University of Alberta

Learning to Cope Among Adolescent Athletes

by

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Abstract

The current research was designed to add to the youth sport coping literature by examining adolescent athletes' stressor appraisals and coping and to understand the way in which athletes learn to cope. Two studies were conducted. Study one was a metastudy (Paterson, Thorne, Canam, & Jillings, 2001) of the qualitative research on stressor appraisals and coping among adolescents in sport. Following database searches, 20 studies were retained for analysis. Meta-data, meta-theory, and meta-method analyses were conducted followed by a final meta-synthesis of findings. Analyses produced four themes: contextual and dynamic stressor appraisals, contextual and dynamic coping, coping resources and processes of acquisition, and social networks as assets and liabilities. These findings highlighted the need for precise use of theory in the study of coping. There was also scope for greater methodological diversity to advance our understanding of coping among adolescent athletes. The second study examined how adolescent athletes learn to cope and the role of social agents (e.g., parents and coaches) in adolescent athletes' acquisition of coping skills. Grounded theory methodology was used (Corbin & Strauss, 2008). Interviews were conducted with 17 athletes (8 females, 9 males, *M*age = 15.6 years), 10 parents (6 mothers, 4 fathers), and 7 coaches. Learning to cope was an experiential process consisting of the athlete – sport experiences and learning through trial and error, reflective practice, and coping outcomes (consistent performance, independence in coping, and persistence in coping). Learning was facilitated by athletes being exposed to multiple situations and reflecting on their coping efforts. Parents and coaches helped athletes learn to cope by creating a supportive context for learning and by using specific strategies to help athletes learn to cope. This research

highlighted the importance of the social context as adolescent athletes learned to cope with stressors in sport and identified specific mechanisms by which parents and coaches influenced the development of coping among young athletes.

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CHAPTER ONE

INTRODUCTION

Context and Rationale

Adolescence is a critical developmental period in the acquisition of coping skills (Skinner & Zimmer-Gembeck, 2007). The use of characteristic ways of coping during adolescence may be an indication of adaptive or maladaptive patterns of coping later in life (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Adolescent athletes must cope with a range of stressors arising from their participation in sport, and failing to cope with stressors may lead to burnout and eventually sport withdrawal (Petlichkoff, 1992; Smith, 1986). In fact, following a retrospective investigation of factors contributing to sport dropout, Butcher, Lindner, and Johns (2002) suggested that "techniques for coping with pressure (stress management) seem necessary" (p. 160). Given that athletes must cope with stressors and that coping is an important feature of human development, adolescents' coping in sport is a particularly relevant area of study for researchers and practitioners in sport psychology (Tamminen & Holt, 2010). Indeed, there is a growing body of sport psychology research examining ways in which young athletes cope with stressors in sport (see Hoar, Kowalski, Gaudreau, & Crocker, 2006; Holt, Hoar, & Fraser, 2005, for reviews).

Coping refers to on-going conscious and deliberate attempts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person (Lazarus, 1999; Lazarus & Folkman, 1984). Lazarus argued that the appraisal of stressors is tied to personal values, goals, and social events of importance, and stated that "a person is only under stress if what happens defeats or endangers

important goal commitment and situational intentions, or violates highly valued expectations" (1999, p. 60). Stressors are subjective appraisals influenced by the strength of an individual's goal commitment and values, and this may explain why an activity that is highly valued, such as sport, would be a context in which athletes may appraise stressors. The types of stressors athletes report – such as not having fun, an overemphasis on winning, conflicts with coaches or opponents, parental pressure to succeed, competitive stressors, and game errors (Anshel & Delaney, 2001; Goyen & Anshel, 1998; Klint & Weiss, 1986; Sirard, Pfeiffer, & Pate, 2006) – are indicative of their goal commitments, values, and intentions. For example, competitive stressors or game errors may relate to athletes' goal of successful performances, while conflicts with coaches or opponents may relate to athletes' valued relationships on a team.

Purpose and Studies

In general terms the current research was designed to add to the youth sport coping literature by examining adolescent athletes' stressor appraisals and coping and the ways in which they learn to cope. The first purpose of this research was to examine adolescent athletes' coping process and establish an interpretive account of 'what is known' within the qualitative youth sport coping research. Study 1 was a metastudy of the qualitative research of stressor appraisals and coping among adolescents in sport. The second purpose of this research was to understand how adolescent athletes learn to cope and the role of social agents (e.g., parents and coaches) in adolescent athletes' acquisition of coping skills. Study 2 was a grounded theory (Corbin & Strauss, 2008) of adolescent athletes' process of learning about coping and the role of parents and coaches within this process. Combined, it is hoped that the knowledge generated from these studies will build

a foundation for coping interventions designed to improve adolescent athletes' experiences in sport.

Stress and Coping Theory in Sport

The most commonly used theory of coping within sport is Lazarus' transactional process-oriented perspective (Lazarus & Folkman, 1984). More recently, Lazarus (1999) described the coping process within a larger cognitive-motivational-relational theory (CMRT) of emotion. This updated theory builds upon the notion of a transactional reciprocal relationship between the individual and the environment, and it combines emotions, coping, and stress as integral parts of one conceptual unit – the emotion process. Lazarus' CMRT involves a primary appraisal of stressors which may result in an appraisal of harm/loss (damage has already occurred), threat (there is a possibility of damage in the future), challenge (difficulties can be overcome) or benefit (gain has occurred); and a secondary appraisal of blame/credit (who or what is responsible for this harm/loss, threat, challenge, or benefit?), coping potential (do I think I can cope with this event?), and future expectations (will this change for the better or worse?). Decisions resulting from appraisals produce a relational meaning, which is the individual's subjective evaluation of the relationship between herself and the environment. Thus, emotions arise or change based on changes in the relational meanings (i.e., subjective evaluations) which an individual constructs about his or her person-environment relationship. Emotions are defined as psychophysiological reactions to ongoing relationships with the environment (Lazarus, 2000), and are classified into four categories: (a) emotions resulting from harms, losses, or threats (e.g., anger, anxiety, fear), (b) emotions resulting from benefits (e.g., happiness, joy), (c) borderline cases

(e.g., hope, relief, compassion), and (d) nonemotions (e.g., confusion, interest, amazement). Lazarus (1999) suggested that even positive emotions can be associated with a negative event. For example, the emotion of relief may result from a threatening situation which has been resolved, while happiness may be associated with fear that favourable conditions may change. Thus, there is considerable complexity to individuals' emotional experiences.

There remains, however, considerable debate about the nature of emotions and the various ways in which they may be categorized (Barrett, 2006). It has been suggested that there exist discrete or basic emotions as well as emotion schemas (Izard, 2007). Basic emotions are characterized as having biological bases; these include interest, joy/happiness, sadness, anger, disgust, and fear. Basic emotions are considered to be few in number, and the experience of basic emotions is short in duration. Emotion schemas, on the other hand, emphasize a process involving an interplay between emotion, appraisal, and higher-order cognition, which may be influenced by individual and cultural differences. Emotion schemas consist of affective components as well as learned labels and concepts, and they are considered the most common emotion experiences in older children and adults. Emotion experiences produced by emotion schemas are "virtually infinite in number and usually longer in duration" than the experience of basic emotions (Izard, 2007, p. 265). Izard proposed a paradigm for the conceptualization of emotions which suggests that discrete emotions are continually present in the human mind, and that perception and the formation of new emotions is influenced by continual interactions between emotions and cognitions.

Lazarus (1999) described the existence of "at least 15 different varieties" (p. 33) of emotion, each of which "tells us something different about how a person has appraised what is happening" (p. 34). Lazarus' emphasis on appraisal processes suggests an adherence to the 'emotion schema' perspective, however he described his perspective as a "categorical approach" (p. 34) and researchers using his theory appear to consider emotions as discrete units. In the sport coping literature there has not been extensive discussion about the implications of considering discrete emotions versus an emotion schema which emphasizes cognitive processes (cf. Robazza, 2006). Nonetheless, coping researchers have embraced Lazarus' (1999) conceptualization of emotions as they relate to stressors and coping in sport.

Stress and Coping Research in Sport

An overview of key findings from the quantitative and qualitative research is provided here to establish the broader context for this Dissertation. To date, researchers have examined aspects of the coping process which include stressor appraisals, coping, emotion, coping effectiveness, variability in coping, and social influences on coping.

Stressor appraisals. Stressors are defined as internal or external demands which an individual appraises as taxing or exceeding his or her resources (Lazarus & Folkman, 1984). The emphasis is on the person's appraisal of the situation and not simply an objective external event. An event which is appraised as a stressor by one individual may not be appraised as a stressor by another individual. Generally, the severity of stressors is influenced by the relative strength of their underlying properties, which include novelty, predictability, event uncertainty, imminence, duration, temporal uncertainty, ambiguity, and timing in relation to life cycle (Lazarus & Folkman, 1984). In sport, unexpected (e.g.,

novel or unpredictable) stressors are perceived as more threatening than expected stressors (Dugdale, Eklund, & Gordon, 2002). Additional dimensions of stressor appraisals relevant to a sport context include self- and other-comparison and inadequate preparation (Thatcher & Day, 2008). As mentioned above, findings have shown that adolescent athletes report stressors which include (but are certainly not limited to) not having fun, an overemphasis on winning, conflicts with coaches or opponents, parental pressure to succeed and competitive stressors or game errors (Anshel & Delaney, 2001; Goyen & Anshel, 1998; Klint & Weiss, 1986; Sirard et al., 2006).

Coping. Coping has been defined as constantly changing "cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141). Coping strategies commonly reported by adolescent athletes include increasing effort, technical adjustments, planning/preparation, relaxation, positive reappraisal, seeking support, and avoidance (e.g., Nicholls, Holt, Polman, & James, 2005). These examples of specific, micro-level strategies reported by athletes have been categorized by researchers into higher-order, macro-level coping functions, such as problem-focused, emotion-focused, or avoidance coping (Kowalski & Gaudreau, 2010; Lazarus & Folkman, 1984). Problem-focused coping refers to actions the individual uses to manage the appraised stressor, whereas emotion-focused coping refers to actions undertaken to manage emotions resulting from the appraised stressor. Avoidance includes cognitive or behavioural efforts to avoid the stressor (see Nicholls & Polman, 2007). Problem-focused strategies include planning/preparation or increasing effort; emotion-focused strategies include relaxation or positive reappraisal; avoidance coping strategies include withdrawal

or distraction. However, evidence suggests that athletes may use a particular coping strategy to fulfill more than one higher-order coping function. For example, seeking support may be considered to be both a problem-focused and an emotion-focused coping strategy (Hoar et al., 2006). Alternative classification of coping strategies includes organization according to task-oriented (e.g., increased effort, relaxation, thought control), distraction-oriented (e.g., distancing, mental distraction), and disengagement coping functions (e.g., venting, disengagement; Gaudreau & Blondin, 2002, 2004).

With regards to young athletes' use of coping strategies, findings suggest that children and early adolescents rely on seeking social support, active problem-solving, detachment, and isolation to cope with stressors, which are considered to be primarily behavioural in nature (see Holt et al., 2005 for a review). Cognitive strategies are thought to emerge as more frequently-used coping strategies during later adolescence, possibly due to changes in cognitive processes (Holt et al., 2005; Compas et al., 2001). More recently, researchers have explored differences in young athletes' coping as a function of pubertal status and age. Nicholls, Polman, Morley and Taylor (2009) found that athletes of different pubertal status used different coping strategies to deal with stressors. Mid-pubertal adolescents (youngest athletes) used distraction significantly more than advanced- and post-pubertal adolescents (oldest athletes). Older athletes were less likely to report using imagery to cope with stressors, and they were more likely to report venting emotions as a coping strategy. Reeves, Nicholls, and McKenna (2009) also found that middle adolescents reported using a wider repertoire of coping strategies than early adolescents. However, one question which remains to be explored is how adolescent

athletes learn to use coping strategies, which was the focus of the second study of this Dissertation.

Emotion. Studies of emotion in youth sport have varied in the extent to which they incorporate and integrate concepts related to stressor appraisals and coping. For example, two studies of emotion among youth sport athletes were conducted by Graham, Kowalski, and Crocker (2002), which assessed goal characteristics (goal importance and goal discrepancy), causal attributions (i.e., locus of causality, stability, and control), and performance discrepancy as they contributed to the prediction of emotions among adolescent soccer players. Results showed that causal attributions and goal characteristics had direct effects in predicting emotions. However, there was only moderate support for the idea that causal attributions and goal characteristics interact to predict emotions. Furthermore, subjective performance discrepancy predicted all five emotions measured (fear, guilt, sadness, self-assurance, and joviality), suggesting that athletes' perceptions of goal attainment predict emotions following a competition.

Bolgar, Janelle, and Giacobbi (2008) examined one specific emotion – anger – among competitive adolescent tennis players as it related to appraisal and the use of coping strategies. The authors found that athletes who were high in reactive anger (a tendency toward immediate angry reactions displayed in response to a perceived negative, threatening, or fear-provoking event) reported significantly more angry outbursts than athletes who had lower reactive anger. Those athletes who reported higher anger control (engaging in proactive behaviours to resolve emotional reactions and impulsive behaviours) also reported greater use of problem- and emotion-focused coping than athletes who reported lower anger control. Encouraging athletes to engage in anger

control or to use coping strategies to deal with angry emotions may minimize anger outbursts.

Further studies that have examined emotions and coping among young athletes include work by Hadd and Crocker (2007) and Nicholls, Hemmings, and Clough (2010). Hadd and Crocker examined the relationship between perceived stress, goal discrepancy, goal importance, self-efficacy, and coping on post-race positive and negative affect among adolescent swimmers. Emotion-focused coping was associated with post-race positive affect, and engaging in coping efforts during competitions influenced athletes' post-competition emotions. Nicholls et al. extended this line of work by examining stressor appraisals, emotions, and coping among international adolescent golfers. The most frequently reported emotion following stressor appraisals was anxiety, and the authors also found evidence that athletes experienced multiple emotions simultaneously at various phases of a competition. However, emotions such as hope, relief, sadness, and pride were reported only after the deployment of coping strategies, lending support to the idea that engaging in coping efforts is related to subsequent emotional states.

Conceptualizations of emotion provide a link to anxiety research. Competitive anxiety is defined as "a specific negative emotional response to competitive stressors" (Mellalieu, Hanton, & Fletcher, 2006, p. 3). In this sense, anxiety research focuses on a specific facet of the broader stress, emotion, and coping process; namely, the appraisal of competitive stressors and the resultant emotion of competitive anxiety. It is important to note that anxiety researchers have made a distinction between state and trait anxiety (Spielberger, 1966); trait anxiety refers to an athlete's predisposition to appraise situations as threatening, while state anxiety is an emotional response to a specific

situation and consists of cognitive and somatic components. Among young athletes, there is support for a three-factor model of competitive trait anxiety consisting of somatic anxiety, worry, and concentration disruption (Grossbard, Smith, Smoll, & Cumming, 2009). Important areas of investigation include athletes' interpretations of competitive anxiety as facilitative versus debilitative, as well as the intensity, frequency, and temporal patterning of anxiety among athletes (see Jones, 1995; Jones & Hanton, 1996; Mellalieu et al., 2006) .

Recently, connections have been made between anxiety, stress, and coping research by incorporating Lazarus' (1999) theory with conceptualizations of anxiety (see Fletcher, Hanton, & Mellalieu, 2006; Hanton, Neil, & Mellalieu, 2008). By incorporating Lazarus' perspective with regards to the appraisal of stressors as opportunities for challenge or benefit, there is scope for overlap with research examining athletes' interpretation of anxiety as facilitative for performance. Theories pertaining specifically to the anxiety-performance relationship will not be addressed in this Dissertation. These theories propose ways in which anxiety impacts performance and they tend to focus on micro-level mechanisms for performance decrements (e.g., by increases in physiological arousal, impaired cognitive processing, or changes in visual attention; Eysenck, 1992; Hardy, 1996; Janelle, 2002). Physiological arousal, cognitive processing, and visual attention may be affected by athletes' coping, however the primary focus of this research was to examine the way in which athletes learn to cope with stressors. Nonetheless, it is important to note that competitive anxiety is considered an emotion resulting from an athlete's interpretation of stressors in a competitive environment.

Variability in coping. One line of research by Gaudreau and colleagues has contributed to understanding changes in young athletes' coping over the course of a competition. Gaudreau, Lapierre and Blondin (2001) reported that athletes' use of some coping strategies (including wishful thinking, seeking social support, suppression of competing activities, behavioural disengagement, increased effort, and active coping) changed over three phases of a competition, while other strategies remained stable (including positive reappraisal, mental disengagement, humor, and venting of emotion). In another study, Gaudreau, Blondin and Lapierre (2002) found that athletes who had high performance-goal discrepancy (i.e., non-attainment of a performance goal) reported changes in their use of coping strategies (behavioural disengagement, increased effort, active coping/planning, suppression, and positive reappraisal) as well as changes in positive and negative affect across phases of a competition. Overall, maintaining a stable level of task-oriented coping strategies across the competition was associated with goal achievement, while decreases in task-oriented coping were associated with non-attainment of goals.

Gaudreau and Blondin (2004) examined athletes' profiles of coping (particular combinations of coping strategies) over the course of a competition and their association with affective states and goal attainment. Athletes who used high levels of task-oriented coping and low levels of disengagement-oriented coping reported lower anger-dejection (e.g., feeling irritable, hostile, upset) during competition. These athletes also reported significantly higher self-referenced goal attainment, positive affective states, and experience of control compared to athletes who used low levels of task-oriented coping and high levels of both disengagement- and distraction-oriented coping. These findings

suggest that adolescent and young adult athletes use different combinations of coping strategies to deal with stressors in sport. Combinations of coping strategies which include high levels of task-oriented coping are associated with positive affect and goal attainment, whereas other combinations may be detrimental to athletes' affect and goal attainment.

Coping effectiveness. Coping effectiveness in sport has been examined from three main perspectives. Folkman (1992) suggested a goodness-of-fit approach which posits that effective coping is a result of a fit between the individual's appraisal of a situation and his or her available coping resources. If a stressor is appraised as controllable, then problem-focused coping is likely to be most effective, whereas uncontrollable stressors call for emotion-focused coping. Another explanation of coping effectiveness is the automaticity perspective, which suggests that athletes with well-learned coping strategies are able to employ them automatically and thus display more effective coping (Dugdale et al., 2002; Gould, Eklund, & Jackson, 1993). A third explanation is that effective coping is related to the choice of appropriate coping strategies within particular contexts (Nicholls, 2007; Nicholls, Holt, & Polman, 2005). This explanation is derived from research by Bolger and Zuckerman (1995), which focused on the role of personality, specifically neuroticism, as it relates to an individual's choice of coping strategy and the effectiveness of their coping. More recently, Folkman and Moskowitz (2004) described this as coping flexibility, or the ability to modify coping according to situational demands.

