one can refer to the collectivistic culture in which the USA-based collegiate athletes operate (Beyer & Hannah, 2000). In this type of culture, training and instruction behaviors may enhance the attributional tendencies of the athlete as a result of a preference for group and/or significant other approval in decision-making (Iyengar & DeVoe, 2003).

In team sports, high volumes of tactical instruction can result in a narrowing of attention, and a failure to adapt to changing situations (Memmert & Furley, 2007; Weinberg & Gould, 2011). An overreliance on training and instruction from coaches may reduce an athlete's attributional tendency to believe a certain outcome will occur again in a different situation, lowering their globality score on the SASS and increasing the specificity of their attributions to one particular set of circumstances. This relationship may have occurred in the US-based group, with higher training and instruction associated with a pessimistic use of globality. However, the opposite relationship was seen in the Ireland-based athletes, with higher training/instruction actually associated with an enhanced use of globality attributions. Perhaps the coupling of higher democratic coaching behaviors, with training/instruction behaviors, enhanced the likelihood of the Ireland-based athletes using globality in an optimistic manner.

Both countries displayed a positive correlation between training/instruction behaviors and stability, indicating that training/instruction promotes the optimistic use of stability in track and field/cross-country athletes in both the USA and Ireland.

5.3.3 Democratic Behaviors

Correlations for Ireland and the USA between democratic behaviors and internality, stability and globality were directly opposed. Democratic behaviors were associated with the pessimistic use of internality and stability, and optimistic use of globality in Ireland-based athletes. The opposite was true of US-based athletes.

For the Ireland group, these relationships were unexpected. An increase in democratic coaching behaviors was associated with attributing success to external and unstable causes, thus democratic behaviors were more associated with a pessimistic explanatory style (Hanrahan & Grove, 1990). Democratic behaviors had a much more positive association with attributional style in the USA group. In previous studies on culture and explanatory style, cultural differences between American and Chinese undergraduate college students (N = 446) were noted for both optimism and pessimism (Zhu, 2003). American students were found to be significantly more optimistic than

their Chinese counterparts (p = .001). Interestingly, American students also scored higher on the pessimism construct (p < .0005). In the present study, Irish-based student athletes scored higher on the explanatory pessimism construct than their US-based counterparts. Perhaps as a society, the USA is more optimistic. Therefore, when a democratic coaching environment prevails, athletes' inherent optimism, or pessimism, shines through.

5.3.4 Positive Feedback and Social Behaviors

In the USA group, positive feedback behaviors from coaches had a positive association with internality and stability, with higher positive feedback associated with an optimistic use of internality and stability. However, positive feedback was also associated with a pessimistic use of globality in US-based student athletes. For the Irish-based athletes, positive feedback was negatively associated with all three explanatory pessimism dimensions.

While pessimism is often regarded as detrimental to performance and motivation, defensive pessimism can actually improve motivation (Gordon, 2008). Defensive pessimism exists in individuals who, despite having experienced positive outcomes in the past, do not presume they will succeed in the future (Norem & Chang, 2001). This form of pessimism, unlike depressive pessimism, can enable the athlete to use their anxiety in a positive manner, leading to favourable outcomes (Gordon, 2008). Anecdotally, track and field/cross-country athletes have a tendency to presume one successful performance does not mean subsequent performances will be successful, while one poor performance may be interpreted more pessimistically as hindering future performances unless action is taken. Therefore, positive feedback may not be always translate to the athlete as a completely positive behavior, if this sample of athletes are inherently more defensively pessimistic. In the USA group, positive feedback was associated with enhanced stability and internality. Defensive pessimism may factor into this group's pessimistic use of globality associated with positive feedback.

No differences between countries were observed for the relationships between perceived social coaching behaviors and internality, globality or stability. Social behaviors were associated with a pessimistic use of internality and globality in both groups, and an optimistic use of stability.

5.4 Limitations

The length of the SASS, along with its repetitive nature, was a limitation in this research study. A large number of participants had to be excluded from the data analysis for failure to complete the SASS in its entirety. Future studies in this area should narrow the focus to fewer than five attributional dimensions to increase the likelihood of respondents completing the full questionnaire.

This study focused on just one sport. Because of the non-revenue-generating nature of cross-country/track and field within NCAA, between-country differences in coaching environment and attributional style may not have been as pronounced as they might be had a wider range of sports been studied. In the future, the study population could be extended to include a larger variety of sports, including both revenue-generating and non-revenue-generating sports.

5.5 Conclusion

The present study found that attributional style in cross-country/track and field athletes was similar between Ireland- and the USA-based student-athletes. In terms of the coaching environment, Irish-based student athletes perceived significantly higher levels of democratic behavior from their coaches in comparison to the US-based athletes. All other coaching dimensions were similar between the two countries.

An interesting finding in this research were the differences seen in the interactions between coaching behaviors and attributional style between the two countries. In many cases, the interactions between a specific coaching dimension and a

specific attributional dimension were opposite in nature for the Ireland-based athletes versus the USA-based athletes. Athletes' perceptions of their coaches' behavior appear to influence how they make attributions. However, this is dependent on culture. In individualistic sporting cultures, such as in Ireland, coaches who provide individualized training and instruction are most effective in making their athletes optimistic about their performance, but creating a democratic environment where all voices are heard may produce a more pessimistic attributional style. In collectivistic sporting cultures, such as in the USA, coaches who employ autocratic methods will produce a more overall pessimistic team. However, because of the need for input from significant others in a collectivistic culture, autocratic behaviors can enhance the optimistic use of certain attribution dimensions. Taken together, this shows that the culture and coaching environment both factor into athletes' tendencies to explain successes and failures.

REFERENCES

1. Abramson, L., Seligman, M., & Teasdale, J. (1978). Learned helplessness in humans: critique and reformulation. *Journal of Abnormal Psychology, 87* (1), 49-74. Retrieved from: American Psychological Association.

2. Amorose, A & Horn, T. (2000). Intrinsic motivation: Relationships with collegiate athletes' gender, scholarship status, and perceptions of their coaches' behavior. *Journal of Sport & Exercise Psychology, 22,* 63-84. Retrieved from: SPORTDiscus.

3. Bartholomew, K., Ntoumanis, N. & Thogersen-Ntoumani, C. (2009). A review of controlling motivational strategies from a self-determination perspective: implications for sports coaches. *International Review of Sport & Exercise Science, 2* (2), 215-233. DOI: http://dx.doi.org/10.1080/17509840903235330.

4. Ball, C. (2013). Unexplained sporting slumps and causal attributions. *Journal of Sport Behavior, 36* (3), 233-242. Retrieved from: SPORTDiscus.

5. Berkowitz, S., Upton, J., Schnaars, C., & Dougherty, S. (2013, Dec 11). 2013 NCAAF coaches salaries. *USA Today.* Retrieved from: http://www.usatoday.com/sports/college/salaries/.

6. Beyer, J. & Hannah, D. (2000). The cultural significance of athletics in U.S. higher education. *Journal of Sports Management, 14*, 105-132. Retrieved from: North American Society for the Psychology of Sport & Physical Activity.

7. Chelladurai, P. & Selah, S. (1980). Dimensions of leader behavior in sports: Development of leadership scale. *Journal of Sport Psychology, 2,* (1). 34-45. Retrieved from: SPORTDiscus .

8. Cremades, G., Flournoy, B. & Gomez, C. (2012). Scholarship status and gender differences in motivation among U.S. collegiate track and field athletes. *International Journal of Sports Science & Coaching, 7 (2),* 333-344. Retrieved from: http://www.multi-science.co.uk/sports-science&coaching.htm.

9. Deci, E., & Ryan, R. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior.* New York, NY: Plenum Press.

10. Deci, E. & Ryan, R. (2000). The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior. *Psychological Inquiry, 11,* (4), 227-268. Retrieved from: Academic Search Premier.

11. Deci , E. & Ryan, R. (2002). Handbook of Self-Determination Research. Rochester, NY: The University of Rochester Press.

12. Falby, J., Hassmen, P., Kentta, G. & Durand-Bush, N. (2006). Relationship between locus of control, sense of coherence, and mental skills in Swedish elite athletes, *International Journal of Sport and Exercise Psychology*, *4* (2), 111-120. DOI: http://dx.doi.org/10.1080/1612197X.2006.9671788.