Eubank and Collins (2000) examined anxiety, coping, and coping effectiveness among 22 youth sport participants and reported that effective coping strategies were

positive self-statements and maintaining a positive focus, while ineffective strategies included a lack of concentration, negative self-statements, uncertainty, and preoccupation with significant others. This study provided some support for the idea that coping effectiveness is related to the choice of coping strategy used by athletes in competitive situations (Nicholls, 2007; Nicholls, Holt, & Polman, 2005).

More recently, Nicholls, Polman, Levy, and Borkoles (2010) examined athletes' perceptions of coping self-efficacy (an individual's confidence in his or her ability to cope effectively) prior to a competition and coping effectiveness following the competition. Coping self-efficacy was found to significantly predict coping effectiveness, suggesting that increasing athletes' perceptions of their coping ability may improve their readiness to cope with potential stressors (Nicholls, Polman, et al., 2010). Athletes' task-oriented coping correlated significantly with coping effectiveness, while disengagement-oriented coping and distraction coping correlated negatively with coping effectiveness. This finding supports work by other researchers in that task-oriented coping is associated with goal achievement and positive affect (e.g., Gaudreau & Blondin, 2002; Nicholls, Holt, Polman, & Bloomfield, 2006).

Social influences on coping. Researchers have recently begun to examine the role of social influences on adolescent athletes' coping. Lafferty and Dorell (2006) explored adolescent swimmers' use of coping strategies and their perceptions of parental support. The authors reported that adolescent athletes used a combination of cognitive and behavioural strategies to deal with stressors, and athletes with high perceptions of parental support used more active coping and increased training to deal with stressors. Athletes who reported lower levels of support used fewer coping strategies overall, and

they used more self-blame and venting of emotions, with less acceptance and positive reinterpretation to deal with stressors. These findings would suggest that athletes who perceive low levels of parental support use less task-oriented coping strategies (such as active coping and increased training) to deal with stressors. Considering that athletes who use fewer task oriented coping strategies report more anger and lower goal attainment (Gaudreau & Blondin, 2004) and less effective coping (Nicholls, Polman, Levy, & Borkoles, 2010), parents appear to play an important role in adolescent athletes' coping.

Coping in Performance and Achievement Contexts

Researchers have examined coping in different performance and achievement contexts including dance, particularly with regards to coping with performance anxiety and injury. In a study of classically trained ballet dancers, coping strategies used to deal with performance anxiety included preparation and planning, using psychological skills (including thought-stopping and imagery), and seeking social support (Walker & Nordin-Bates, 2010). In a study of injury and performance pain among professional ballet and contemporary dancers, coping strategy use depended on the type of pain the athlete appraised (Anderson & Hanrahan, 2008). Dancers coping with performance pain (acute, controllable pain due to performance demands) used active coping strategies and ignored their pain, while dancers coping with injury pain (chronic, uncontrollable pain due to injury) used avoidance coping (avoiding activities which would make pain worse) and catastrophizing (dwelling on pain while injured).

In the context of music performance, researchers have focused primarily on the experience of music performance anxiety (e.g., Clark, 1989; Kenny & Osborne, 2006; Kirchner, 2003). However, a systematic review of treatments for music performance

anxiety revealed that interventions which improved performance quality included combinations of behaviour rehearsal (increased practice), cognitive restructuring, self-instruction (self-talk), attentional training, and progressive muscle relaxation (Kenny, 2005).

School and academic domains are considered achievement contexts in their own right. Coping with stressors in school is an important part of academic success and school completion, however "very little research has been conducted on stress and coping in relation to school" (Frydenberg, 2008, p. 212). Recent studies in academic settings have focused on broad factors such as cross-cultural examinations of academic achievement (for a review see Yu & Patterson, 2010), student engagement (Wang & Holcombe, 2010), peer groups (Hamm, Schmid, Farmer, & Locke, 2011), and bullying (Ma, Phelps, Lerner, & Lerner, 2009). Relatively less research has focused on students' coping with specific stressors, however some studies have examined coping and academic achievement (Fad & Ryser, 1993; Mantzicopoulos, 1990), coping and goal orientations (e.g., Brdar, Rijavec & Loncaric, 2006), and coping with test anxiety (Wessel & Mersch, 1994). Generally, students using problem-focused, active, or positive coping strategies are reported to have higher academic achievement, self-esteem, and self-worth. Helpless and avoidant responses (e.g. avoiding or ignoring problem) and externalizing behaviours (e.g., aggression) are considered to be maladaptive responses to school stressors and have negative associations with achievement and self-perceptions among students (for a review see Skinner & Wellborn 1997).

Researcher-as-Instrument Statement

This dissertation was an interpretive examination of adolescent athletes' coping. The interpretivist paradigm is a worldview which informs the researcher about what is important and how research may be conducted (Annells, 1996; Denzin & Lincoln, 1994). Each paradigm makes assumptions regarding ontological, epistemological, and methodological questions. Ontology deals with the nature and form of reality, and considers what can be known about reality. Interpretivism assumes a relativist ontology, which acknowledges that there are multiple realities which collectively exist (Sparkes, 1992). Epistemology deals with the nature of the relationship between the researcher and what can be known. Interpretivism subscribes to a subjectivist epistemology, whereby the researcher and the knowledge he or she seeks are subjectively and interactively linked. Methodological questions deal with the way in which the researcher sets out to discover knowledge. Within an intepretivist paradigm, the researcher engages in a process where knowledge is a co-construction between the researcher and the participants. Thus, data collection within an interpretivist paradigm becomes a means of creating and understanding participants' multiple perspectives through dialogue and interactions between the researcher and the participants (Denzin & Lincoln, 1994).

Within interpretive inquiry, the researcher's pre-understandings of a context can be described as forestructures of understanding (Prasad, 2005), which represent a concerned engagement with the area and provide guidance and direction to future interpretations. It is important to note that the interpretivist paradigm acknowledges the researcher's own experiences as interpretive knowledge, and that past experiences, research, and understandings are considered valuable and important attributes, since

research should be guided by a genuine engagement with the entry question (Ellis, 1998). Although researchers operating within positivist or post-positivist paradigms may view this as allowing subjectivities to contaminate one's findings, researchers working with post-modern sensibilities understand that these subjectivities are necessary to conduct research in a given area. Hence, it is important to provide a researcher-as-instrument statement.

Initially, I became interested in youth sport coping research because of its potential to impact sport dropout. I dropped out of competitive sports in high school and although I have remained involved in recreational sports and physical activity, I believe my sport experiences as an adolescent were important in developing empathy for adolescent athletes who experience stressors in the course of their sport participation. For my Master's degree I examined stressors and coping among female adolescent athletes, which encouraged me to examine concepts related to the development of coping. I became interested in understanding why certain athletes appear to cope better than others, despite having similar sport backgrounds and levels of experience in their sport. I also became interested in trying to appreciate multiple viewpoints regarding one situation or stressful episode. My prior experiences have reinforced my belief that stress and coping is a subjective experience which is different for every athlete, although there are some broad similarities in terms of the ways in which athletes cope with stressors. Taking an interpretive approach to the study of coping among adolescent athletes was one way to understand athletes' personal experiences and perspectives of their own coping.

Overview of Studies

Study 1. Different facets of the stress and coping process have typically been examined separately. For example, researchers have examined aspects of athletes' stressor appraisals (Thatcher & Day, 2008), emotions (Graham et al., 2002), the types of coping strategies used to deal with appraised stressors (e.g., Holt & Mandigo, 2004; Nicholls et al., 2005), and coping effectiveness (Nicholls, 2007). It has been difficult for researchers to simultaneously assess athletes' appraisals of stressors, emotional experiences, use of coping strategies and perceptions of coping effectiveness. Due to the complex nature of the coping process, these aspects have typically been thought of as discrete components for ease of analysis. However Lazarus (1999) noted that analysis of separate variables:

> … is not enough to produce the understanding we want, because it reduces what we learn to separate variables that in nature operate in a part-whole relationship. To truly understand the parts have to be synthesized back into nature's whole (pp. 283-284).

By pulling together and synthesizing 'islands of knowledge'(Yick, 2008) from studies of athletes' stressor appraisals, emotions, use of coping strategies, changes in coping over time, and perceptions of coping effectiveness, youth sport coping research could be advanced further than might be possible in a 'one-shot study' or by conducting an investigation of a single aspect of the coping process. Thus, the first purpose of this research was to examine adolescent athletes' coping process and establish an interpretive account of 'what is known' within the qualitative youth sport coping research to enable an understanding of the interaction between specific components of the coping process.

Study 2. In addition to understanding adolescent athletes' coping process, it is equally important to understand how adolescent athletes learn to cope with stressors. For example, research shows that older, more experienced athletes tend to have a greater repertoire of coping responses than younger, less experienced athletes (Holt et al., 2005; Reeves et al., 2009; Nicholls et al., 2009). Although there is evidence of differences in coping strategy use between older and younger athletes, it remains unclear how athletes learn to cope with stressors.

Social influences may shape the development of adaptive or maladaptive coping responses (Compas et al., 2001; Holt et al., 2005; Skinner, Edge, Altman, & Sherwood, 2003; Skinner & Zimmer-Gembeck, 2007). Parents and coaches are two of the most important members of athletes' social network, and their influence has been examined in a sport context as it relates to motivation, achievement goals, confidence, self-concept, and enjoyment (Brustad, 1996; Fredricks & Eccles, 2004; Weiss & Williams, 2004). Less research has focused on how parents and coaches may influence athletes' coping. One study which began to address this issue was conducted by Lafferty and Dorrell (2006), who examined the relationship between adolescent athletes' use of coping strategies and their perceptions of parental support. As noted previously, athletes who reported higher levels of parental support used active coping and increased training to deal with stressors, whereas athletes who reported lower levels of support used coping strategies such as self-blame, venting of emotions, and less acceptance and positive reinterpretation to deal with stressors. Parents (and presumably coaches) are likely to play a large role in shaping the development of adolescent athletes' coping, however little research to date has examined this issue. Thus, the second purpose of this Dissertation was to understand how

adolescent athletes learn to cope and the role of social agents (e.g., parents and coaches) in adolescent athletes' acquisition of coping skills.

These two studies were designed to shed light on the nature of adolescent athletes' coping and the way in which athletes learn to cope with stressors. The knowledge generated from these two studies contributes to an understanding of athletes' coping development and will hopefully lead to interventions to improve adolescent athletes' experiences in sport.

References

Anderson, R., & Hanrahan, S. J. (2008). Dancing in pain: Pain appraisal and coping in dancers. *Journal of Dance Medicine & Science, 12,* 9-16.

Annells, M. (1996). Grounded theory method: Philosophical perspectives, paradigm of inquiry, and postmodernism. *Qualitative Health Research, 6,* 379-393.

Anshel, M. H., & Delaney, J. (2001). Sources of acute stress, cognitive appraisals, and coping strategies of male and female child athletes. *Journal of Sport Behavior, 24,* 329-353.

Barrett, L. F. (2006). Solving the emotion paradox: Categorization and the experience of emotion. *Personality and Social Psychology Review, 10,* 20-46.

Bolgar, M. R., Janelle, C., & Giacobbi, P. R. (2008). Trait anger, appraisal, and coping differences among adolescent tennis players. *Journal of Applied Sport Psychology, 20,* 73-87. doi:10.1080/10413200701790566

Bolger, N., & Zuckerman, A. (1995). A framework for studying personality in the stress process. *Journal of Personality and Social Psychology, 69,* 890-902.

Brdar, I., Rijavec, M., & Loncaric, D. (2006). Goal orientations, coping with school failure and school achievement. *European Journal of Psychology of Education, 21,* 53-70.

Brustad, R. J. (1996). Attraction to physical activity in urban schoolchildren: Parental socialization and gender influences. *Research Quarterly for Exercise and Sport, 67,* 316-323.

Butcher, J., Lindner, K. J., & Johns, D. P. (2002). Withdrawal from competitive youth sport: A retrospective ten-year study. *Journal of Sport Behavior, 25,* 145-163.

Clark, D. B. (1989). Performance-related medical and psychological disorders in instrumental musicians. *Annals of Behavioral Medicine, 11,* 28-34.

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin, 127,* 87-127. doi:10.1037//0033-2909.127.1.87

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.

Denzin, N. K., & Lincoln, Y. (1994). Entering the field of qualitative research. In N. K. Denzin & Y. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 1-17). Thousand Oaks, CA: Sage.

Dugdale, J. R., Eklund, R. C., & Gordon, S. (2002). Expected and unexpected stressors in major international competition: Appraisal, coping and performance. *The Sport Psychologist, 16,* 20-33.

Ellis, J. (1998). Narrative inquiries with children and youth. In J. Ellis (Ed.), *Teaching from understanding: Teacher as interpretive inquirer* (pp. 35-55). New York: Taylor & Francis.

Eubank, M., & Collins, D. (2000). Coping with pre- and in-event fluctuations in competitive state anxiety: A longitudinal approach. *Journal of Sport Sciences, 18,* 121-131.

Eysenck, M. W. (1992). *Anxiety: The cognitive perspective.* London: Lawrence Erlbaum.

Fad, K. S., & Ryser, G. R. (1993). Social/behavioural variables related to success in general education. *Remedial and Special Education, 14*(1), 25-35.

Fletcher, D., Hanton, S., & Mellalieu, S. D. (2006). An organizational stress review: Conceptual and theoretical issues in competitive sport. In S. Hanton & S. D. Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 321-374). New York: Nova Science Publishers.

Folkman, S. (1992). Making the case for coping. In B. N. Carpenter (Ed.), *Personal coping: Theory, research, and application* (pp. 31-46). Westport, CT: Praeger/Greenwood.

Folkman, S., & Moskowitz, J. T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology, 55*, 745-774.

Fredricks, J. A., & Eccles, J. S. (2004). Parental influences on youth involvement in sports. In M.R. Weiss (Ed.), *Developmental sport and exercise psychology: A lifespan perspective* (pp. 145-164). Morgantown, WV: Fitness Information Technology.

Frydenberg, E. (2008). *Adolescent coping: Advances in theory, research and practice.* New York: Routledge.

Gaudreau, P., & Blondin, J. P. (2002). Development of a questionnaire for the assessment of coping strategies employed by athletes in competitive sport settings. *Psychology of Sport and Exercise, 3,* 1-34. doi:10.1016/S1469-0292(01)00017-6

Gaudreau, P., & Blondin, J. P. (2004). Differential associations of dispositional optimism and pessimism with coping, goal attainment, and emotional adjustment during sport competition. *International Journal of Stress Management, 11*, 245-269. doi: 10.1037/1072-5245.11.3.245

Gaudreau, P., Blondin, J. P., & Lapierre, A.-M. (2002). Athletes' coping during a competition: Relationship of coping strategies with positive affect, negative affect, and performance-goal discrepancy. *Psychology of Sport and Exercise, 3,* 125-150.

Gaudreau, P., Lapierre, A.-M., & Blondin, J. P. (2001). Coping at three phases of a competition: Comparison between pre-competitive, competitive, and post-competitive utilization of the same strategy. *International Journal of Sport Psychology, 32,* 369-385.

Gould, D., Eklund, R. C., & Jackson, S. (1993). Coping strategies used by U.S. Olympic wrestlers. *Research Quarterly for Exercise and Sport, 64,* 83-93.

Goyen, M. J., & Anshel, M. H. (1998). Sources of acute competitive stress and use of coping strategies as a function of age and gender. *Journal of Applied Developmental Psychology, 19,* 469-486.

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

Grossbard, J. R., Smith, R., Smoll, F. L., & Cumming, S. P. (2009). Competitive anxiety in young athletes: Differentiating worry, somatic anxiety, and concentration disruption. *Anxiety, Stress & Coping, 22,* 153-166.

Hadd, V. N., & Crocker, P. R. E. (2007). The effect of stress-related factors on post-performance affects in competitive adolescent swimmers. *International Journal of Sport and Exercise Psychology, 5,* 142-157.

Hamm, J. V., Schmid, L., Farmer, T. W., & Locke, B. (2011). Injunctive and descriptive peer group norms and the academic adjustment of rural early adolescents. *Journal of Early Adolescence, 31,* 41-73. doi: 10.1177/0272431610384486

Hanton, S., Neil, R., & Mellalieu, S. D. (2008). Recent developments in competitive anxiety direction and competition stress research. *International Review of Sport and Exercise Psychology, 1,* 45-57.

Hardy, L. (1996). Testing the predictions of the cusp catastrophe model of anxiety and performance. *The Sport Psychologist, 10,* 140-156.

Hoar, S., Kowalski, K. C., Gaudreau, P., & Crocker, P. R. E. (2006). A review of coping in sport. In S. Hanton & S. D. Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 47-90). New York: Nova Science.

Holt, N. L., Hoar, S., & Fraser, S. N. (2005). How does coping change with development? A review of childhood and adolescent sport coping research. *European Journal of Sport Science, 5,* 25-39. doi:10.1080/17461390500076915

Holt, N. L., & Mandigo, J. L. (2004). Coping with performance worries among male youth cricket players. *Journal of Sport Behavior, 27,* 39-57.

Izard, C. E. (2007). Basic emotions, natural kinds, emotion schemas, and a new paradigm. *Perspectives on Psychological Science, 2,* 260-280.

Janelle, C. M. (2002). Anxiety, arousal and visual attention: A mechanistic account of performance variability. *Journal of Sports Sciences, 20,* 237-251.

Jones, G. (1995). More than just a game: Research developments and issues in competitive state anxiety in sport. *British Journal of Psychology, 86,* 449-479.

Jones, G., & Hanton, S. (1996). Interpretation of anxiety symptoms and goal attainment expectations. *Journal of Sport & Exercise Psychology, 18,* 144-158.

Kenny, D. T. (2005). A systematic review of treatments for music performance anxiety. *Anxiety, Stress, and Coping, 18,* 183-208. doi: 10.1080/10615800500167258

Kenny, D. T., & Osborne, M. S. (2006). Music performance anxiety: New insights from young musicians. *Advances in Cognitive Psychology, 2,* 103-112. doi: 10.2478/v10053-008-0049-5

Kirchner, J. M. (2003). A qualitative inquiry into musical performance anxiety. *Medical Problems of Performing Artists, 18,* 78-82.

Klint, K. A., & Weiss, M. R. (1986). Dropping in and dropping out: Participation motives of current and former youth gymnasts. *Canadian Journal of Applied Sport Sciences, 11,* 106-114.

Kowalski, K. C., & Gaudreau, P. (2010). Stress and coping in sport and exercise. In P. R. E. Crocker (Ed.), *Sport and exercise psychology: A Canadian perspective* (2nd ed., pp. 139-165). Toronto: Pearson.