13. Gernigon, C. & Delloye, J. (2003). Self-efficacy, causal-attribution, and track athletic performance following unexpected success or failure among elite sprinters. *The Sport Psychologist, 17,* 55-76. Retrieved from: Human Kinetics.

14. Gordon, R. (2008). Attributional style and athletic performance: Strategic optimism and defensive pessimism. *Psychology of Sport & Exercise, 9* (3), pp.336-350. DOI: doi:10.1016/j.psychsport.2007.04.007.

15. Graham, T., Kowalski, K. & Crocker, P. (2002). The contributions of goal characteristics and causal attributions to emotional experience in youth sport participants. *Psychology of Sport & Exercise 3,* 273-291. Retrieved from: Elsevier.

16. Grove, R. (n.d.). The Sport Attributional Style Scale: Summary of scoring procedures and bibliography.

17. Hagger, M. & Chatzisarantis, N. (2005). Applying Social Psychology: The Social Psychology of Exercise and Sport. Berkshire, England: Open University Press

18. Hamilton, P. & Jordan, S. (2000). Most successful and least successful performances: Perceptions of causal attributions in high school track athletes. *Journal of Sport Behavior, 23* (3), pp. 245-254.

19. Hanrahan, S., Grove, R. & Hattie, J. (1989). Development of a questionnaire measure of sport-related attributional style. *International Journal of Sport Psychology, 20,* pp.114-134.

20. Hanrahan, S. & Grove, R. (1990). A short form of the Sport Attributional Style Scale. *The Australian Journal of Science & Medicine in Sport, 22* (4), 97-101. Retrieved from: Research Gate.net.

21. Hollembeak, J. & Amorose, A. (2005). Perceived coaching behaviors and college athletes' intrinsic motivation: a test of self-determination theory. *Journal of Applied Sport Psychology, 17,* 20-36. DOI: http://dx.doi.org/10.1080/10413200590907540.

22. Horn, T. (2008). Advances in Sport Psychology (3rd. Ed.). Champaign IL: Human Kinetics.

23. Hui, C. & Triandis, H. (1986). Individualism-Collectivism: A study of cross-cultural researchers. *Journal of Cross-Cultural Psychology, 17* (2), 225-248. DOI: http://dx.doi.org.libproxy.eku.edu/10.1177/0022002186017002006.

24. Iyengar, S. S., & DeVoe, S. E. (2003). Rethinking the value of choice: Considering cultural mediators of intrinsic motivation. In Hagger, M. & Chatzisarantis, N. (2005). Applying Social Psychology: The Social Psychology of Exercise and Sport. Berkshire, England: Open University Press.

25. Jonker, L., Elferink-Gemser, M. & Visscher, C. (2010). Differences in self-regulatory skills among talented athletes: The significance of competitive level and type of sport. *Journal of Sport Sciences, 28* (8), 901-908. DOI: http://dx/doi.org/10.1080/02640411003797157.

26. LeFoll, D., Rascle, O. & Higgins, N. (2006). Persistence in a putting task during perceived failure: Influence of state-attributions and attributional style. *Applied Psychology: An International Review,* 55 (4), 586-605. DOI: http://dx.doi.org/10.1111/j.1464-0597.2006.00249.x.

27. Lepper, M., Greene, D. & Nisbett, R. (1973). Undermining children's intrinsic interest with extrinsic reward: A test of the "overjustification" hypothesis. *Journal of Personality & Social Psychology, 28* (1)*,* 129-137. DOI: http://dx.doi.org/10.1037/h0035519.

28. Lonsdale, C., Hodge, K. & Rose, E. (2006). Pixel vs. Paper: Comparing online and traditional survey methods in sport psychology. *Journal of Sport & Exercise Psychology, 28* (1), 100-109. Retrieved from: SPORTDiscus.

29. Martin-Krumm, C., Sarrazin, P., Peterson, C. & Famose, J. (2003). Explanatory style and resilience after sports failure. *Personality and Individual Differences, 35,* 1685-1695. DOI: http://dx.doi.org/10.1016/S0191-8869(02)00390-2.

30. Matosic, D., Cox, A. & Amorose, A. (2014). Scholarship status, controlling coaching behavior, and intrinsic motivation in collegiate swimmers: A test of Cognitive Evaluation Theory. *Sport, Exercise, & Performance Psychology, 3* (1), 1-12. DOI: http://dx.doi.org/10.1037/a0031954.

31. Medic, M., Mack, D., Wilson, P. & Starkes, J. (2007). The effects of athletic scholarships on motivation in sport. *Journal of Sport Behavior, 30* (3), 292-306. Retrieved from: http://www.selfdeterminationtheory.org/SDT/documents/2007_MedicMackWiilsonStarkes_JSB.pdf.

32. Memmert, D. & Furley, P. (2011). "I Spy With My Little Eye!": Breadth of Attention, Inattentional Blindness, and Tactical Decision Making in Team Sports. *Journal of Sport & Exercise Psychology, 29,* (3), 365-382. Retrieved from: SPORTDiscus.

33. McAuley, E., Duncan, T., & Russell, D. (1992). Measuring causal attributions: The revised Causal Dimension Scale (CDSII). *Personality and Social Psychology Bulletin*, *18* (5), 566-573. DOI: http://dx.doi.org/10.1177/0146167292185006.

34. Norem, J. & Chang, E. (Ed) (2001). Optimism & pessimism: Implications for theory, research, and practice. Washington, DC: American Psychological Association.

35. Parkes, J. & Mallett, C. (2011). Developing mental toughness: Attributional style retraining in rugby. *The Sport Psychologist, 25*(3), 269-288. Retrieved from: SPORTDiscus.

36. Rees, T., Ingledew, D. & Hardy, L. (2005). Attribution in sport psychology: seeking congruence between theory, research and practice. *Psychology of Sport & Exercise, 6*, pp.189-204. DOI: http://dx.doi.org/10.1016/j.psychsport.2003.10.008.

37. Rotter, J. (1966) Generalized expectancies for internal versus external control of reinforcement. In Leary, M. & Hoyle, R. (2009). Handbook of Individual Differences in Social Behavior. New York: The Guildford Press.

38. Rocchi, M., Pelletier, L. & Couture, L. (2013). Determinants of coach motivation and autonomy supportive coaching behaviors. *Psychology of Sport & Exercise, 14* (6), pp. 852-859. DOI: http://dx.doi.org/10.1016/j.psychsport.2013.07.002.

39. Russell, D. (1982). The Causal Dimension Scale: A measure of how individuals perceive causes. *Journal of Personality & Social Psychology, 42*(6), 1137-1145. DOI: 0022-3514/82/4206-1137S00.7S.

40. Seligman, M. (1990). Learned optimism. New York: Pocket Book.

41. Serin, N., Serin, O. & Sahin, S. (2010). Factors affecting the locus of control of the university students. *Procedia Social and Behavioral Sciences, 2,* (2), 449-452. DOI: http://dx.doi.org/10.1016/j.sbspro.2010.03.041.

42. Smith, R. (2000). A Brief History of the National Collegiate Athletic Association's Role in Regulating Intercollegiate Athletics. *Marquette Sports Law Review, 11,* (1). Retrieved from: http://scholarship.law.marquette.edu/sportslaw/vol11/iss1/5 .

43. Stebbings, J., Taylor, M., Spray, C. & Ntoumanis, N. (2012). Antecedents of perceived coach interpersonal behaviors: the coaching environment and coach psychological well- and ill-being. *Journal of Sport & Exercise Psychology, 34,* pp. 481-502.

44. Steinbach (2009) http://www.athleticbusiness.com/Staffing/contract-bonuses-award-college-coaches-for-all-sorts-of-achievements.html .

45. Stoeber, J. & Becker, C. (2008). Perfectionism, achievement motives, and attribution of success and failure in female soccer players. *International Journal of Psychology, 43* (6), 980-987. DOI: http://dx.doi.org/10.1080/00207590701403850.

46. Triandis, H., Bontempo, R., Villareal, M., Asai, M. & Lucca, N. (1988). Individualism and collectivism: cross-cultural perspectives on self-ingroup relationships. *Journal of Personlality and Social Psychology, 54* (2), 323-328. Retrieved from: American Psychological Association.