Lafferty, M. E., & Dorrell, K. (2006). Coping strategies and the influence of perceived parental support in junior national age swimmers. *Journal of Sports Sciences, 24,* 253-259. doi:10.1080/17461390500188702

Lazarus, R. S. (1999). *Stress and emotion: A new synthesis.* New York: Springer.

Lazarus, R. S. (2000). Cognitive-motivational-relational theory of emotion. In Y. L. Hanin (Ed.), *Emotion in sport* (pp. 39-63). Champaign, IL: Human Kinetics.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer.

Ma, L., Phelps, E., Lerner, J. V., & Lerner, R. M. (2009). Academic competence for adolescents who bully and who are bullied: Findings from the 4-H study of positive youth development. *Journal of Early Adolescence, 29,* 862-897. doi: 10.1177/0272431609332667

Mantzicopoulos, P. (1990). Coping with school failure: Characteristics of students employing successful and unsuccessful coping strategies. *Psychology in Schools, 27,* 138-143.

Mellalieu, S. D., Hanton, S., & Fletcher, D. (2006). A competitive anxiety review: Recent directions in sport psychology research. In S. Hanton & S. D. Mellalieu (Eds.) *Literature reviews in sport psychology* (pp. 1-45). New York: Nova Science.

Nicholls, A. (2007). A longitudinal phenomenological analysis of coping effectiveness among Scottish international adolescent golfers. *European Journal of Sport Science, 7,* 169-178.

Nicholls, A., Hemmings, B., & Clough, P. J. (2010). Stress appraisals, emotions, and coping among international adolescent golfers. *Scandinavian Journal of Medicine & Science in Sports, 20,* 346-355. doi: 10.1111/j.1600-0838.2009.00894.x

Nicholls, A., Holt, N. L., & Polman, R. C. J. (2005). A phenomenological analysis of coping effectiveness in golf. *The Sport Psychologist, 19,* 111-130.

Nicholls, A., Holt, N. L., Polman, R. C. J., & Bloomfield, J. (2006). Stressors, coping, and coping effectiveness among rugby union players. *The Sport Psychologist, 20,* 314-329.

Nicholls, A., Holt, N. L., Polman, R. C. J., & James, D. W. G. (2005). Stress and coping among international adolescent golfers. *Journal of Applied Sport Psychology, 17,* 333-340. doi:10.1080/10413200500313644

Nicholls, A., & Polman, R. C. J. (2007). Stressors, coping, and coping effectiveness among players from the England under-18 rugby union team. *Journal of Sport Behavior, 30,* 199-218.

Nicholls, A., Polman, R. C. J., Levy, A. R., & Borkoles, E. (2010). The mediating role of coping: A cross-sectional analysis of the relationship between coping self-efficacy and coping effectiveness among athletes. *International Journal of Stress Management, 17,* 181-192. doi: 10.1037/a0020064

Nicholls, A., Polman, R. C. J., Morley, D., & Taylor, N. J. (2009). Coping and coping effectiveness in relation to a competitive sport event: Pubertal status, chronological age, and gender among adolescent athletes. *Journal of Sport & Exercise Psychology, 31,* 299-371.

Petlichkoff, L. M. (1992). Youth sport participation and withdrawal: Is it simply a matter of fun? *Pediatric Exercise Science, 4,* 105-110.

Prasad, P. (2005). *Crafting qualitative research: Working in the postpositivist traditions.* Armonk, NY: M. E. Sharpe.

Reeves, C. W., Nicholls, A., & McKenna, J. (2009). Stressors and coping strategies among early and middle adolescent Premier League academy soccer players: Differences according to age. *Journal of Applied Sport Psychology, 21,* 31-48. doi:10.1080/10413200802443768

Robazza, C. (2006). Emotion in sport: An IZOF perspective. In S. Hanton & S. D. Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 127-158). New York: Nova Science.

Sirard, J. R., Pfeiffer, K. A., & Pate, R. R. (2006). Motivational factors associated with sports program participation in middle school students. *Journal of Adolescent Health, 38,* 696-703.

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin, 129,* 216-269. doi:10.1037/0033-2909.129.2.216

Skinner, E. A., & Wellborn, J. G. (1997). Children's coping in the academic domain. In S. A. Wolchik & I. N. Sandler (Eds.), *Handbook of children's coping: Linking theory and intervention* (pp. 387-422). New York: Plenum Press.

Skinner, E. A., & Zimmer-Gembeck, M. J. (2007). The development of coping. *Annual Review of Psychology, 58,* 119-144. doi:10.1146/annurev.psych.58.110405.085705

Smith, R. E. (1986). Toward a cognitive-affective model of athletic burnout. *Journal of Sport Psychology, 8,* 36-50.

Sparkes, A. C. (1992). The paradigms debate. In A. C. Sparkes (Ed.), *Research in physical education and sport* (pp. 9-60). Washington, DC: Falmer Press.

Spielberger, C. D. (1966). Theory and research on anxiety. In C. D. Spielberger (Ed.), *Anxiety and behavior* (pp. 3-20). New York: Academic Press.

Tamminen, K. A., & Holt, N. L. (2010). Female adolescent athletes' coping: A season-long investigation. *Journal of Sports Sciences, 28,* 101-114. doi:10.1080/02640410903406182

Thatcher, J., & Day, M. C. (2008). Re-appraising stress appraisals: The underlying properties of stress in sport. *Psychology of Sport and Exercise, 9,* 318-335. doi: 10.1016/j.psychsport.2007.04.005

Walker, I. J., & Nordin-Bates, S. M. (2010). Performance anxiety experiences of professional ballet dancers: The importance of control. *Journal of Dance Medicine & Science, 14,* 133-145.

Wang, M. T., & Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. *American Educational Research Journal, 47,* 633-662. doi: 10.3102/0002831209361209

Weiss, M., & Williams, L. (2004). The why of youth sport involvement: A developmental perspective on motivational processes. In M. R. Weiss (Ed.), *Developmental sport and exercise psychology: A lifespan perspective* (pp. 223-268). Morgantown, WV: Fitness Information Technology.

Wessel, I., & Mersch, P. P. A. (1994). A cognitive-behavioural group treatment for test-anxious adolescents. *Anxiety, Stress, and Coping, 7,* 149-160.

Yick, A. G. (2008). A metasynthesis of qualitative findings on the role of spirituality and religiosity among culturally diverse domestic violence survivors. *Qualitative Health Research, 18,* 1289-1306. doi:10.1177/1049732308321772

Yu, F., & Patterson, D. (2010). Examining adolescent academic achievement: A cross-cultural review. *The Family Journal, 18,* 324-327. doi: 10.1177/1066480710372071

CHAPTER TWO

A Meta-Study of Qualitative Research Examining Stressor Appraisals and Coping Among Adolescents in Sport

A version of this chapter has been published. Tamminen, K. A., & Holt, N. L. (2010). A meta-study of qualitative research examining stressor appraisals and coping among adolescents in sport. *Journal of Sports Sciences, 28,* 1563 – 1580. doi: 10.1080/02640414.2010.512642. Reprinted by permission of the publisher. Taylor & Francis, Ltd. http://www.informaworld.com

Coping is described as a conscious attempt by individuals to manage situations they perceive to be stressful (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Lazarus, 1999). Coping is a complex, dynamic process including factors such as appraisal, coping responses, emotions, and coping effectiveness (e.g. Lazarus, 1999; Lazarus & Folkman, 1984). Adolescence is an important developmental period during which there are critical changes in the ways individuals learn to cope (Skinner & Zimmer-Gembeck, 2007), and the coping patterns individuals exhibit during adolescence may be indicative of adaptive or maladaptive patterns of coping in adulthood (Compas et al., 2001). Therefore, at a general level it is particularly important to study coping among adolescents. More specifically, it is important to study the ways in which adolescents cope with stressors experienced in sport contexts, which can include stressors arising from their coaches over-emphasizing winning, conflicts with opponents, or parental pressures to succeed (Anshel & Delaney, 2001; Goyen & Anshel, 1998; Sirard, Pfeiffer, & Pate, 2006).

Qualitative approaches are useful for studying coping because coping is a subjective process and different types of qualitative research can be used to examine personal meanings and processes (Denzin & Lincoln, 2005). Although a review of adolescent coping literature was published fairly recently (Holt, Hoar, & Fraser, 2005), it focused primarily on quantitative studies and developmental issues. No previous reviews have sought specifically to synthesize the findings from the growing number of qualitative studies in this area. The current study was designed to create an integrated synthesis of the qualitative literature to establish "what is known" and create a conceptual model depicting the state of knowledge about adolescent coping in sport.

The qualitative adolescent sport coping literature may benefit from being subjected to an integrative review for several reasons which provided the rationale for this research. First, researchers tend to use different terms to conceptualize 'stressors,' which means that the literature as a whole is somewhat fragmented because different terms have been used to describe similar concepts. Second, studies have examined coping at different 'levels.' For example, some researchers have examined instances of coping with specific stressor appraisals within a competitive situation (e.g. Nicholls & Polman, 2008), whereas others have focused on contextual factors that influence stressor appraisals and coping (e.g. Reeves, Nicholls, & McKenna, 2009). These types of studies are clearly related, but as yet there are no published accounts depicting how the findings from conceptually different research can be integrated.

Finally, before commencing the current study, it was apparent that Lazarus' theoretical work tended to dominate the adolescent sport coping literature. However, because Lazarus' (1999) cognitive-motivational-relational theory is complex and wide ranging, it was unlikely that many qualitative studies would have embraced all the components of the theory. Neil and colleagues observed that sport stress and coping research has tended to "focus on separate facets of this stress process" (Neil, Mellalieu, & Hanton, 2009, p. 194). Therefore, if different qualitative studies have examined different aspects of the theory, an integrated review could help bring together related studies to present a more complete description of adolescent athletes' coping than could be achieved by a single study alone. In fact, Lazarus (2000) noted that studies often reduce the coping process to discrete parts without reconstructing these parts to understand the process as a whole. He suggested such research designs can fractionate our understanding of the

complexity of coping, thus restricting knowledge generation and the creation of potentially useful interventions. He has also suggested that “after we have broken a phenomenon down in a reductive analytic search for causal components - that is, part processes - the whole phenomenon must still be resynthesized to what it is in nature” (Lazarus, 1999, p. 195). The current study was conducted to resynthesize previous findings to help establish more about the phenomenon of adolescents' coping in sport.

In summary, the main aim of this study was to create an integrated theoretical perspective of the qualitative adolescent sport stressor appraisal and coping literature. A secondary aim was to critique theoretical and methodological issues in the extant literature. Only studies that presented qualitative (as opposed to quantitative) data were included in the current study because it has been suggested that research syntheses should include studies that share a similar epistemological perspective and approach to knowledge generation (Paterson, Thorne, Canam, & Jillings, 2001). Studies included in this synthesis shared a similar approach to creating knowledge about coping (i.e. they value knowledge that is created by producing and analyzing data in the form of words - rather than numbers - to reflect participants' subjective experiences of coping).

Method

Meta-study

A meta-study was selected to analyze and synthesize data, methods, and theory used in primary research reports in order to generate new knowledge or understanding. Meta-studies can bring individual studies together at a more abstract level and identify consensus, develop hypotheses, and investigate contradictions. Therefore, a meta-study is neither a review of literature nor an aggregation of findings (Finfgeld, 2003), but rather it

involves a systematic approach to collecting and analyzing qualitative research findings. Meta-study was an appropriate methodological choice because it is an interpretation of a phenomenon that brings together various qualitative studies that are examined at an abstract level for their contribution to an overall understanding of stressor appraisals and coping (Zimmer, 2006).

Meta-studies use qualitative methods to analyze and synthesize findings of qualitative studies where the emphasis is placed on interpretation rather than reduction of data (Sandelowski & Barroso, 2003). A meta-study consists of four components: meta-data analysis, meta-method analysis, meta-theory analysis, and meta-synthesis (Paterson et al., 2001). The first three components are considered as the data analysis phase, which is followed by the synthesis phase. During the analysis phase, the examination of data, method, and theory do not necessarily occur sequentially and are often conducted concurrently (Paterson et al., 2001), but the meta-synthesis must necessarily follow the analysis phase and is presented as the findings of a meta-study.

Procedure

Initially, a broad search strategy was used to retrieve articles from sport and exercise psychology journals and online databases. Keywords included terms such as stress, emotion, anxiety, coping, appraisal, coping effectiveness, youth, adolescent, and qualitative. First, manual searches were conducted of the following sport psychology journals: *Athletic Insight*, *Research Quarterly for Exercise and Sport*, *European Journal of Sport Science*, *International Journal of Sport and Exercise Psychology*, *Journal of Applied Sport Psychology*, *Journal of Sport Behavior*, *Journal of Sport & Exercise Psychology*, *Journal of Sports Sciences*, *Psychology of Sport and Exercise*, *The Sport*

Psychologist, and *Qualitative Research in Sport and Exercise Psychology*. This initial search returned 5648 articles that were examined based on keywords in the title or abstract. Altogether, 51 studies were retained for further examination (see Figure 2-1).

The findings of a meta-study rest on having conducted a sufficiently exhaustive search of the literature. Based on the advice of experts in meta-study methodology (Barroso et al., 2003), an expert-level search professional was contacted to assist with online database searches. The expert-level searcher was a librarian liaison who was familiar with appropriate search syntax and operators to assist with searching for and retrieving qualitative studies. Computer-assisted searches (using the keywords indicated above) were conducted of the following databases: PsychINFO, SPORTdiscus, MEDLINE, ERIC, EMBASE, Physical Education Index, and Google Scholar. The "grey" (unpublished) literature was searched using ProQuest Dissertations and Theses database. The date range for searching was specified as "earliest" to "March 2009". In addition, weekly automated searches were created to update results in the event that new studies were published after the initial search was conducted. The database searches returned 711 articles; irrelevant or duplicate articles were rejected, and 13 articles were retained for examination. Of the 64 studies gathered via the manual and computer database searches, 15 were rejected because they were review articles, and 5 articles were rejected for using quantitative data; 44 studies were retained for further inspection.

Criteria for Inclusion/Exclusion

Following the initial collection of articles, and based on the guidelines provided by Sandelowski and colleagues (Sandelowski, Docherty, & Emden, 1997) for conducting meta-study, the criteria for inclusion were refined and the 44 studies were sorted

according to three main criteria. Specifically, articles were included/excluded by posing the following questions:

a) Did the study collect and report qualitative data? Qualitative data include interviews, observations, and document analysis, which all involved written or transcribed descriptions, quotations or responses (Patton, 2002). Studies that combined qualitative and quantitative data (such as questionnaires with open-ended questions) were included if findings based on qualitative data could be separated and examined independently from the quantitative data.

b) Did the sample include adolescent athletes? It is widely accepted that adolescence is the second decade of life (age 11-20 years) during which the key developmental task is preparation for adulthood (Santrock, 2008). Based on this classification, articles were included if they sampled athletes between the ages of 11 and 20 years. Studies that sampled adolescents and adults were included if the mean age of the participants was under 20 years. In the case of studies where the mean age of the participants was over 20 years, these were included if the data for the adolescent athletes could be separated from data from the adult athletes.

c) Did the authors study an aspect of the coping process and/or did the authors use a theoretical framework of stressor appraisals and coping? Studies were included if the authors stated that they adopted a theoretical framework of stressor appraisals and coping and/or if the stated purpose of the study was to examine an aspect of stressor appraisals and/or coping. Studies that did not have a theoretical framework were included if the stated purpose of the study was to examine stressor appraisals or coping. For example, Gould and colleagues (Gould, Wilson, Tuffey, & Lochbaum, 1993) defined stress as a

process but did not explicitly state the use of any particular theoretical framework. Although this could be considered an atheoretical study, the article was included because the stated purpose of the study was to learn more about stressor appraisals and coping. Twenty-four articles were excluded and 20 were retained for the final analysis (Figure 2-1).

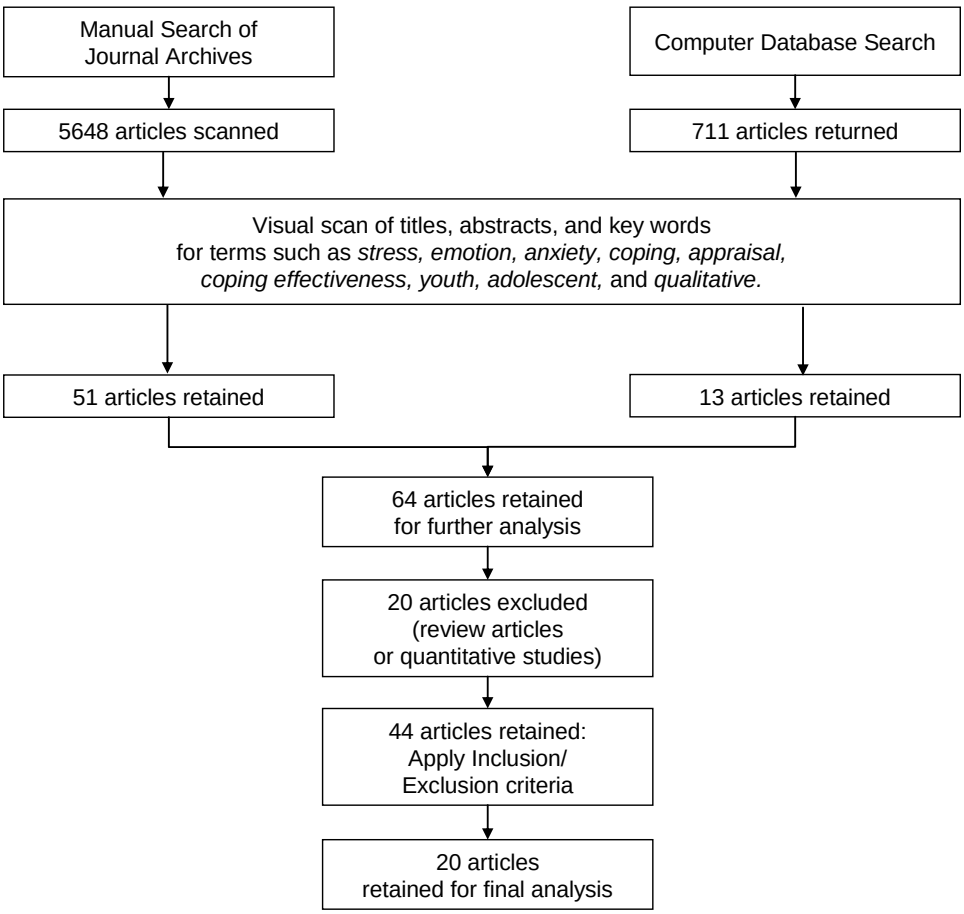

Figure 2-1. Flow diagram of search and retrieval strategies.

Table 2-1. Key features of primary research reports.