47. Vallerand, R. & Losier, G. (1999). An integrative analysis of intrinsic and extrinsic motivat intrinsic and extrinsic motivation in sport, Journal of Applied Sport Psychology, 11:1, 142-169,DOI: http://dx.doi.org/10.1037/0022-0663.71.1.3.

48. Weinberg, R. & Gould, D. (2011). Foundations of Sport & Exercise Psychology (5th Ed.). Champaign: Human Kinetics.

49. Wilson, M., Hawkins, B. & Joyner, B. (2015). An investigation of optimism between players and coaches in NCAA Men's Division I golf. *Journal of Sport Behavior, 38* (1). 118-140. Retrieved from: Academic Search Complete.

50. Zhu, L. (2003). Optimism and well-being in American and Chinese college student samples: A cross-cultural short-term longitudinal study. *ProQuest Dissertations & Theses Full Text*. (305306343). Retrieved from: http://search.proquest.com/docview/305306343?accountid=10628.

APPENDIX A:

Recruitment Email

Department of Exercise & Sport Science

Recruitment Letter – XC/T&F Teams

02/03/2015

Dear Coach,

I am contacting you to inform you of a research project that we are currently conducting at Eastern Kentucky University (EKU) involving cross-country/track & field student athletes. The aim of this study is to compare cross-country/track & field coaching environments in the United States of America, and in Ireland, and to evaluate how athletes in both of these environments make causal attributions for events which occur in the sporting environment.

I have completed a Bachelor of Science in Sport & Exercise at the University of Limerick, Ireland and am currently undertaking a Master's of Science in Physical Education at Eastern Kentucky University, USA. I have been fortunate enough to be involved in cross-country/track & field at both universities. As a result, I have a keen interest in this research study, and in establishing the various differences between athlete attributions and perceptions of the coaching environment in Irish and US colleges.

I am currently in the process of recruiting college cross-country/track & field teams in America and Ireland. Student athlete involvement would require athletes to complete two sport psychology questionnaires focusing on perceptions of the coaching environment (Leadership Scale for Sport – Chelladurai & Selah, 1980) and causal attributions among athletes (Sport Attributional Style Scale – Hanrahan et al, 1989). These questionnaires will be administered electronically via email, and will take approximately fifteen minutes to complete in total.

If you would be interested in your team being involved in this study I would greatly appreciate it. If you have any questions regarding any of the details of this study please don't hesitate to contact me. I would like to take this opportunity to thank you in advance for your interest in the project and I look forward to hearing from you. Yours sincerely;

_____

Úna Britton
Master's of Sciencce, Physical Education at EKU
Department of Exercise & Sport Science,
Eastern Kentucky University,
Richmond, Kentucky, 40475
USA.
Tel: 859-582-2317
Email: una_britton@mymail.eku.edu

APPENDIX B:

Study Information Sheet

Department of Exercise & Sport Science; Eastern Kentucky University (EKU);

Richmond, KY 40475

Subject Information Sheet

Title: The relationship between coaching behaviours & athlete attributional style.

What is the study about?

This project aims to assess how athletes attribute reasons for positive and negative sporting experiences. The project will also assess athlete perceptions of their coach's behaviour. Finally, this project will try to determine if athletes in different coaching environments (Irish vs. American universities) create different attributions for their experiences in sport.

What will I have to do?

In agreeing to participate, you will be requested to complete two questionnaires, one on coaching behaviour (Leadership Scale for Sports), and one on your own personal sports experiences (Sport Attributional Style Scale). These questionnaires will take approximately 15-20 minutes to complete and will be done online.

What are the risks?

There are no obvious risks involved with filling out the questionnaires.

What if I do not want to take part?

You are not obliged to take part in this study. Also, please be assured that you, as the participant, reserve the right to withdraw from the study at any stage (without explanation) and completely without repercussion.

What happens to the information?

All individual recorded information will be treated with the strictest confidence and will not be disclosed to any party other than the investigator, supervisor or yourself (if desired). Your results will remain completely anonymous at all times. These anonymous results will be used in the researcher's master's thesis project.

Who else is taking part in the study?

A number of other track & field/cross-country university teams in America and in Ireland have been asked to participate in this research.

What if I have more questions or do not understand something?

If you have any additional questions regarding any aspect of this study please contact the principal investigator via e-mail (address listed below).

What happens if I change my mind during the study?

You reserve the right to withdraw from the study at any stage (without explanation) if so desired and completely without repercussion.

Contact Informtion of Study Investigators:

Principal Investigator: Úna Britton, una_britton@mymail.eku.edu

Academic Supervisor: Dr. Jim Larkin, jim.larkin@eku.edu

APPENDIX C:

Sport Attributional Style Scale

(Hanrahan et al., 1989)

SPORT ATTRIBUTIONAL STYLE SCALE

Instructions

This questionnaire describes several positive and negative events in sport. Please try to vividly imagine yourself in each situation. If such an event happened to you, what would have caused it? While events may have many causes, we want you to pick only one – the single most likely cause if this event happened to you. Please write this cause in the blank provided. Then, we will ask you to answer some questions about the cause and about the event. To summarise, we want you to:

1. Read each event and vividly imagine it happening to YOU.
2. Decide what you feel would be the single most likely cause of the event if it happened to you.
3. Write the most likely cause in the blank provided.
4. Answer five questions about the cause.
5. Answer two questions about the event.
6. Go to the next event.

Treat each event independently, trying to vividly imagine yourself involved in that situation. Then, answer the questions as they apply to how you would feel. Please note that you can use any part of the rating scale when answering a question. The labels at each end of the scale are only for your guidance. Make sure that your answers accurately reflect how YOU would feel.

PLEASE TURN OVER AND BEGIN

1. YOUR TEAM-MATES CLAIM THAT YOU ARE A VERY GOOD PERFORMER.

a) Write down the single most likely cause: _____

b) Is the cause of your team-mates claiming you are a good performer something about you, or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances — Totally due to me

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

c) In the future when your team-mates are talking about your performance in sport, will this cause be present again? (Circle one number)

Will never again be present — Will always be present

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

d) Is the cause something that just influences how your team-mates refer to your performance in sport, or does it also influence other areas of your life? (Circle one number)

Influences just this particular event — Influences all my life events

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

e) Is the cause something that is controllable by you or others, or is it uncontrollable? (Circle one number)

Controllable — Uncontrollable

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

f) Is the cause something that is intentional or unintentional? (Circle one number)

Intentional — Unintentional

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

2. YOU ARE NOT SELECTED FOR THE STARTING TEAM IN AN IMPORTANT COMPETITION.

a) Write down the single most likely cause: _____

b) Is the cause of your not being selected for the starting team something about you, or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances — Totally due to me

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

c) In the future when a starting team is selected, will this cause be present again? (Circle one number)

Will never again be present — Will always be present

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

d) Is the cause something that just influences whether or not you get selected for the starting team, or does it also influence other areas of your life? (Circle one number)

Influences just this particular event — Influences all my life events

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

e) Is the cause something that is controllable by you or others, or is it uncontrollable? (Circle one number)

Controllable — Uncontrollable

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

f) Is the cause something that is intentional or unintentional? (Circle one number)

Intentional — Unintentional

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

3. YOU PERFORM VERY WELL IN A COMPETITION.

a) Write down the single most likely cause: _____

b) Is the cause of your good performance something about you, or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances						Totally due to me
1	2	3	4	5	6	7

c) In the future when performing in a competition, will this cause be present again? (Circle one number)

Will never again be present						Will always be present
1	2	3	4	5	6	7

d) Is the cause something that just influences your performance in competitions, or does it also influence other areas of your life? (Circle one number)

Influences just this particular event						Influences all my life events
1	2	3	4	5	6	7

e) Is the cause something that is controllable by you or others, or is it uncontrollable? (Circle one number)

Controllable						Uncontrollable
1	2	3	4	5	6	7

f) Is the cause something that is intentional or unintentional? (Circle one number)

Intentional						Unintentional
1	2	3	4	5	6	7

4. YOU HAVE GREAT DIFFICULTY WITHSTANDING A DEMANDING TRAINING SESSSION.

a) Write down the single most likely cause: _____

b) Is the cause of training being difficult for you to withstand something about you, or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances — Totally due to me

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

c) In the future when you are training, will this cause be present again? (Circle one number)

Will never again be present — Will always be present

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

d) Is the cause something that just influences how difficult training is for you to withstand, or does it also influence other areas of your life? (Circle one number)