Study	Theory	Sampling Method	Sample Characteristics	Data Collection	Data Analysis
Anshel & Delaney (2001)	Lazarus & Folkman (1984); adheres to transactional model	Head coaches provided study information to their players and "encouraged them to participate" (p. 337).	52 field hockey players (36 males, 16 females) Ages 10-12 New South Wales Junior Hockey Association. Ethnicity not stated.	Self-report checklist to identify stressors and positive/negative appraisals; used within a structured interview.	Deductive content analysis. Classified coping responses according to approach or avoidance strategies.
Chase et al. (2005)	Bandura's (1977) self-efficacy theory; Heil's (2000) model of risk	Purposeful sampling of information rich cases	10 competitive female gymnasts aged 12-17 (*M* age = 13.9 yrs) participating since they were 3-5yrs old (*M* = 8.7 yrs); all Caucasian	Standardized open-ended interview	Inductive content analysis by two researchers, checked by another researcher Frequency counts of reported themes.
Cohn (1990)	Smith's (1986) cognitive-affective model of stress and burnout.	Sampling criteria: required to have played 1 year competitive golf	10 competitive male high school golfers (age 15-17; *M* age = 16.4 yrs). 3-9 yrs participation (*M* = 7.1 yrs). Ethnicity not stated.	Semi-structured interviews	Typological analysis of transcripts; deductive content analysis.
Colgan (2006)	Lazarus & Folkman (1984)	Recruited via a list provided by coaches	15 competitive figure skaters aged 11-17 (*M* age = 13.6). 11 girls, four boys. 5-6 years participation. 13 Caucasian, 1 female pacific islander, 1 male Asian.	Quantitative and qualitative data collection; semi-structured interviews.	Coding process "unique to this project and developed by the principal investigator" (p. 39); inductive analysis or "emergent coding" and development of categories.

Study	Theory	Sampling Method	Sample Characteristics	Data Collection	Data Analysis
Eubank & Collins (2000)	Martens' (1990) cognitive and somatic anxiety; reference to 'dynamic' approach to coping (Lazarus & Folkman, 1984)	Not stated	24 national and regional standard youth sport participants (gymnastics and tennis) aged 14-18 (*M* age = 17.8), actively competing for 6-10 yrs (*M* = 8.7yrs); Ethnicity not stated.	Qualitative and quantitative data collection; Semi-structured interviews while watching video of "high stress" competitive performance.	Inductive content analysis; elements of deductive analysis to verify that themes and categories were represented in original transcripts.
Giacobbi et al. (2004)	Lazarus' transactional model	Convenience and purposeful sampling	5 first year female university students from NCAA Div 1 school. All Caucasian, 18 yrs old.	3 semi-structured interviews: 2 focus groups and 1 individual interview conducted across the season (Nov, Jan, April).	Grounded theory (open & focused coding, memos, constant comparative method, sensitizing concepts, development of theory).
Gilbert (2000)	Lazarus' transactional model	Purposeful sampling	5 female adolescent team sport (soccer) athletes and their coaches. 6-10 years experience in soccer. Ethnicity not stated.	Collective case study approach. Interviews, document analysis (newspapers, athlete journal entries, field notes, team newsletters), and observation over 8-month period. Group and multiple individual interviews with athletes and coaches.	Inductive coding

Study	Theory	Sampling Method	Sample Characteristics	Data Collection	Data Analysis
Gould et al. (1993)	Not stated	Convenience sampling: 4 students selected for a panel discussion.	4 male student-athletes, ages 11-16. Ethnicity not stated.	Structured interviews. 15 male and female students interviewed 3-6 other young athletes (total sample unknown) "who vary in race, gender, athletic talent, and academic ability" (p. 288); 4 student-interviewers were selected by the second author to discuss peers' responses.	Not stated. Excerpts from panel discussion presented.
Holt & Mandigo (2004)	Lazarus' transactional model	Not stated	33 junior members of a cricket club in Wales (*M* age = 11.9 yrs). Average 2.9 yrs playing experience. All were Caucasian	2 concept maps completed during training sessions. Open ended seed ideas given and participants generated ideas.	Inductive analysis using constant comparative method. Coping themes were deductively classified according to function (problem or emotion focused), and coping strategies used to manage three most frequent worries were tallied. Quantitative analyses (phi coefficients) were calculated.

Study	Theory	Sampling Method	Sample Characteristics	Data Collection	Data Analysis
Holt et al. (2007)	Lazarus' transactional model; Aspinwall & Taylor's (1997) proactive coping model	Purposeful sampling	10 Canadian female collegiate volleyball players (*M* age = 19.36 yrs). Average 7.91 yrs playing experiences. All players were Caucasian.	Pre- and post-tournament semi-structured interviews.	Instrumental Case Study methodology stated. Content analysis was initially inductive, became more deductive as analysis progressed. Constructed idiographic chronological profiles using a deductive approach.
Nicholls (2007a)	Lazarus' transactional model	Names provided by Scottish Golf Union.	5 male Scottish international golfers aged 16-17 yrs (*M* age = 16.6 yrs) with handicap of 1 to +4. Playing experience ranged from 5-15 yrs (*M* = 8 yrs). Ethnicity not stated.	Daily diaries collected over 28-day period.	Interpretive phenomenological analysis
Nicholls (2007b)	Lazarus' transactional model	Not stated	16 yr old internationally ranked male English golfer. 5 years experience and a scratch handicap. Ethnicity not stated.	30min semi-structured interview prior to training program; audio diary completed over 21-day period; post-intervention interview (9 months follow-up)	Phenomenological qualitative analysis procedure: inductive line-by-line analysis to identify stressors, coping, and effectiveness.
Nicholls, Holt & Polman (2005)	Lazarus' transactional model	Purposeful sampling	18 male Irish international golfers aged 14-21 yrs (*M* age = 17 yrs), experience ranged from 5-14 yrs (*M* = 8.3 yrs). Ethnicity not stated.	Semi-structured telephone interviews	Interpretive phenomenological analysis

Study	Theory	Sampling Method	Sample Characteristics	Data Collection	Data Analysis
Nicholls & Polman (2007)	Lazarus' transactional model	Not stated	11 international rugby union players (*M* age = 17.9 yrs) affiliated with the England Rugby Union talent identification program. Playing experience ranged from 7-12 yrs (*M* = 9.7yrs). Ethnicity not stated.	Daily diary using a stressor checklist; open ended coping response section, and perceived coping effectiveness (Likert scale)	Stressor checklists were tallied to identify five most frequently reported stressors and analyzed longitudinally. Coping responses were analyzed both inductively and deductively. Mean scores and standard deviations were calculated.
Nicholls, Holt, Polman & James (2005)	Lazarus' transactional model	Not stated	11 international golfers (*M* age = 16.4 yrs), middle class, had handicaps from 0-4 (*M* = 1.4). All were Caucasian.	Daily diary (stressor checklist and open ended coping response section) collected over 31-day period.	Stressor data tallied and analyzed longitudinally. Open-ended coping responses analyzed inductively.
Nicholls & Polman (2008)	Lazarus' transactional model	Purposeful sampling	5 English-Caucasian high level golfers (*M* age = 16.8 yrs) handicap *M* = 1.4, played 4-10 years (*M* = 6.6 yrs).	Athletes instructed to verbalize their thoughts for 6 holes of golf (with microphone).	Protocol analysis for relevance (related to golf) and consistency (streams of consistent verbalization). Inductive content analysis to identify stressors and coping.

Study	Theory	Sampling Method	Sample Characteristics	Data Collection	Data Analysis
Reeves et al. (2009)	Lazarus' transactional model	Not stated	40 male academy level soccer players 12-18 yrs (*M* age = 14.22 yrs), 1-9 yrs competitive experience (*M* = 3.9). Ethnicity not stated.	Semi structured interview	Early analysis was inductive, based on constant comparative method; categories were clustered and then subjected to a deductive analysis.
Sagar et al. (2007)	Lazarus' transactional model	Not stated	British Caucasian elite athletes aged 14-17 yrs, (5 male, 4 female) from tennis (3m), kickboxing (1m), triathlon (1f), basketball (1m), field hockey (1f), football/soccer (2f). 1.5 – 5 yrs competitive experience.	20min pre-interview meeting to build rapport; Semi-structured in-depth interview.	Inductive thematic analysis with some principles of grounded theory (coding, constant comparison, memo writing).
Tamminen (2007)	Aspinwall & Taylor (1997) proactive coping theory; Lazarus' transactional model	Purposeful sampling	13 female basketball players (*M* age = 16 yrs), 6.2 yrs experience (avg). 10 Caucasian, 3 African-Canadian or African-European.	Pre and post season interviews; athletes maintained audio diaries over the season; participant observation to contextualize interview and audio diary data.	Group level inductive content analysis of stressors; deductive analysis of coping data based on Skinner & Zimmer-Gembeck (2007) families of coping; created idiographic profiles of coping.
Udry et al. (1997)	Lazarus' transactional model	Not stated	10 former elite junior tennis players (6 females, 4 males, *M* age = 17.4 yrs). Athletes began playing tennis at 8.5yrs; began competing at 10.1 yrs.	Semi-structured interview	Data inductively analysed using content analysis; idiographic profiles created.

Data Management

Following Paterson et al. (2001), once the primary research reports were selected a table was constructed that listed the significant aspects of the studies (Table 2-1). This table was created by reading each primary research report to identify the methods, use of theory, and findings that would contribute to each of the analytic components of the meta-study.

Meta-data Analysis

Meta-data analysis concerns the examination of findings from primary research reports (Paterson et al., 2001). The terms ‘data’ or ‘findings’ in a meta-study refer to the analyses and interpretations made by the authors of primary research reports. Thus, meta-study is a comparative analysis of the authors' findings from those studies (Zimmer, 2006), through which the researcher develops new interpretations. Meta-data analysis portrays the shared and unique findings of each individual study, and proposes hypotheses about the relationships between the concepts represented within the primary reports. Meta-data analysis is used to interpret the findings from primary research reports that provide insights into the phenomenon studied.

During meta-data analysis, the findings from each primary research report were coded inductively line-by-line as though it were a transcript of an interview (Paterson et al., 2001). The findings were treated as raw data, much like data in an interview transcript, and they were identified and labelled according to the essential meaning conveyed in the findings. For example, the finding ‘reflection and learning was mentioned frequently by both early and middle adolescents’ (Reeves et al., 2009) was identified as a concept related to reflection and learning. All the concepts identified in the

primary research reports were listed in a table for comparison and concepts that shared essential meanings were clustered together (Table 2-2). Next, concepts from the primary reports were translated into one another (Noblit & Hare, 1988) by determining how the key concepts, metaphors, and phrases were represented in each study. In other words, the concepts of each study were compared and contrasted with the concepts of every other study. For example, studies used terms such as *source of stress* (Anshel & Delaney, 2001), *performance worries* (Holt & Mandigo, 2004), and *reported* or *appraised stressors* (Holt, Berg, & Tamminen, 2007; Nicholls, Holt, Polman, & James, 2005), which all appear to describe a similar phenomenon related to athletes' perceptions of stressors. In the final synthesis, the term "stressor appraisals" was used to refer to this common concept, which is theoretically consistent with Lazarus' (1999; Lazarus & Folkman, 1984) theory (which was appropriate because Lazarus' theory was used by 17 of the 20 primary reports). This process was repeated for all the concepts identified in the primary research reports in order to combine and analyze similar concepts.

Meta-method Analysis

Meta-method analysis offers a means for researchers to reflect on ways in which methods, methodology, and research decisions affect the findings and outcomes of a particular study (Paterson et al., 2001). After examining the methodologies (e.g. phenomenology, case study) used by each primary report (if applicable), the meta-method analysis involved an overall appraisal of methodological themes and patterns within the area of inquiry (Paterson et al., 2001). Next, the use of particularly popular methods (or techniques) was examined to identify patterns of research, sampling

procedures, and data collection and analysis techniques. These methods and their implications for future research are addressed in the Discussion section.

Meta-theory Analysis

Meta-theory analysis is the analysis of the theoretical underpinnings of research conducted in a particular area (Paterson et al., 2001). Overt theoretical underpinnings were identified within the research reports. By examining theory across the studies, it is possible to understand how the use of particular theories may give rise to particular interpretations of data, which in turn may have shaped the way in which subsequent research has been conducted. As noted previously, it was apparent that Lazarus' (1999; Lazarus & Folkman, 1984) perspective of coping has dominated the field of adolescent sport coping research. As such, the theoretical issues addressed in the Discussion primarily relate to the ways Lazarus' theory has been used in the published qualitative literature.

Meta-synthesis

The meta-synthesis is the primary outcome of this study (addressing the primary purpose). Meta-synthesis pulls together the interpretations made from the meta-data-analysis, meta-method analysis, and meta-theory analysis processes. By engaging in a meta-synthesis of the data, methods, and theory from primary research reports, a meta-study aims to produce a mid-range theory concerning a substantive area of research (Paterson et al., 2001). The meta-synthesis was refined continuously over the course of the research in an iterative process between conducting the analyses, discussions between the co-authors, and the final synthesis. The primary analyses were conducted by the first author and produced initially descriptive accounts of the categories identified within the

primary research reports. The key categories and themes were then discussed with the second author to evaluate their coherence and the overall results. Following discussions between the authors, re-analysis of the findings led to a more interpretive presentation of results (see Figure 2-2). Upon discussing the results with the second author, the findings were refined, similarities and differences between the categories were examined, and the final model was developed. The results below are the product of the overall meta-synthesis.

Results

First, the major themes are identified from the meta-data analysis. The final model is then presented (Figure 2-2), which was produced as a result of the meta-synthesis. This model is the primary outcome of the current study.

Contextual and Dynamic Stressor Appraisals

Contextual factors influenced athletes' stressor appraisals. Giacobbi and colleagues (2004) reported dimensions of stressor appraisals for athletes transitioning to the first year of university as ‘being away from home’ and ‘academics.’ In a different context, such as adolescents' professional soccer clubs, stressors included social evaluation, contractual stressors, and playing at a higher level (Reeves et al., 2009). These stressor appraisals reflected the contextual demands associated with playing at a soccer academy, which likely did not emphasize academics in the same way transitioning to university would. In addition to broader contextual factors, stressor appraisals may be sport-specific or even position-specific. At a team level, athletes' stressor appraisals were influenced by perceptions of their coach (Tamminen, 2007). At the level of a specific

playing position, Gilbert (2000) noted that among soccer players, one athlete "experienced a great deal of stress due to her position as a goalkeeper" (p. 237).

It is possible athletes' stressor appraisals are influenced by an accumulation of factors, which include past experiences as well as contextual conditions (Sagar, Lavallee, & Spray, 2007). Chase and colleagues (Chase, Magyar, & Drake, 2005) found that gymnasts' previous injury experiences produced feelings of apprehension, anxiety, and fear, which influenced the fear of becoming injured again. The implication is that athletes' stressor appraisals do not occur in isolation and only in relation to their immediate performance. Stressor appraisals occur in the context of athletes' entire lives and the conditions surrounding their sport experience.

Athletes' stressor appraisals were also dynamic and changed over time. In a season-long study of swimmers, Giacobbi et al. (2004) noted that swimmers appraised stressors in a more positive or benign manner as the season progressed, and the authors suggested that changes in athletes' appraisals were related to changes in the athletes' social network over the season. In a study of stressor appraisals and coping over a 31-day period, Nicholls, Holt, Polman and James (2005) found that initially golfers were primarily concerned with their physical performance, but later in the season mental performance became a greater concern. Increases in mental performance stressor appraisals coincided with the golfers' participation in important tournaments. In the studies reported above, stressor appraisals changed in relation to context (i.e. social networks and importance of competitions).

At a micro-level, Nicholls and Polman (2008) found that some golfers' reported stressor appraisals remained consistent across six holes of golf (i.e. score), while reports

of other stressors such as the environment (i.e. wind, tree), performance, and mistakes varied over the six holes. Overall, then, changes in athletes' stressor appraisals occurred within competitive events and across longer and shorter periods of time. These changes were interconnected with athletes' continuously changing environments and developments in their social networks.

Contextual and Dynamic Coping

Much as stressor-appraisals changed in response to contextual conditions, coping responses were also highly contextual. It has been reported that athletes' coping appears to change as they appraise new stressors over the season. For example, Giacobbi et al. (2004) found swimmers used forms of emotion-focused coping (e.g. humour/fun, venting) throughout the season, but cognitive appraisals and active cognitive efforts emerged during the latter parts of the season, possibly as adaptational responses to new stressor appraisals. Another study showed that as athletes experienced new conditions over the course of a season they apprised different stressors, which may have forced the development of new coping strategies (Eubank & Collins, 2000). Giacobbi et al. (2004) also reported that changes in athletes' use of social support influenced subsequent stressor appraisals. As coping changed over the season, athletes appeared to be more likely to appraise stressors as challenges rather than as threats. The influence of social networks in this process will be described in further detail below.

Coping was also dynamic and subject to change over longer and shorter terms. In their 31-day study of adolescent golfers, Nicholls, Holt, Polman and James (2005) found athletes reported an increase in all coping functions (problem focused, emotion focused, and avoidance coping) during days 11-15, which included the athletes' most important

competitions. The frequency of coping fluctuated over time, as did the use of specific coping strategies. For example, whereas problem-focused coping remained stable during days 16-25, emotion-focused and avoidance coping increased during days 21-25. There was then an increase in problem- and emotion-focused coping in the final 6 days, but a decrease in avoidance. This fluctuating pattern of coping was also found in a study of adolescent rugby players (Nicholls & Polman, 2007). Nicholls and Polman (2008) also found that golfers' coping appeared to change over the six holes as stressor appraisals changed. For example, 'Dan' used 'swing thoughts' (identified as a problem-focused cognitive technique-oriented coping strategy) for every hole, but also used a 'shot plan' (a problem-focused shot preparation coping strategy) for holes 1, 2, 5, and 6, and he used positive appraisal (an emotion-focused strategy) for holes 3 and 4. That is, athletes used different coping strategies to deal with different stressor appraisals and in some cases the athletes appraised up to five consecutive stressors before deploying a coping strategy.

Finally, coping is dynamic in that it appears to change over the course of development. Reeves et al. (2009) reported that early adolescents used avoidance concurrently with problem-focused coping, but used few emotion-focused strategies. Middle adolescents used social support and emotion-focused strategies frequently, whereas avoidance coping was less common. Middle adolescents also employed a greater range of coping strategies to deal with appraised stressors compared with early adolescents. The use of abstract coping strategies such as using tactical concepts to improve performance may be related to the cognitive developmental status of athletes (Holt & Mandigo, 2004), although the process by which these coping strategies develop is not well understood. Gilbert (2000) attempted to describe the processes by which

athletes develop coping strategies, but she reported that as the study progressed the athletes were “largely unable to unpack and discuss this process” (p. 200).

Coping Resources and Processes of Acquisition

Coping resources. Adolescent athletes' coping was related to the development or availability of coping resources. Athletes with a ‘reservoir’ or range of coping resources may cope more effectively with appraised stressors than athletes who do not possess a range of coping strategies (Gilbert, 2000; Nicholls & Polman, 2007). Thus, the suggestion is that the more coping strategies available to the athletes, the more effective their coping will be. Athletes may cope most effectively by using a few ‘tried and true’ strategies, but maintain an arsenal of back-up strategies for use in times of need (Eubank & Collins, 2000; Tamminen, 2007). There may be a reciprocal effect between the development of coping resources and the perception of pre-competitive cognitions (anxiety) as facilitative, such that as athletes develop coping resources, they begin to perceive anxiety as facilitative, which in turn facilitates the development of new coping strategies (Eubank & Collins, 2000).

Reflection and learning. The development or acquisition of coping skills appears to be related to a process of reflection and learning among athletes. Reeves et al. (2009) reported that reflection and learning was mentioned frequently by both early and middle adolescents as a coping strategy, although athletes' awareness of coping strategies may not fully emerge until late adolescence. On the other hand, Nicholls, Holt, Polman and James (2005) found that when adolescents failed to cope with stressors, they reported ‘no coping attempt.’ Thus, it appeared they were unable to reflect on coping until asked during research interviews. It appears that not all athletes engage in a process of

reflection and learning about their coping efforts and it may be a process that emerges later in adolescence (Tamminen, 2007).

Effective coping is a skill. Coping is a skill that can be learned or acquired with accumulated experience. There is some evidence to suggest that older, more experienced athletes cope more effectively with stressors than younger, less experienced athletes on a team (Holt et al., 2007). Nicholls (2007a) reported that elite golfers had effective coping responses in relation to most stressors they experienced. The experiences associated with performing as a highly competitive athlete may contribute to the development of effective coping. Alternatively, athletes who are effective copers may succeed at attaining high levels of sport performance. These propositions remain unexplored and it is unclear which explanation is most accurate.

Athletes may develop coping strategies through an experiential learning process that is highly malleable to change (Giacobbi et al., 2004). This suggestion was supported by Gilbert's (2000) study of adolescent soccer players, in which she found that three (of five) athletes used a coping strategy during the study because they had used it successfully in the past. Gilbert suggested coping is a skill and, to be most effective, coping strategies must be practised and rehearsed on a regular basis. Reinforcing the need for practising coping, Nicholls and colleagues (Nicholls, Holt, & Polman, 2005) found athletes' ineffective coping was associated with strategies that were *not* well learned (such as speeding up and trying too hard).

Coping skills may be taught through interventions, such as in Nicholls' (2007b) study, in which a golfer was provided with a coping training program. The athlete reported using fewer ineffective coping strategies as the study progressed and a 9-month

post-intervention social validation interview suggested longevity of training effects. Although Reeves et al. (2009) suggested that middle adolescence is the key phase for teaching coping skills, further information is needed regarding the timing by which adolescent athletes may acquire coping skills.

Social Networks as Assets and Liabilities

Because of the intricate and complex nature of social networks, this category was described as having both 'assets and liabilities' for athletes' coping (cf. Udry, Gould, Bridges, & Tuffey, 1997). First, social networks influenced the ways in which athletes appraised stressors (Giacobbi et al., 2004). For example, one athlete reported that "it's good to have a team because everyone is going through the same things … It helps to know you are not the only one going through it" (Giacobbi et al., 2004, p. 9). On the other hand, members of a social network may have a negative influence on athletes' stressor appraisals. Sagar et al. (2007) noted that some athletes felt that failure made their coach unhappy, thus perceiving failure to have adverse consequences for their relationship with their coach, as well as with team-mates and parents. It is unclear whether negative interactions with parents and coaches lead to stressor appraisals, or if athletes appraise stressors and then consider the consequences of these appraisals in relation to their social network.

Second, athletes' social networks influenced the ways in which they coped with stressors. Gilbert (2000) reported that soccer coaches emphasized a strong work ethic and encouraged athletes to continue working hard on the field even though their minds were not in the game. The author suggested that the coaches' messages may have contributed to the athletes' use of 'working hard' and 'not giving up' as coping strategies. Giacobbi et

al. (2004) reported that the influence of social networks was prominent in athletes' use of cognitive forms of coping. In terms of the influence of social networks on the development of coping, Gilbert (2000) also reported that athletes in her study engaged in social modelling of coping strategies by observing parents and coaches exhibiting certain coping behaviours and modelled these behaviours when dealing with their own stressors. Thus, it appears that individuals in the athletes' social networks (e.g., parents and coaches) may influence athletes' coping.

Finally, changes in social networks also appeared to have an impact on changes in athletes' coping. As the nature of social relationships changed so too did athletes' stressor appraisals and coping. Giacobbi et al. (2004) reported that as social support networks developed among competitive swimmers, two outcomes were observed: athletes began to use cognitive forms of coping, and they perceived sources of stress as challenges that may offer benefits, rather than perceiving potential for threat or harm (Lazarus, 1999). The degree to which the athletes used social support as a coping strategy was dependent on the quality of relationships.

Positive and negative social interactions. Social networks appeared to influence stressor appraisals and coping through positive and negative social interactions. In terms of positive interactions, athletes used social support to deal with appraised stressors (Chase et al., 2005; Giacobbi et al., 2004). Positive functions of social networks included providing athletes with a sense of emotional support and understanding (Udry et al., 1997). In addition to being a coping strategy in itself, positive social interactions influenced athletes' stressor appraisals as well as the development of coping skills. Giacobbi et al. (2004) provided an analysis of this relationship and reported that as

athletes' social support networks developed, athletes began to use cognitive forms of coping and they perceived sources of stress as challenges that may offer benefits.

However, social interactions may have negative implications for the coping process. In a study of athletes struggling with burnout, negative aspects of social relationships with parents and coaches included perceived pressure or having unrealistic expectations and lack of player control (Udry et al., 1997). These aspects of negative social interactions may contribute to athletes' appraisals of stressors. For example, Udry et al. (1997) reported the case of an athlete who said the coach "always expects us to have a winning attitude … to me it seems like no one can possibly do that every single day … I wasn't able to do that, so it made me depressed, and it had a negative effect on me" (p. 375). The underlying causes of these negative interactions are not entirely clear; however, the authors suggested that, over time, members of the athletes' social networks became overwhelmed by the interpersonal demands associated with interacting with athletes coping with stress. That is, coaches and parents appraised stressors themselves and were prone to experiencing emotional depletion or exhaustion when dealing with athletes who were also appraising competitive stressors.

High standards and social evaluation. This category reflects interpretations about athletes' perceptions of social evaluation or high standards of individuals in their social network. This category is linked to stressor appraisals and aspects of negative social interactions. Reeves et al. (2009) noted that compared with early adolescent athletes, middle adolescents reported that making errors led to worrying about social evaluation by significant others. Athletes have described 'letting down significant others' and 'negative social evaluation' as common perceived consequences of failure (Sagar et

al., 2007). Coaches and parents may unknowingly create stressful sport environments by placing too much emphasis on winning and too much importance on athletic performance, thus creating the perception of high standards for the athlete (Gould et al., 1993). Udry et al. (1997) suggested that important others may have misconceptions about what behaviours would be considered helpful. It is unclear when parental or coach standards are indeed too high for adolescent athletes, or whether improvements in communication and positive interactions may reduce athletes' perceptions of pressure. Overall, social networks serve an important, if paradoxical, function within adolescent athletes' stress and coping process. That is, social networks appear to be both an asset and a liability for athletes.

Table 2-2. Themes and main findings from primary reports.

Theme	Subcategory	Studies	Main findings
Contextual and Dynamic Stressor Appraisals	Stressor appraisals are contextual	Anshel & Delaney (2001)	Sources of stress appear to reflect sport type.
		Chase et al. (2005)	As a result of previous injury experiences, feelings of apprehension, anxiety, and fear were based on the fear of becoming injured again.
		Giacobbi et al. (2003)	Stressors for athletes included being away from home and academics.
		Gilbert (2000)	Position on team may influence stressor appraisals.
		Nicholls & Polman (2007)	Injury was a prominent stressor, presumably because rugby is physically demanding. Coach or parental criticism was a stressor which may be due to roles of coaches in team sports.
		Reeves et al. (2009)	Middle adolescents reported social evaluation, contractual stressors, and playing at a higher level as stressors, which may reflect demands among athletes playing at a soccer academy.
		Sagar et al. (2007)	Some stressor appraisals may be instilled at a young age and persist into adulthood.
		Tamminen (2007)	Coach criticism and poor coach communication were central to the climate for stress that pervaded the athletes' reported stressors.
	Stressors are dynamic	Giacobbi et al. (2003)	There was a shift in the way athletes appraised major stress sources as athletes became more comfortable with their environment.
		Gilbert (2000)	Athletes experienced stress related to competition and training.
		Nicholls, Holt, Polman, and James (2005)	Stressor appraisals changed over a 31-day period; number of appraisals increased in conjunction with most important competitions.
		Nicholls & Polman (2007)	More stressors were reported during periods when matches were played.
		Nicholls and Polman (2008)	Stressor appraisals change over a round of golf.
		Reeves et al. (2009)	Developmental differences in stressor appraisals between early and middle adolescent athletes.
		Tamminen (2007)	Stressors changed over time with changing circumstances.
Contextual and Dynamic Coping		Eubank & Collins (2000)	Individuals possess strategies they typically use to cope with stress, but they may adjust those or use different strategies depending on the circumstance.
		Giacobbi et al. (2004)	Some coping strategies were used consistently throughout the year while others seemed to develop as the year progressed, possibly as adaptational responses to particular stressors.

Contextual and Dynamic Coping (cont'd)		Gilbert (2000)	Position on team may influence use and development of particular coping strategies.
		Holt & Mandigo (2004)	Participants did not report more abstract coping strategies such as using tactical concepts to improve performance, which may reflect the young age of the athletes.
		Nicholls, Holt, Polman & James (2005)	Variations in athletes' use of coping strategies coincided with the athletes' most important competitions.
		Nicholls & Polman (2007)	Use of coping strategies changed over 31-day period.
		Nicholls & Polman (2008)	Coping appeared to change over the 6 holes. Athletes used different coping strategies to deal with different stressors.
		Reeves et al. (2009)	Middle adolescents employed a greater range of coping strategies to deal with the same stressors compared to early adolescents. Social support was a salient coping strategy among middle adolescents but was rarely reported by early adolescents. The processes by which these coping strategies develop is not well known.
Coping Resources and Processes of Acquisition	Coping resources	Eubank & Collins (2000)	Individuals possess strategies they typically use to cope with stress, but they may adjust those or use different strategies depending on the circumstance. The development of coping strategies may be related to the extent to which athletes perceive anxiety to be facilitative or debilitative. The experience of more stressful conditions may force the development of new coping strategies.
		Gilbert (2000)	There is an increased ability during adolescence to utilize support resources when coping with stress.
		Holt & Mandigo (2004)	Athletes may not have possessed an appropriate repertoire of coping skills for the worries they experienced.
		Nicholls & Polman (2007)	Coping effectiveness fluctuated over a 31-day period and may be related to the number of coping strategies deployed.
		Reeves et al. (2009)	Emotion focused coping suggested to emerge in middle adolescence.
		Tamminen (2007)	Athletes may explore a variety of strategies and cope most effectively by using a few 'tried and true' strategies.
	Reflection and learning	Gilbert (2000)	Athletes were largely unable to unpack and discuss their coping development.
		Nicholls, Holt, & Polman (2005)	The majority of golfers were unaware of coping poorly until they were asked to reflect.

Coping Resources and Processes of Acquisition (cont'd)	Reflection and learning (cont'd)	Reeves et al. (2009)	Reflection and learning was mentioned frequently by both early and middle adolescents.
		Tamminen (2007)	Reflection and learning distinguished between athletes who coped proactively versus coping in a more reactive manner.
	Effective coping is a skill .	Giacobbi et al. (2004)	Participants may have learned or developed coping strategies as the year progressed; coping is a learned response to the demands experienced athletes and is highly malleable to change.
		Gilbert (2000)	Coping with stress is considered a mental skill, and therefore to be most effective, coping strategies must be practiced and rehearsed on a regular basis. The athletes developed their coping strategies through an experiential learning process.
		Holt et al. (2007)	Athletes who reported effective coping learned to use certain coping strategies through accumulated experience; older more experienced athletes appeared to cope more effectively than the younger less experienced athletes.
		Nicholls (2007)	The athlete reported using fewer ineffective coping strategies as the study progressed; 9 month post-intervention social validation interview suggested longevity of training effects.
		Nicholls (2007)	Athletes had highly effective coping responses in relation to most stressors they experienced; high level athletes cope effectively with performance stress.
		Nicholls, Holt, & Polman (2005)	Coping by speeding up, trying too hard, etc is suggested to be not well learned and not automated, thus ineffective.
		Reeves et al. (2009)	Middle adolescence is a phase for initiating the employment of more combinations of cognitive and behavioural strategies.
Social Networks as Assets and Liabilities	Social networks influence stressor appraisals and coping	Anshel & Delaney (2001)	Social support serves as a buffer against stress, particularly among younger athletes whose coping skills are underdeveloped.
		Giacobbi et al. (2004)	Social networks influenced the way participants perceived their sources of stress and coped with stressors.
		Gilbert (2000)	The coaches' strong work ethic may have contributed to the athletes' use of working hard and not giving up as coping strategies.
		Gilbert (2000)	Parents are key influences in the origins of the athletes' coping strategies.
		Reeves et al. (2009)	The emergence of emotion focused coping reflected changes in social networks.

Social Networks as Assets and Liabilities (cont'd)	Stressor appraisals and coping (cont'd)	Sagar et al. (2007)	Failure may have aversive consequences for athletes' social relationships.
		Tamminen (2007)	The team context was described as a 'climate for stress' which subsequently appeared to influence the nature of the stressors reported by the athletes.
	Positive and negative social interactions	Chase et al. (2005)	Positive feedback from coaches, parents, and teammates was a common source of self-efficacy.
		Giacobbi et al. (2004)	Athletes transitioning to first-year university used social networks to gain advice and comfort.
		Gould et al. (1993)	Young athletes have difficulty receiving feedback and criticism from parents.
		Tamminen (2007)	Improvements in communication may actually serve to reduce the stressors appraised by athletes.
		Udry et al. (2007)	Members of athletes' social networks may become overwhelmed by the interpersonal demands associated with interacting with athletes coping with stress and are prone to experiencing emotional depletion or exhaustion. Social interactions provide athletes with a sense of emotional support and understanding; negative aspects of social relationships with parents and coaches included perceived pressure or having unrealistic expectations and lack of player control.
	High standards and social evaluation	Cohn (1990)	Frequently reported sources of stress were trying to perform up to personal standards; perceived pressure from self and others places a demand which may exceed the reward.
		Gilbert (2000)	The most important stressor related to performance expectations was self-imposed.
		Gould et al. (1993)	Coaches and parents may create stressful sport environments by placing too much emphasis on winning.
		Reeves et al. (2009)	Only middle adolescents reported that making errors led to worrying about social evaluation by significant others.
		Sagar et al. (2007)	Perceived consequences of failure included letting down significant others and negative social evaluation The ability to achieve competitively was perceived as an indication of worth.
		Udry et al. (2007)	Important others may have misconceptions about what behaviours would be considered helpful; athletes struggling with burnout identified pressure/having unrealistic expectations and lack of player control were salient negative aspects of their relationship with parents and coaches.

A Meta-synthesis of Qualitative Research on Adolescent Athletes' Stressor Appraisals and Coping

Based on the aforementioned categories and in order to synthesize the findings, a model of qualitative research on adolescent athletes' stressor appraisals and coping is proposed (Figure 2-2). This model should be viewed as the primary outcome of the current study. Within this model, it is suggested that stressor appraisals and coping are interrelated at a micro level (signified by (a) in Figure 2-2), and the recursive nature of these interactions has been well documented. This suggests that as stressor appraisals change, so too does coping, which influences subsequent stressor appraisals. Stressor appraisals and coping are also contextual and dynamic, suggesting that they change rapidly depending on the circumstances, yet they are also bound by athletes' situational (i.e. team or position) and developmental differences.

Stressor-coping interactions (b) influence the development of coping resources, such that past stressor appraisals and coping efforts effect the development of coping resources through a process of reflection and learning, and experiential learning. The acquisition of coping skills in turn affects subsequent stressor appraisals and coping episodes. The development of coping is also influenced by the nature of athletes' social networks (c), specifically through positive and negative social interactions. Social networks (d) influence the micro-level aspects of stressor appraisals and coping efforts via positive and negative interactions, and high standards and social evaluation expressed through communication between athletes and members of their social network. Micro-level stressor appraisal and coping in turn affect relationships with members of athletes'

social networks. Athletes' social networks may be a source of support or they may be viewed as potential stressors, alluding to the paradoxical influence of social networks.

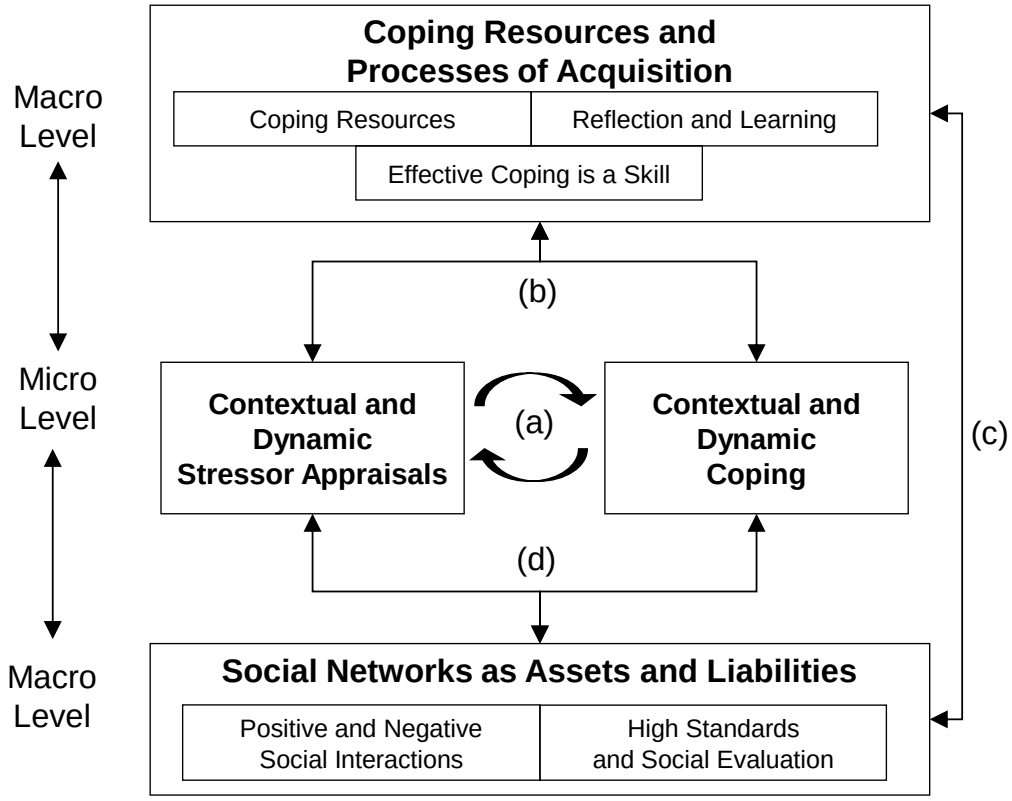

Figure 2-2. Synthesis of qualitative research on adolescent athletes' stressor appraisals and coping.