Influences just this particular event — Influences all my life events

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

e) Is the cause something that is controllable by you or others, or is it uncontrollable? (Circle one number)

Controllable — Uncontrollable

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

f) Is the cause something that is intentional or unintentional? (Circle one number)

Intentional — Unintentional

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

5. THE COACH CRITICISES YOUR PERFORMANCE.

a) Write down the single most likely cause: _____

b) Is the cause of the coach criticising you something about you, or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances — Totally due to me

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

c) In the future when the coach criticizes you, will this cause be present again? (Circle one number)

Will never again be present — Will always be present

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

d) Is the cause something that just influences your coaches comments, or does it also influence other areas of your life? (Circle one number)

Influences just this particular event — Influences all my life events

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

e) Is the cause something that is controllable by you or others, or is it uncontrollable? (Circle one number)

Controllable — Uncontrollable

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

f) Is the cause something that is intentional or unintentional? (Circle one number)

Intentional — Unintentional

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

6. YOUR TEAM-MATES CLAIM THAT YOU ARE NOT A GOOD PERFORMER.

a) Write down the single most likely cause: _____

b) Is the cause of your team-mates claiming you are not a good performer due to something about you, or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances — Totally due to me

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

c) In the future when your team-mates are talking about your performance in sport, will this cause be present again? (Circle one number)

Will never again be present — Will always be present

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

d) Is the cause something that just influences how your team-mates refer to your performance in sport, or does it also influence other areas of your life? (Circle one number)

Influences just this particular event — Influences all my life events

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

e) Is the cause something that is controllable by you or others, or is it uncontrollable? (Circle one number)

Controllable — Uncontrollable

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

f) Is the cause something that is intentional or unintentional? (Circle one number)

Intentional — Unintentional

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

7. YOU ARE SELECTED FOR THE STARTING TEAM IN AN IMPORTANT COMPETITION.

a) Write down the single most likely cause: _____

b) Is the cause of your being selected for the starting team something about you, or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances — Totally due to me

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

c) In the future when a starting team is selected, will this cause be present again? (Circle one number)

Will never again be present — Will always be present

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

d) Is the cause something that just influences whether or not you get selected for the starting team, or does it also influence other areas of your life? (Circle one number)

Influences just this particular event — Influences all my life events

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

e) Is the cause something that is controllable by you or others, or is it uncontrollable? (Circle one number)

Controllable — Uncontrollable

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

f) Is the cause something that is intentional or unintentional? (Circle one number)

Intentional — Unintentional

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

8. YOU PERFORM VERY POORLY IN A COMPETITION.

a) Write down the single most likely cause: _____

b) Is the cause of your poor performance something about you, or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances						Totally due to me
1	2	3	4	5	6	7

c) In the future when performing in a competition, will this cause be present again? (Circle one number)

Will never again be present						Will always be present
1	2	3	4	5	6	7

d) Is the cause something that just influences your performance in competitions, or does it also influence other areas of your life? (Circle one number)

Influences just this particular event						Influences all my life events
1	2	3	4	5	6	7

e) Is the cause something that is controllable by you or others, or is it uncontrollable? (Circle one number)

Controllable						Uncontrollable
1	2	3	4	5	6	7

f) Is the cause something that is intentional or unintentional? (Circle one number)

Intentional						Unintentional
1	2	3	4	5	6	7

9. THE COACH COMPLIMENTS YOUR PERFORMANCE.

a) Write down the single most likely cause: _____

b) Is the cause of the coach complimenting you something about you, or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances						Totally due to me
1	2	3	4	5	6	7

c) In the future when the coach compliments you, will this cause be present again? (Circle one number)

Will never again be present						Will always be present
1	2	3	4	5	6	7

d) Is the cause something that just influences your coach's comments, or does it also influence other areas of your life? (Circle one number)

Influences just this particular event						Influences all my life events
1	2	3	4	5	6	7

e) Is the cause something that is controllable by you or others, or is it uncontrollable? (Circle one number)

Controllable						Uncontrollable
1	2	3	4	5	6	7

f) Is the cause something that is intentional or unintentional? (Circle one number)

Intentional						Unintentional
1	2	3	4	5	6	7

10. YOU HAVE NO DIFFICULTY WITHSTANDING A DEMANDING TRAINING SESSION.

a) Write down the single most likely cause: _____

b) Is the cause of training being easy for you to withstand something about you, or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances — Totally due to me

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

c) In the future when you are training, will this cause be present again? (Circle one number)

Will never again be present — Will always be present

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

d) Is the cause something that just influences how easy training is for you to withstand, or does it also influence other areas of your life? (Circle one number)

Influences just this particular event — Influences all my life events

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

e) Is the cause something that is controllable by you or others, or is it uncontrollable? (Circle one number)

Controllable — Uncontrollable

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

f) Is the cause something that is intentional or unintentional? (Circle one number)

Intentional — Unintentional

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ---------- 6 ---------- 7

APPENDIX D:

Leadership Scale for Sport

(Chelladurai & Saleh, 1980)

Leadership Scale for Sports (LSS)

Using the following scale, please circle a number from 1 to 5 to indicate your level of agreement with each of the statements regarding your COACH.

1	2	3	4	5
Never	**Seldom** 25% of the time	**Occasionally** 50% of the time	**Often** 75% of the time	**Always**

My coach…

	Never				Always
1. Sees to it that every athlete is working to his/her capacity.	1	2	3	4	5
2. Explains to each athlete the techniques and tactics of the sport.	1	2	3	4	5
3. Pays special attention to correcting athlete's mistakes.	1	2	3	4	5
4. Makes sure that his/her part in the team is understood by all the athletes.	1	2	3	4	5
5. Instructs every athlete individually in the skills of the sport.	1	2	3	4	5
6. Figures ahead on what should be done.	1	2	3	4	5
7. Explains to every athlete what he/she should and what he/she should not do.	1	2	3	4	5
8. Expects every athlete to carry out his assignment to the last detail.	1	2	3	4	5
9. Points out each athlete's strengths and weaknesses.	1	2	3	4	5
10. Gives specific instructions to each athlete as to what he/she should do in every situation.	1	2	3	4	5
11. Sees to it that the efforts are coordinated.	1	2	3	4	5
12. Explains how each athlete's contribution fits into the total picture.	1	2	3	4	5
13. Specifies in detail what is expected of each athlete.	1	2	3	4	5
14. Asks for the opinion of the athletes on strategies for specific competitions.	1	2	3	4	5
15. Gets group approval on important matters before going ahead.	1	2	3	4	5
16. Lets his/her athletes share in decision making.	1	2	3	4	5
17. Encourages athletes to make suggestions for ways of conducting practices.	1	2	3	4	5
18. Lets the group set its own goals.	1	2	3	4	5
19. Lets the athletes try their own way even if they make mistakes.	1	2	3	4	5
20. Asks for the opinion of the athletes on important coaching	1	2	3	4	5

matters.					
21. Lets athletes work at their own speed.	1	2	3	4	5
22. Lets the athletes decide on the plays to be used in a game.	1	2	3	4	5
23. Works relatively independent of the athletes.	1	2	3	4	5
24. Does not explain his/her action.	1	2	3	4	5
25. Refuses to compromise a point.	1	2	3	4	5
26. Keeps to himself/herself.	1	2	3	4	5
27. Speaks in a manner not to be questioned.	1	2	3	4	5
28. Helps the athletes with their personal problems.	1	2	3	4	5
29. Helps members of the group settle their conflicts.	1	2	3	4	5
30. Looks out for the personal welfare of the athletes.	1	2	3	4	5
31. Does personal favors for the athletes.	1	2	3	4	5
32. Expresses affection he/she feels for his/her athletes.	1	2	3	4	5
33. Encourages the athlete to confide in him/her.	1	2	3	4	5
34. Encourages close and informal relations with athletes.	1	2	3	4	5
35. Invites athletes to his/her home.	1	2	3	4	5
36. Compliments an athlete for his performance in front of others.	1	2	3	4	5
37. Tells an athlete when he/she does a particularly good job.	1	2	3	4	5
38. Sees that an athlete is rewarded for a good performance.	1	2	3	4	5
39. Expresses appreciation when an athlete performs well.	1	2	3	4	5
40. Gives credit when credit is due.	1	2	3	4	5