Discussion

The main aim of this study was to create an integrated theoretical perspective of the qualitative adolescent sport stressor appraisal and coping literature. Having gone through the process of meta-data analysis, a synthesis of the qualitative research in the area was produced (Figure 2-2) that fulfilled the primary purpose. The secondary aim was to critique theoretical and methodological issues in the literature, and this was achieved

through the meta-method and meta-theory analyses conducted to complete the meta-synthesis. The following discussion first considers issues related to the primary purpose before considering issues related to the secondary purpose.

The meta-synthesis (Figure 2-2) led to five main conclusions about the state of knowledge in the adolescent coping literature. First, the findings confirmed that research has widely documented the dynamic, recursive process of appraisal and coping. This is theoretically consistent with Lazarus (1999) and there is no pressing need for additional qualitative research to establish the recursive process of appraisal and coping. However, new and innovative designs may help shed light on the conditions that influence the recursive process of appraisal, coping, emotions, and associated outcomes.

Second, the findings highlighted the active role of adolescents in acquiring coping resources through an experiential learning process. One issue that has yet to be widely studied is how adolescent athletes learn to cope with stressors in sport. This is an important area for future research. The third issue that the meta-synthesis revealed was the important role of social networks as a macro-level factor in the coping process. This is similar to findings by Kliewer and colleagues (2006) from the area of developmental psychology, who suggested that parental modelling and family context contribute to adolescents' coping. Because social influences change as athletes develop and progress in sport (Partridge, Brustad, & Babkes Stellino, 2008), parents and coaches may play more or less important roles in the development of coping depending on the athlete's age or level of sport participation. Thus at a macro-level, future research should examine the role of athletes' social networks in the development of coping.

This finding regarding social networks has potentially important implications for the creation of interventions to improve adolescents' coping in sport. Most previous studies have concluded with applied implications that involve helping adolescent athletes build a repertoire of coping resources and/or selecting the coping strategies that are 'tried and true.' The current findings do not oppose these suggestions, but rather *also* highlight the importance of delivering interventions that focus on athletes' social networks, which were found to be both assets and liabilities. Thus, interventions that also target coaches, parents, and even team/peer interactions may be useful for improving adolescents' coping in sport. This issue does not appear to have been widely considered in the literature to date. This finding also reflects one of the benefits of a meta-synthesis such that by integrating findings from previous studies, it can reveal knowledge that may not be generated by a single study alone.

The fourth issue concerns a concept that the meta-synthesis revealed was relatively under-studied, namely coping effectiveness. The conclusion was forwarded that effective coping is a learned skill because some studies have shown that experienced athletes cope better than less experienced athletes (e.g. Holt et al., 2007), there is evidence that effective coping strategies must be practised (Gilbert, 2000), and that ineffective coping is associated with strategies that are not well learned (Nicholls, Holt & Polman, 2005). But, few other studies have explicitly set out to examine coping effectiveness. At a rudimentary level, it remains unclear whether adolescent athletes evaluate effective coping in terms of managing their emotions, optimizing the enjoyment and overall quality of their sport experiences, improving their performance, or a combination of all three. Furthermore, it is unclear if subjective evaluations of what

constitutes effective coping changes with development. This is an important issue because of the performance orientation in sport; an issue not addressed in models of coping from developmental and social psychology. More research is needed to establish the nature of coping effectiveness and this will produce important information to help provide a foundation for interventions.

The fifth and final issue arising from the meta-synthesis was that the model produced (Figure 2-2) considers a wide body of research examining adolescent athletes' coping at both a micro or episodic level as well as at a macro or adaptive level (see also Skinner & Zimmer-Gembeck, 2009). To relate this research to other comparable literature within sport, it may be valuable to consider Fletcher and colleagues' (Fletcher, Hanton, & Mellalieu, 2006) meta-model of stress, emotions, and performance. Their model provides a theoretical context for examining coping primarily at an episodic level (see Skinner & Zimmer-Gembeck, 2009), while the current meta-study highlights the relationship between coping at an episodic level and the acquisition of coping skills. The current meta-study also emphasizes the way in which social networks may serve as both assets and as liabilities for adolescent athletes. Moving forward, it would be valuable to consider the role of social networks as they relate to athletes' acquiring coping skills in an adaptive manner. That is, coping at an episodic level may contribute to adaptive outcomes such as the development of coping skills for some athletes; however, this process may be facilitated or impeded by members of the athletes' social network as well as by the athlete's interpretation of anxiety (see Eubank & Collins, 2000).

The secondary aim of the current study was to critique theoretical and methodological issues in the extant literature. The meta-theory analysis confirmed that

Lazarus' (1999) theorizing has dominated the adolescent sport coping literature. Several conclusions were drawn from the analysis of the theory underpinning the research reviewed. Researchers would be well advised to specify exactly which elements of coping they wish to study because there are both micro and macro levels of coping. There is scope for researchers who continue to use Lazarus' (1999) cognitive-motivational-relational theory to specify which aspects of this theory they are studying. This would facilitate the integration of future studies into existing research. The need for more precise use of theory is exemplified by the fact that, within Lazarus' theory, emotion plays a key role in the coping process. However, as yet, the role of emotion in the coping process has not been clearly documented in the adolescent sport coping literature. At this time, it is unclear how adolescents cope with the negative emotions that arise from stressor appraisals versus coping with stressors themselves.

In addition to more precise use of theory, there is also an apparent need to adopt more holistic approaches to study the coping process, which has been identified as necessary for understanding the complexity of coping (e.g. Lazarus, 1999; Neil et al., 2009). It may not be possible for a single study to assess all aspects of the coping process, but it does seem important that studies attempt to embrace multiple concepts of the coping process more completely. For example, studies that move beyond appraisal and coping to also include emotion, effectiveness, and implications for behaviour within this process could make valuable contributions to the literature. Similarly, further research is also needed to examine how social networks and adolescents' personal resources influence the coping process because previous studies examining these macro level factors have tended not to include also assessments of coping as a process. In calling for

more holistic approaches, it is acknowledged that the complexity of the coping process creates several methodological challenges for researchers. Researchers from social psychology have observed that whereas qualitative studies tend to examine select elements of the coping process, few studies have examined the ways in which multiple elements of the coping processes interact (Somerfield & McCrae, 2000). Although it may be difficult to study all aspects of coping, the literature could be advanced by more holistic studies.

There also appears to be scope to develop substantive sport-specific theories of coping (as opposed to broader, formal theories; Strauss & Corbin, 1998). Sport is a unique achievement context where successes and failures occur in a public setting, which differs to other achievement domains (such as school). In sport, parents and coaches are emotionally involved in the athlete's performances and can provide more immediate feedback than in other achievement domains. These unique characteristics of sport are not often accounted for in formal theories of coping. Given the likelihood of overlapping stressor appraisals from other areas of athletes' lives (i.e., school, relationships, families), it would be beneficial to examine the impact of these ‘external’ demands on athletes' appraisals of competitive stressors and performance. Figure 2-2, along with previous sport-specific conceptualizations (e.g., Fletcher et al., 2006), may provide useful starting points for informing the creation of substantive sport-specific theories of coping that take into consideration the broader context of athletes' lives.

Continued investigation of Lazarus' (1999; Lazarus & Folkman, 1984) conceptualization of coping is warranted, however the failure to adopt diverse theories within a field of research may lead to a reduction in scholarly inquiry, creativity, and

growth (Nagle & Mitchell, 1991). To move forward it may be useful for researchers to adopt different models or theories such as Taylor's (2009) stress, coping, and adaptation framework, which incorporates internal/external resources, effects of the event, appraisal, coping, and estimated distress in the study of coping (for a test of the model, see Gidron & Nyklicek, 2009). Alternatively, Jones and colleagues' (Jones, Meijen, McCarthy, & Sheffield, 2009) theory of threat and challenge states examines athletes' dispositional style, appraisals of the demand and resources (including self-efficacy and control), emotional and physiological consequences, performance consequences, and performance outcomes. Lazarus' theory of coping is not explicitly concerned with development and was derived from research with adults (Compas et al., 2001). Thus, adolescent coping research in sport may benefit from taking a more developmental approach (see Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000; Skinner & Zimmer-Gembeck, 2009), and it may add to our understanding of adolescents' coping if researchers include different theoretical perspectives within their research.

The meta-method analysis revealed several issues, although it is important to first distinguish between qualitative methods versus methodologies. Methods are the techniques used to collect and manage data (e.g., interviews, content analysis, etc.) whereas methodologies are traditions of inquiry (e.g., ethnography, grounded theory, etc.) that provide “guiding plans” for research design. Researchers used various methods of data collection such as interviews, diaries, and think-aloud protocols (e.g. Nicholls & Polman, 2008; Tamminen, 2007), which is a promising development that should continue. In fact, Skinner and Zimmer-Gembeck (2007) and Somerfield and McCrae (2000) argued for more research at a micro-level using daily diaries and other such

momentary recall approaches to examine coping as an interactive process in real time. However, the studies reviewed tended to use similar analytic techniques, with the majority using basic content or thematic analysis in the absence of a stated methodology (Table 1). This is consistent with a "quasi-qualitative" approach, which Culver and colleagues (Culver, Gilbert, & Trudel, 2003) describe as dominating qualitative research within sport psychology.

These findings (Figure 2-2) suggest that micro-level coping influences and is influenced by macro-level issues. Increased use of different qualitative *methodologies* may help enhance our understanding of the interaction of micro- and macro-level issues in the coping process (cf. Brustad, 2008). Lazarus (1999) called for the use of narrative methodologies to enable a greater understanding of the person and situational variables that contribute to different appraisals, emotions, and coping efforts. Ethnographic methodologies, which enable researchers to analyse culture or subculture, could be used to examine situational constraints or opportunities within different sport "cultures" that may impact athletes' appraisals of stressors and the development of coping. Similarly, case study methodologies require researchers to establish the boundaries of a case and can be used to help researchers explain the social and environmental factors that influence, and are influenced by, individuals' coping attempts (see Holt & Hogg, 2002). In addition, grounded theory (Corbin & Strauss, 2008) could be used to create sport-specific theories of coping. However, there is no point in using methodologies for the sake of it. Rather, it is important that research decisions are driven by research questions. In this respect, the current synthesis provides useful direction for research questions by

highlighting the need to examine social networks and ways in which athletes acquire coping skills.

To synthesize the points made above concerning coping theory and issues relating to methods and methodologies, it may be worth considering the role of theory in qualitative research. Some qualitative research can be descriptive and atheoretical and still make important contributions to the literature in areas that have not received much previous attention. However, as an area matures it becomes important for qualitative studies to be informed by previous work as a "starting point" to ensure findings do not merely replicate previous knowledge. Theories are often used to create such starting points, and qualitative studies can be informed by theory. Sandelowski (1993) explained that it is incumbent on qualitative researchers to be precise about how theory is used in a study. For example, it may be used to create a conceptual context for a study, used within the latter stages of analysis, or to help compare and integrate findings with previous research. Such clear use of theory is consistent with the arguments put forward here.

At the procedural level, the quality of a meta-study is judged based on its adherence to principles of design. This criterion has been fulfilled by carefully outlining the steps taken from the retrieval of the primary research reports to the final presentation of results. Ultimately it is left to the reader to evaluate the rigour of the procedures used. Although every effort was made to conduct an exhaustive search of the literature, it is difficult to ensure every relevant study is found within a specific field of study (Cooper & Lindsay, 1998). This is a limitation of all qualitative meta-studies (Paterson et al., 2001), although this limitation was addressed by seeking the assistance of an expert-level searcher (cf. Barroso et al., 2003) in retrieving relevant articles.

In terms of evaluating the outcome of the meta-study, these findings have the potential to increase understanding of adolescent athletes' stressor appraisals and coping by identifying important themes at both micro and macro levels of research. The current research attempts to highlight some of the implications of the theories and methods used in the area of adolescent sport stress and coping research. Overall, this study presented a conceptual model of qualitative adolescent sport coping research (Figure 2-2) that may inform future research and practice. This study has also presented findings relating to the use of theory and methodological issues, all of which may provide useful considerations for future research. Future studies that build upon the findings of the current research will help advance adolescent sport coping research and ultimately provide evidence that can be used to enhance young athletes' experiences in sport.

References

Anshel, M. H., & Delaney, J. (2001). Sources of acute stress, cognitive appraisals, and coping strategies of male and female child athletes. *Journal of Sport Behavior, 24*, 329-353.

Aspinwall, L. G. & Taylor, S. E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin, 121*, 417-436.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191-215

Barroso, J., Gollop, C. J., Sandelowski, M., Meynell, J., Pearce, P. F., & Collins, L. J. (2003). The challenges of searching for and retrieving qualitative studies. *Western Journal of Nursing Research, 25*, 153-178.

Brustad, R. J. (2008). Qualitative research approaches. In T. S. Horn (Ed.), *Advances in sport psychology* (3rd ed., pp. 31-44). Champaign, IL: Human Kinetics.

Chase, M. A., Magyar, M. T., & Drake, B. M. (2005). Fear of injury in gymnastics: Self-efficacy and psychological strategies to keep on tumbling. *Journal of Sports Sciences, 23*, 465-475.

Cohn, P. J. (1990). An exploratory study on sources of stress and athlete burnout in youth golf. *The Sport Psychologist, 4*, 95-106.

Colgan, D. B. (2006). *Psychological, physiological, and situational factors affecting performance in adolescent figure skaters.* (Unpublished doctoral dissertation). Available from ProQuest Dissertation and Theses database. (ProQuest Publication No. 3225724)

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin, 127*, 87-127.

Connor-Smith, J. K., Compas, B. E., Wadsworth, M. E., Thomsen, A. H., & Saltzman, H. (2000). Responses to stress in adolescence: Measurement of coping and involuntary stress responses. *Journal of Consulting and Clinical Psychology, 68*, 976-992.

Cooper, H. M., & Lindsay, J. J. (1998). Research synthesis and meta-analysis. In L. Bickman & D. J. Rog (Eds.), *Handbook of applied social research methods* (pp. 315-337). Thousand Oaks, CA: Sage.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.

Culver, D. M., Gilbert, W. D., & Trudel, P. (2003). A decade of qualitative research in sport psychology journals: 1990-1999. *The Sport Psychologist, 17*, 1-15.

Denzin, N. K., & Lincoln, Y. (2005). The discipline and practice of qualitative research. In N. K. Denzin & Y. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 1-27). Thousand Oaks, CA: Sage.

Eubank, M., & Collins, D. (2000). Coping with pre- and in-event fluctuations in competitive state anxiety: A longitudinal approach. *Journal of Sports Sciences, 18*, 121-131.

Finfgeld, D. L. (2003). Metasynthesis: The state of the art - so far. *Qualitative Health Research, 13*, 893-904.

Fletcher, D., Hanton, S., & Mellalieu, S. D. (2006). An organizational stress review: Conceptual and theoretical issues in competitive sport. In S. Hanton & S. D. Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 321-374). New York: Nova Science.

Giacobbi, P. R., Lynn, T. K., Wetherington, J. M., Jenkins, J., Bodenforf, M., & Langley, B. (2004). Stress and coping during the transition to university for first-year female athletes. *The Sport Psychologist, 18,* 1-20.

Gidron, Y., & Nyklicek, I. (2009). Experimentally testing Taylor's stress, coping and adaptation framework. *Anxiety, Stress, and Coping, 22,* 525-535.

Gilbert, J. N. (2000). *The female adolescent team sport athlete: Stress and ways of coping.* (Unpublished Doctoral dissertation). Available from ProQuest Dissertation and Theses database. (ProQuest Publication No. NQ58275)

Gould, D., Wilson, C. G., Tuffey, S., & Lochbaum, M. (1993). Stress and the young athlete: The child's perspective. *Pediatric Exercise Science, 5,* 286-297.

Goyen, M. J., & Anshel, M. H. (1998). Sources of acute competitive stress and use of coping strategies as a function of age and gender. *Journal of Applied Developmental Psychology, 19,* 469-486.

Heil, J. (2000). The injured athlete. In Y. L. Hanin (Ed.), *Emotions in sport* (pp. 245-265). Champaign, IL: Human Kinetics.

Holt, N. L., Berg, K.-J., & Tamminen, K. (2007). Tales of the unexpected: Coping among female collegiate volleyball players. *Research Quarterly for Exercise and Sport, 78,* 117-132.

Holt, N. L., Hoar, S., & Fraser, S. N. (2005). How does coping change with development? A review of childhood and adolescent sport coping research. *European Journal of Sport Science, 5*, 25-39.

Holt, N. L., & Hogg, J. M. (2002). Perceptions of stress and coping during preparations for the 1999 women's soccer world cup finals. *The Sport Psychologist, 16*, 251-271.

Holt, N. L., & Mandigo, J. L. (2004). Coping with performance worries among male youth cricket players. *Journal of Sport Behavior, 27*, 39-57.

Jones, M., Meijen, C., McCarthy, P. J., & Sheffield, D. (2009). A theory of threat and challenge states in athletes. *International Review of Sport and Exercise Psychology, 2*, 161-180.

Kliewer, W., Parrish, K. A., Taylor, K. W., Jackson, K., Walker, J. M., & Shivy, V. A. (2006). Socialization of coping with community violence: influences of caregiver coaching, modeling, and family context. *Child Development, 77*, 605-623.

Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. New York: Springer.

Lazarus, R. S. (2000). Toward better research on stress and coping. *American Psychologist, 55*, 665-673.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

Martens, R., Burton, D., Vealey, R. S., Bump, L. A., & Smith, D. E. (1990). Development and validation of the Competitive State Anxiety Inventory-2 (CSAI-2). In R. Martens, R. S. Vealey, & D. Burton (Eds). *Competitive anxiety in sport* (pp. 117-123). Champaign, IL: Human Kinetics.

Nagle, L. M., & Mitchell, G. J. (1991). Theoretic diversity: Evolving paradigmatic issues in research and practice. *Advances in Nursing Science, 14*, 17-25.

Neil, R., Mellalieu, S. D., & Hanton, S. (2009). The contribution of qualitative inquiry towards understanding competitive anxiety and competition stress. *Qualitative Research in Sport and Exercise, 1*, 191-205.

Nicholls, A. (2007a). A longitudinal phenomenological analysis of coping effectiveness among Scottish international adolescent golfers. *European Journal of Sport Science, 7*, 169-178.

Nicholls, A. (2007b). Can an athlete be taught to cope more effectively? The experiences of an international-level adolescent golfer during a training program for coping. *Perceptual and Motor Skills, 104*, 494-500.

Nicholls, A., & Polman, R. C. J. (2007). Stressors, coping, and coping effectiveness among players from the England under-18 rugby union team. *Journal of Sport Behavior, 30*, 199-218.

Nicholls, A., & Polman, R. C. J. (2008). Think aloud: Acute stress and coping strategies during golf performances. *Anxiety, Stress and Coping, 21*, 283-294.

Nicholls, A., Holt, N. L., & Polman, R. C. J. (2005). A phenomenological analysis of coping effectiveness in golf. *The Sport Psychologist, 19*, 111-130.

Nicholls, A., Holt, N. L., Polman, R. C. J., & James, D. W. G. (2005). Stress and coping among international adolescent golfers. *Journal of Applied Sport Psychology, 17*, 333-340.

Noblit, G. W., & Hare, R. D. (1988). *Meta-ethnography: Synthesizing qualitative studies*. Newbury Park, CA: Sage.

Partridge, J. A., Brustad, R. J., & Babkes Stellino, M. (2008). Social influence in sport. In T. S. Horn (Ed.), *Advances in sport psychology* (3rd ed., pp. 269-292). Champaign, IL: Human Kinetics.

Paterson, B. L., Thorne, S. E., Canam, C., & Jillings, C. (2001). *Meta-study of qualitative health research: A practical guide to meta-analysis and meta-synthesis.* Thousand Oaks, CA: Sage.

Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd ed.). Newbury Park, CA: Sage.

Reeves, C. W., Nicholls, A., & McKenna, J. (2009). Stressors and coping strategies among early and middle adolescent Premier League academy soccer players: Differences according to age. *Journal of Applied Sport Psychology, 21,* 31-48.

Sagar, S. S., Lavallee, D., & Spray, C. M. (2007). Why young elite athletes fear failure: Consequences of failure. *Journal of Sports Sciences, 25*, 1171-1184.

Sandelowski, M. (1993). Theory unmasked: The uses and guises of theory in qualitative research. *Research in Nursing & Health, 16*, 213-218.

Sandelowski, M., & Barroso, J. (2003). Toward a metasynthesis of qualitative findings on motherhood in HIV-positive women. *Research in Nursing & Health, 26*, 153-170.

Sandelowski, M., Docherty, S., & Emden, C. (1997). Focus on qualitative methods. Qualitative metasynthesis: Issues and techniques. *Research in Nursing & Health, 20*, 365-371.

Santrock, J. W. (2008). *Adolescence* (12th ed.). New York: McGraw-Hill.

Sirard, J. R., Pfeiffer, K. A., & Pate, R. R. (2006). Motivational factors associated with sports program participation in middle school students. *Journal of Adolescent Health, 38,* 696-703.

Skinner, E. A., & Zimmer-Gembeck, M. J. (2007). The development of coping. *Annual Review of Psychology, 58,* 119-144.

Skinner, E. A., & Zimmer-Gembeck M. J. (2009). Challenges to the developmental study of coping. *New Directions for Child and Adolescent Development, 124,* 5–17.

Smith, R. E. (1986). Toward a cognitive-affective model of athletic burnout. *The Sport Psychologist, 8,* 36-50.

Somerfield, M. R., & McCrae, R. R. (2000). Stress and coping research: Methodological challenges, theoretical advances, and clinical applications. *American Psychologist, 55,* 620-625.

Strauss, A. & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Newbury Park, CA: Sage.

Tamminen, K. A. (2007). *Proactive coping among female adolescent athletes*. (Unpublished Master's thesis). Available from ProQuest Dissertation and Theses database. (ProQuest Publication No. MR33157)

Taylor, S. E. (2009). *Health psychology* (7th ed.). New York: McGraw-Hill.

Udry, E., Gould, D., Bridges, D., & Tuffey, S. (1997). People helping people? Examining the social ties of athletes coping with burnout and injury stress. *Journal of Sport & Exercise Psychology, 19,* 368-395.

Zimmer, L. (2006). Qualitative meta-synthesis: A question of dialoguing with texts. *Journal of Advanced Nursing, 53,* 311-318.

CHAPTER THREE

A Grounded Theory of Adolescent Athletes' Learning to Cope And The Role of Parents and Coaches

A version of this chapter has been submitted for publication. Tamminen, K. A., & Holt, N. L. (under review). A grounded theory of adolescent athletes' learning to cope and the role of parents and coaches. *Psychology of Sport and Exercise*.

Theorists have argued that in order to fully appreciate the nature and development of coping among adolescents, we must understand the social context in which it occurs (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Lazarus, 1999; Skinner & Wellborn, 1994; Zimmer-Gembeck & Locke, 2007). In this sense, the social context refers to the individuals and the socialization processes that may influence the ongoing development of an adolescent's coping. Social influences on coping may shape the development of adaptive or maladaptive coping responses (Compas et al., 2001; Holt, Hoar, & Fraser, 2005; Skinner, Edge, Altman, & Sherwood, 2003; Skinner & Zimmer-Gembeck, 2007). However, social influences on coping is a line of inquiry which is relatively unstudied within developmental and sport psychology research. As Skinner and Zimmer-Gembeck stated, researchers "should continue to examine the role parents and other social partners play in the development of coping" (p. 140). Furthermore, researchers "need to take social context seriously" (Compas et al., 2001, p. 122) when studying coping.

In sport, stress and coping has typically been studied using Lazarus' (Lazarus, 1999) cognitive-motivational-relational theory (CMRT), which suggests that coping is a process of conscious efforts to manage demands that are appraised as taxing or exceeding an individual's resources. This perspective has led to research at an episodic level (Skinner & Zimmer-Gembeck, 2007), in that coping efforts have been examined in response to particular appraised stressors. Demands which young athletes may appraise as stressors include pressure to perform, conflicts with coaches or opponents, fear of injury, making game errors, and poor coach-athlete relationships (see Holt et al., 2005). Researchers examining coping in youth sport have also identified different types of

coping strategies young athletes use to deal with stressors (e.g., Reeves, Nicholls, & McKenna, 2009). In a review of coping research conducted among children and adolescents in sport, Holt and colleagues (2005) reported that adolescent athletes used a variety of coping strategies including seeking social support, problem-solving or task-oriented coping, emotion-focused coping, distraction, and withdrawal/avoidance to deal with stressors. Although researchers have conceptualized and measured coping in different ways, it is evident that adolescent athletes use a variety of coping strategies to deal with stressors in sport.

In addition to identifying the coping strategies athletes use to deal with stressors, researchers have also investigated ways in which coping changes over time. Athletes' coping strategies fluctuate over the course of a single competition (Nicholls & Polman, 2008), and coping has been shown to change over longer periods of time (e.g., over a competitive season) in response to changing contextual factors (Giacobbi et al., 2004; Tamminen & Holt, 2010a). Nicholls and colleagues found that reported coping responses fluctuated over 31-day periods among adolescent golfers (Nicholls, Holt, Polman, & James, 2005) and rugby players (Nicholls & Polman, 2007a). Athletes used a higher frequency of coping strategies during their most important competitions (e.g., Nicholls et al., 2005). Collectively, this research highlights the dynamic nature of stressor appraisals and coping responses.

Extending this area of research to examine developmental differences in adolescent athletes' coping, Reeves et al. (2009) examined stressors and coping strategies among elite early (12-14yrs) and middle (15-18yrs) adolescent soccer players. Middle adolescents employed a greater range of coping strategies than early adolescents, and

they also used more problem- and emotion-focused coping but less avoidance coping. This is consistent with reviews which suggest that adolescent athletes have an increased repertoire and variability of coping strategies compared to that of younger athletes (Holt et al., 2005; Compas et al., 2001), and athletes appear to cope more effectively with stressors as they age (Nicholls & Polman, 2007b). While it is important to identify how young athletes cope with stressors, little is known about how young athletes *learn* coping skills. Identifying processes of learning about coping can provide practical information for parents, coaches, and sport practitioners to be better positioned to help young athletes develop effective coping strategies. By developing effective coping strategies young athletes may be better equipped to manage the demands of competitive sport, which may contribute to adaptive coping in the long term and continued participation in sport.

The social context that shapes coping has received some attention in the developmental psychology literature (Kliewer, Fearnow, & Miller, 1996; Meesters & Muris, 2004; Power, 2004), and has also begun to receive attention within the sport psychology literature. Lafferty and Dorrell (2006) investigated the relationship between adolescent athletes' coping strategy use and perceptions of parental support. Athletes who perceived moderate and high levels of parental support reported using active coping (similar to problem-focused coping) and increased training to deal with stressors. Conversely, athletes who perceived low parental support reported more use of self-blame and venting of emotions, and significantly less acceptance, positive reinterpretation, and social support when dealing with stressors. Athletes who reported low perceptions of parental support also used fewer coping strategies overall and may be at risk of developing maladaptive patterns of coping. Research in developmental psychology has

shown that positive parental influence (Hauser, Borman, Jacobson, Powers, & Noam, 1991) and parental support (Ptacek, Pierce, Eberhardt, & Dodge, 1999; Zimmer-Gembeck & Locke, 2007) are related to adolescents' use of adaptive coping strategies, possibly due to modeling, coaching, or socializing adaptive coping (Power, 2004).

Although parental support is associated with adaptive coping, there is little research within the sport psychology literature that examines the specific ways in which parents influence adolescents' coping development (Tamminen & Holt, 2010b). Power (2004) suggested that although there is evidence that parents and family environments influence children's adjustment to stressful events, there is little known about *how* parents help children learn to cope or adjust to stressful events. Furthermore, while parents appear to play an important role in the development of coping, coaches may also influence adolescent athletes' learning about coping. Coaches occupy a central role within the athletic setting, and their influence may extend into other areas of the athlete's life (Smith & Smoll, 1996). Clearly it is important to examine how parents and coaches may influence ways in which adolescent athletes learn about coping, but these issues have yet to be fully examined. The current study addressed these gaps in the literature.

The first aim of this study was to examine the process by which adolescent athletes learned to cope. The second aim of this study was to examine the role of parents and coaches in adolescent athletes' process of learning to cope. The ultimate objective of this research was to develop a theoretical explanation of adolescent athletes' process of learning to cope and the role of parents and coaches within this process.

Learning to cope and potential for change. One fundamental assumption of this research is that individuals maintain the potential for change and development and that

they may indeed experience improvements in their coping. This perspective is informed by Lerner's theory of developmental contextualism and also the concept of relative plasticity (Lerner, 1984, 1995, 1996). Developmental contextualism suggests that human development consists of successive changes among biological, psychological, social and physical variables over the life course, and these variables are interdependent and interrelated (Lerner, 1996). As such, changes to any of these variables influence and are influenced by one another in a constantly evolving system. Relative plasticity suggests that within any individual there is potential for systematic change across the life span. The term relative plasticity implies that change is not limitless, but rather change is constrained by past developments and current contextual conditions (Lerner, 1984). The current research is based on the assumption that individuals maintain the capacity for change and that they have the ability to learn to cope, however the extent to which they may achieve positive, adaptive changes or improvements in their coping is constrained by their past development and their current contextual conditions (i.e., biological, psychological, social, and physical variables). This perspective also implies the potential for interventions to ameliorate behaviours (Lerner, 1984). Thus, one underlying assumption of this research is that by understanding how adolescent athletes learn to cope, appropriate interventions may be implemented to encourage adaptive coping behaviours.

Method

Grounded theory methodology (Corbin & Strauss, 2008) was chosen to fulfill the purposes of this research. Grounded theory is particularly useful when researchers wish to generate a substantive theory relevant to the area of study and is particularly suited to

offering insight, enhancing understanding, and to serve as a guide for future action (Strauss & Corbin, 1998). It was an appropriate methodology because there is a need to develop sport-specific theories of coping due to the unique demands of sport (Tamminen & Holt, 2010b). Sport is a unique achievement context and it has been proposed that "existing psychological theory will not have all the answers for the sport psychologist. New theories that account for multivariate, highly complex athletic settings must be identified and tested" (Gould, 1996, p. 406).

This research was approached from an interpretivist philosophical perspective, which focuses on understanding the meanings, purposes, and intentions people give to their own actions and interactions with others (Smith, 2008). The interpretivist epistemological position maintains that knowledge is developed through a process of interpretation, and it is consistent with a constructivist ontological position that there are multiple realities which exist for individuals which can co-exist (Guba & Lincoln, 1994). There has been ongoing debate about the variants of grounded theory and their use by researchers, and some have argued that Strauss and Corbin's (1998) variant of grounded theory is essentially post-positivistic in nature and ontologically realist (Annells 1996; Weed, 2009). However, more recently Corbin has stated that "concepts and theories are *constructed* by researchers" (Corbin & Strauss, 2008, p. 10) and that "there is not one reality; there are multiple 'realities,' and collecting and analyzing data require capturing and taking into account those multiple viewpoints" (Corbin, 2009, p. 38). Thus, using Corbin and Strauss' most recent (2008) variant of grounded theory to represent the multiple perspectives of the athletes, coaches, and parents in this study was coherent with the researcher's epistemological and ontological viewpoints.

Sampling and Participants

Sampling within grounded theory begins by recruiting participants who will provide the best data to answer the research question, and the researcher's knowledge of the relevant literature can provide information about potential areas of inquiry (Corbin & Strauss, 2008). Although athletes' perspectives of learning to cope were central to this research, parents and coaches were also sampled in the current study. Parents are considered to be "the most important socializing agents" in shaping development through sport (Brustad, 1996, p. 113) while coaches "occupy a central and influential position in the athletic setting, and their influence may extend into other areas of the child's life as well" (Smith & Smoll, 1996, p. 125). Due to their extensive role in young athletes' lives, parents and coaches were identified as important individuals to interview regarding their potential influence on athletes' learning about coping.

Peers also play an important role in young athletes' sport experiences, particularly in terms of peer acceptance and development of self-concept (Brustad, 1996). In order to remain open to the possibility that peers may also play a role in athletes' learning about coping, initial interview questions were intentionally broad and asked athletes 'do you seek advice when confronted with a stressful situation?' 'who helps you deal with stress?' and 'has anyone ever talked to you or taught you about dealing with stressful situations?' (see Appendix I: Athlete Interview Guide). Athletes described the influence of parents and coaches in learning to cope, but few athletes indicated that peers or teammates helped them to learn about coping. As such, later interviews and analyses focused on the role of parents and coaches in athletes' learning process.

Following research board ethics approval, participants were theoretically sampled according to grounded theory procedures, which are predicated on the interaction between data collection and analysis (Corbin & Strauss, 2008). During the first phase of data collection youth sport participants were purposively sampled from provincial soccer and hockey teams; the main criterion for sampling at this stage was participation in sport at a competitive level. Parents of the athletes were purposively sampled to examine their influence on the development of coping among youths (Lafferty & Dorrell, 2006). Following the initial purposive sampling of young athletes (11-14 years) and the first phase of data analysis, older adolescent athletes (15-18 years) were theoretically sampled in the second phase of data collection to gain their perspectives about how they learned to cope as they progressed through the adolescent period. At this point coaches were also recruited, as initial interviews with athletes and the researchers' previous knowledge about stress and coping suggested that coaches may influence the development of coping among athletes. The next phase of analysis revealed the need to theoretically sample specific concepts identified as important in earlier interviews. Thus, data collection proceeded according to theoretical sampling in order to sample specific concepts which emerged from the data analysis and to check for variation in the developing theory. In the final phase of data collection, older adolescent athletes (15-18 years) as well as former athletes (19-22 years) and multi-sport athletes from team and individual sports were sampled, as well as their parents. The final sample comprised 17 athletes (8 females, 9 males, M_{age} = 15.6 years), 10 parents (6 mothers, 4 fathers), and 7 coaches (see Figure 3-1: Theoretical sampling process).

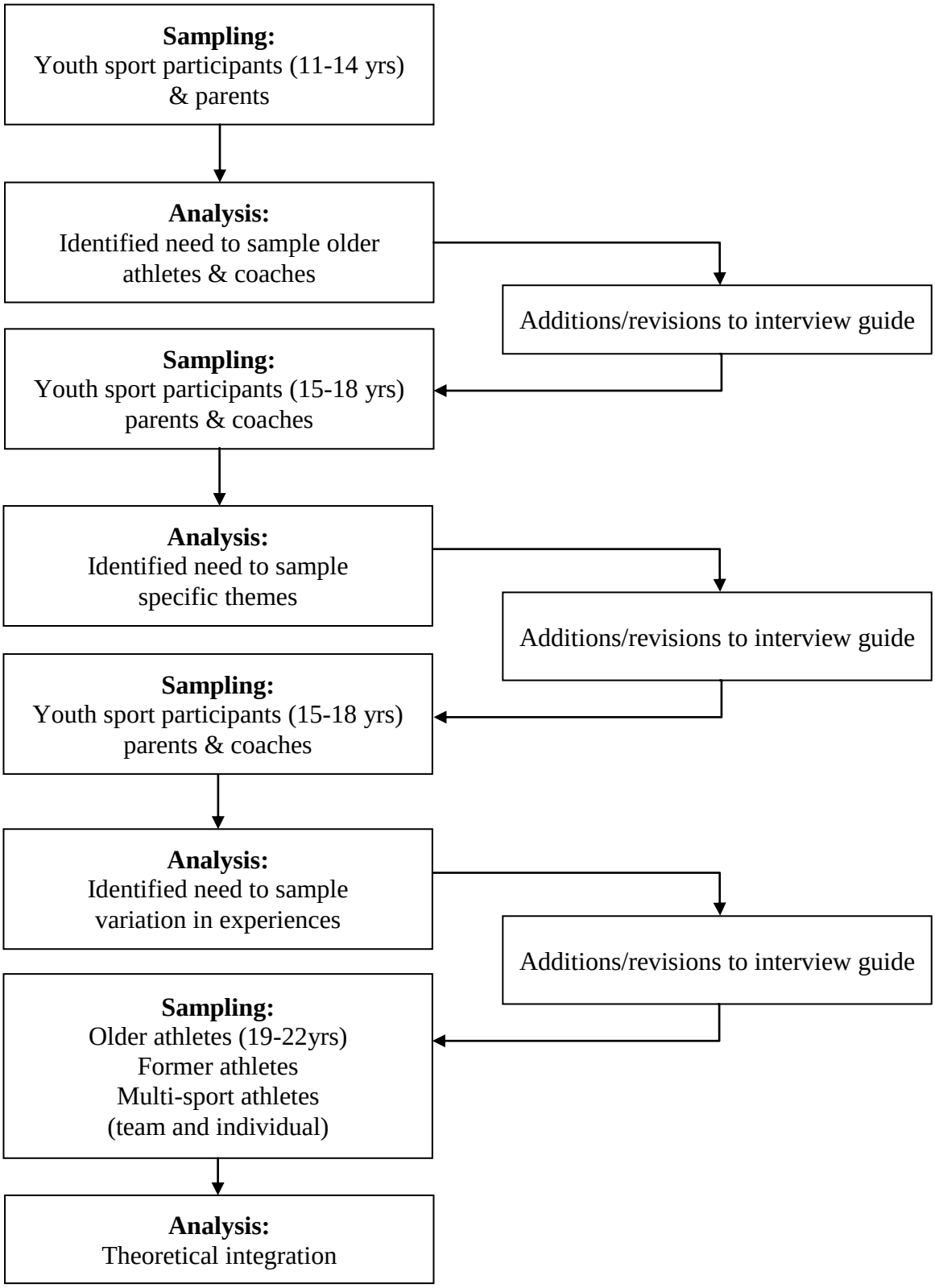

Figure 3-1. Theoretical sampling process.

Data Collection

Semi-structured interviews were conducted. Although the interview guides evolved during the process of the study (Corbin & Strauss, 2008), the main areas covered were: a) sport participation history/timeline; b) stressors encountered in youth sport; c) coping strategies used in youth sport; d) development of coping strategies; e) role of parents and coaches in learning to cope. Open-ended questions were used in order to reveal salient issues related to the topic as well as frames of reference specific to the participant (Ellis, 2006) and to remain open to new possibilities emerging from the data analysis. The interviews were modified as required for coach, parent, and athlete interviews. As data collection progressed, interview questions were refined in accordance with the concept of theoretical sampling and the interaction of data collection and analysis (Corbin & Strauss, 2008). For example, initial interviews asked participants broad questions about stressors and coping in sport, as well as perceptions of learning to cope. Interview questions were later refined to include more specific questions about concepts which emerged from earlier analyses, for example *creating a supportive context for learning, strategies for assistance,* and *reflective practice.*

Interviews were conducted at a location which was comfortable and convenient for the participants. Participants were told they could come to an office for the interview, but many elected to do the interview at their home. In the case that interviews were conducted at the participant's home, the interviewer sought to maintain the same conditions as an office interview. For example, interviews were conducted in private with no other family members present. Participants were reminded that involvement in the study was voluntary and they were free to withdraw or end the interview at any time

without consequence. Participants were reminded that the information they shared during the interview was confidential and would not be disclosed to others without their prior permission.

Interviews lasted 35 minutes on average (younger athletes typically had shorter interviews, while parents and coaches generally had longer interviews). The interviews were audio recorded, transcribed verbatim and organized using the computer program NVivo. There is some debate over the use (and misuse) of computer programs within qualitative research (Corbin & Strauss, 2008; Holton, 2007; Hutchison, Johnston & Breckon, 2009). Corbin and Strauss noted that computer programs are tools which can "help a researcher to keep track of his or her codes, provide easy access to memos, and facilitate the making of diagrams" (p. xi) rather than take over or direct the research process. Within the current research NVivo was used as a program to facilitate data management, rather than as an analytic 'search and retrieve' program.

Data Analysis

Data analysis commenced as soon as the first data were collected to ensure interplay between analysis and data collection (Corbin & Strauss, 2008). As noted in the sampling procedure and in Figure 3-1, analysis of participants' interviews revealed areas for subsequent data collection in order to theoretically sample emerging concepts and variation in experiences (Corbin & Strauss, 2008).

Open coding was used to identify concepts and their properties and dimensions (Strauss & Corbin, 1998). As new transcripts were analyzed, concepts were examined using constant comparison to ensure data were coded into unique categories and to identify the properties and dimensions of each concept.

Axial coding (Strauss & Corbin, 1998) was used to develop and describe concepts and to create relational statements between categories and subcategories. This was the phase of research when additional participants were sampled in order to gather data necessary to develop and adequately saturate the emerging categories. Categories were deemed to be saturated when interviews revealed no new data or conceptual explanation of the phenomena.

Theoretical integration (Corbin & Strauss, 2008) was used to identify a central process (learning about coping) and to refine the theory by identifying relationships between concepts, adding density to categories, and to determine how well the theory fit the data. To aid this analytic process, during the latter phases of the research participants were presented with a proposed model of the emerging theory and asked to provide feedback about the extent to which it represented their own experiences. This information was used to further refine and develop the grounded theory, and to ensure that the findings reflected the participants' experiences by validating the theoretical scheme (Corbin & Strauss, 2008). This was important to ensure the findings were 'grounded' in the data and that the participants could "recognize themselves in the story that is being told" (Corbin & Strauss, 2008, p. 113).

The analytic techniques of memo-writing and diagramming (Corbin & Strauss, 2008) were used to keep the research grounded in the data by describing relationships between concepts and to maintain reflexivity on the part of the researcher. Memos were used to help gain analytical distance and to think conceptually about the data. Diagramming was used in developing the theory and thinking through concepts and relational statements.

A review of the sport psychology literature had been conducted for the purposes of the research proposal required to obtain research ethics board approval (McGhee, Marland, & Atkinson, 2007). However, concepts which emerged from the data analysis were not compared to the extant literature until the latter stages of data collection and analysis. Then, a delayed literature review (Strauss & Corbin, 1998) was conducted to examine the coherence of the theory with extant developmental psychology literature. Previous research was used with the aim of contrasting, comparing, and integrating findings from the current study, as well as to highlight possible connections to relevant theories and constructs. For example, a concept described as 'dosing' stress experiences in the current study was compared and contrasted with Power's (2004) concept of 'scaffolding.' Also, concepts were examined in order to determine whether labels may be assigned to ensure consistency with the extant literature and to reduce terminological overlap and confusion. For example, athletes in the current study described a process of reflecting on stressors and coping, a concept which was termed 'reflective practice' to maintain consistency with similar research concerning reflection within sport psychology (Faull & Cropley, 2009; Hanton, Cropley, & Lee, 2009; Tamminen & Holt, 2010b).

Finally, seven experts in sport psychology and coaching (3 sport psychology professors, 1 coaching professor, 2 PhD students in sport psychology, 1 sport psychology consultant) were asked to comment on the general coherence of the model and its practicality as a guide for action when working with youth sport participants. The panel of experts were not asked to validate the theory or to comment on the 'truth' of the findings (which would suggest a realist ontological perspective), but rather they were asked to comment on whether the final model was comprehensible and whether it

communicated information in a way which was easy to understand. This was important given that the study was intended to provide new insights into the field of youth sport coping research and practice. Their feedback did not change the content of the model per se but rather it helped improve the final presentation of the data (shown in Figure 3-2).

Ethical Considerations

Conducting research with youth and their parents presents specific ethical concerns regarding the power dynamics between the researcher and the participants. These power dynamics may explicitly or implicitly influence youths' decisions to participate in research studies, and deserves consideration by the researcher. Children and adolescents may be accustomed to obeying authority figures and adults, and youth may 'go along' with research procedures and answer interview questions without fully understanding the implications of their cooperation (Trussell, 2008). Similarly, youth may agree to participate in research to which their parents have given consent, without fully understanding the nature of research or despite their desire not to participate. It was therefore incumbent on the researcher to make clear to the participant (and his or her parents) any potential risks and benefits associated with participation in order to provide free and informed consent. The adolescents who participated in this research were informed before beginning their interview that they were under no obligation to take part in the study.

Confidentiality is another ethical concern when conducting research with adolescents. Parents and children were informed from the outset of the study that information disclosed to the researcher would be confidential, unless there was cause for serious concern for the child's safety or welfare. In that case, the researcher would be

obligated to take appropriate action and inform the child's parents or appropriate authorities of the situation or information of concern. No concerns for any of the youths' safety or welfare were noted during the interviews with the adolescents, and all interviews and responses were kept confidential.

Finally, the nature of research interviews may provoke intense introspection or self-reflection, which may be disquieting for some participants (Gabb, 2010). One strategy to deal with this was to make clear to the participants that they did not have to discuss any topics which made them uncomfortable and they were free to end the interview at any time.

Results

An overview of the components of athletes' process of learning about coping is presented first, followed by an explanation of the role of parents and coaches in this process, and finally the grounded theory model linking these categories together.

Process of Learning About Coping

Learning about coping was a process represented by the following categories: the athlete – sport experiences and learning through trial and error, reflective practice, and coping outcomes.

The Athlete – Sport experiences and learning through trial and error. Athletes, parents, and coaches reported that exposure to multiple stressful experiences contributed to learning about coping. Adolescent athletes who were exposed to stressful experiences in sport had opportunities to learn coping strategies that they then used to cope with stressors in the future. Embedded in this concept is the notion that athletes bring their past experiences, personal characteristics and individual differences to each

new experience, which affects their personal process of learning about coping. Athlete 13 said plainly "I think the only way to learn to deal was something is to be involved in it. So I think that you need to experience stress to learn how to deal with it." One soccer player had been involved with a national training program for soccer and her exposure to this elite environment helped her to learn about coping. Although the stressors she appraised had not changed from the previous year, she said "it wasn't, like, a lot better but I tolerated it better" (Athlete 10). Another soccer player said that she learned to cope by:

> Trying different things out and then if it works then you stick with that and if it doesn't work then you try something new the next time … I don't think anyone can tell you how to deal with it … it's different for everyone and you just have to find what works for you through trial and error. (Athlete 14)

Parents and coaches generally corroborated the athletes' views. Mother 3 reflected on her son's injury in his current season of volleyball. She said that because he had been injured previously, he was "not as devastated for as long. Not as stressed about it. Because he had been through the experience before, and he could see that if he did certain things it would be better [than last year]." Coach 2 said emphatically "how do they, they learn to cope? They, they learn by trial and error … that's a huge thing for these kids and like, some of them will get it, some of them won't." Overall, the central category of learning about coping was characterized by an experiential process whereby athletes developed coping strategies through direct experience facing multiple stressful situations.

Reflective practice. Learning to cope was facilitated when athletes took an active role in the learning process and reflected on their previous sport experiences. A soccer player said that as she progressed through higher levels of competitive soccer, she learned to cope by using reflection: "when you actually think about what you're thinking about, I guess like the mental part and distractions and focus and stuff, it does help a lot" (Athlete 10). However, some athletes reported that it was difficult to engage in reflection about coping, but that reflective practice was easier when engaged in conversations with others. A volleyball player said:

> I might not necessarily sit and go 'did this work for me?' … I reflect on what other people's experiences [were], to help me cope with it … someone who went through the same thing and then comparing your experiences [with their experiences]. (Athlete 12)

Thus, athletes reflected on their own experiences and the experiences of others as part of the process of learning about coping.

Coping outcomes. Outcomes of learning to cope were described by the athletes in terms of consistent sport performance and persistence in dealing with stressors. In terms of maintaining a consistent performance, a volleyball player said "you kinda have been able to cope with all the things going through your head and the stressful things going through your head" (Athlete 12). A soccer player reported that an athlete who had not learned to cope would "show their frustrations and show that it's actually really getting to them and letting it affect [their performance]" (Athlete 14).

A second positive outcome of coping was described as persistence in dealing with stressors. An athlete who played both soccer and volleyball said an individual who had learned to cope would:

> Come up with the best situation possible … they may not be able to cope with it perfectly, and they might not end up being perfectly happy or like completely unstressed or anything like that, but just the fact that they tried is good. (Athlete 15)

A final outcome of coping reported by the parents (but not the athletes) was the ability to employ coping strategies independently. Father 4 said "I think our job has always been to make them as independent as possible as young as possible." Mother 6 described how intervening on behalf of an athlete attempting to cope with stressors was, in her opinion, detrimental to developing independence in coping. She said:

> I think if you give a child a feeling that you are always rescuing them then I think what you do to them is you make them feel like they're, like they're always drowning and they can never cope with anything. How very sad.

Supportive Context for Learning

Learning about coping was facilitated when athletes' attempts to cope with stressful experiences occurred in a supportive context. This involved parents and coaches establishing a 'psychologically safe' environment in order for athletes to feel comfortable discussing stressors and coping. A supportive context for learning was very important for athletes. One athlete said "… if you have parents that don't support you or you can't talk to, or coaches that just like tear you down, you're obviously gonna have a more hard time

[learning to cope]" (Athlete 15). The importance of a supportive context was further highlighted by participants who perceived it to be lacking. That is, some athletes did not feel comfortable approaching their parents or coaches to discuss stressors or coping. One soccer player said "I kind of think it's weird talking to my Dad so I don't really talk to him about it … I don't know if I want him to know that much" (Athlete 13). A parent acknowledged "there's [*sic*] other kids that will talk with their parents more, are more open with their parents and are more expressive … we have only ourselves to blame" (Father 5). Hence, in the absence of a supportive context in which athletes feel comfortable to discuss coping, their opportunities for learning about coping are limited.

Listening and monitoring reactions. Parents could establish a supportive context through listening and monitoring their own reactions during discussions with their children. One mother said, "the quieter I am the more I get to hear. You know 'cause as soon as I say 'well you should do this, you should do that,' then I think they don't say as much" (Mother 6). Another parent said "if we came down too hard or were too judgmental or were shaming in our words or actions then we probably wouldn't hear about that ever again" (Father 4).

Reading the athlete. Parents and coaches attempted to read athletes' body language and responsiveness when discussing coping. When asked whether he ever initiated discussions about stressors or coping, Father 1 said "We just leave her [daughter] … when she wants to talk about it, she'll bring it up … we've tried talking to her about it. Uh-uh not a good thing. She freaks out." Father 5, who was also a coach, reported that to read the athletes on his team, he tried to:

> Read if there's things going on in their lives, if we've been stressing them out, at school … their body language, facial expressions and whether they're very talkative, and do they want to talk … It's a subtle art.

A basketball player said "if you tried to talk to an athlete after like when they're in a pissy mood it's just, it doesn't, uh it's not fun" (Athlete 11). Thus, a feature of creating a supportive context for learning to cope was reading athletes' mood and receptivity to feedback.

Fostering independence. Parents wanted to support their children in becoming independent in coping with stressors. However they also felt protective of their children having difficulty coping. Mother 3 reported struggling with supporting her son's coping attempts versus protecting him when he was having difficulties dealing with stressors. She said "your instinct is to protect and to make everything better, but what you learn over time is that's not what they need." She went on to explain, "if you run in and fix it for them, then what you end up with is this person who has no ability to deal with adversity." Mother 2 said it was important to allow her son to gain some independence in coping independently with stressors related to sport-related travel to a tournament, however she still reported the desire to protect her children: "I try to let them spread their wings, but at the same time I'm very in touch with how much they still need me and their dad."

Trusting and respecting coaches. A supportive context was created when athletes had trust and respect with their coaches. A basketball player explained, "respect is a big one for me … we knew [the coach] respected us … Now that he's more like a friend, it's easier to come back and talk to him and I definitely respect him" (Athlete 11).

This finding suggests coaches should demonstrate respect for their athletes in order to create a context for learning. Coaches also had to establish respect before athletes would trust them to talk about coping. Coach 4 said:

> If they don't respect the coach, if they don't feel like they can be friends with them, they're not gonna come in and, and start talking about issues that they're having personally … that's where I think it really does start, I think they need to respect coaches … if that's not the case I mean they're not gonna come to you and respect your comments about something they're feeling inside, right?

Parent and Coach Strategies

This category described more specific strategies parents and coaches used to help athletes learn about coping within the general atmosphere of a supportive context. Concepts included *questioning and reminding, providing perspective, sharing experiences, dosing stress experiences, initiating informal conversations, creating learning opportunities,* and *direct instruction.* The important issue was that these strategies were used within a supportive context created by parents and coaches.

Questioning and reminding. *Questioning* helped prompt athletes to think about ways in they might cope with stressors, and *reminding* helped them recall available coping strategies that could be used in specific situations. Coaches used questioning and reminding to help athletes learn to cope with performance stressors. For example, a hockey coach said he would question his athletes, asking "What do you think we could do differently to make that work for you and the team?" (Coach 3). Another hockey coach said that reminding athletes about available coping strategies was "a repetitive

thing, it's like almost every practice, almost every game you have to talk to [the athletes]" (Coach 2). Athletes reported that such reminders were useful. For example, one of the youngest athletes reported that when dealing with a performance stressor, "my coaches, they told me what I need to remember and so it kinda just stuck in my brain and [I] thought about it at the time" (Athlete 3).

Parents used similar strategies to help athletes develop coping strategies and to elicit cues about what constituted useful reminders for their children. Mother 4 reported that in her conversations with her children she would say:

> Let's talk about what happened and the choices that you made and what were the consequences of those choices? And if you were to go forward again to this same situation, would you make a different choice? And if you would make a different choice what kind of reminders do you need from us next time you're in that place so that [we can] help you make the right choice?

Providing perspective. Parents and coaches helped athletes learn about coping by providing perspective to help athletes to see stressors in context. Mother 3 reported that when her son was injured, she used the opportunity to provide some perspective on the situation:

> You learn that the game is, you know, a different game from the bench. And we would talk about that too about, you know, you get to that point of almost being recovered and still having to miss the big games and just talking about what that felt like. And so, what do your friends who sit the

bench a lot feel like and, and, you know, just that whole conversation of contextualizing it.

A basketball coach said that when his athletes were dealing with performance stressors, he provided perspective by telling them "everybody misses [free throws], even Michael Jordan missed tons of free throws so nobody judges him on that, so if you miss a free throw in a game, it's not the end of the world" (Coach 7).

Sharing experiences. Sharing experiences was a way for parents and coaches to engage in conversations to help athletes learn about coping. For example, a coach said "I always typically try to base it around experiences I've had to show that there's been some success. So the way I always look at it is if these kids see that there's success, they're gonna get it" (Coach 2). Parents reported sharing experiences with athletes was possible regardless of whether they had any prior sport experience. For example, one mother said that while she was not an athlete herself, "I just basically share my life experiences and how I've overcome, um adversity and various situations … I just try to share my experiences" (Mother 2). The practice of sharing experiences may be important in engaging athletes in reflective practice to learn about coping. Athlete 4 described how hearing others' experiences and sharing his own experiences helped him to develop coping strategies. He said that by hearing "other people telling me stories and how they have experienced it, I think how, like I put myself in their shoes and think what would I done there, I think that helps me a little bit."

Dosing stress experiences. Parents and coaches described the way they limited stressful experiences for adolescent athletes so as not to overwhelm them with situations which would be beyond their ability to cope. For example, Father 2 reported that he

would prevent his son from attending some team events when school, games, and practices became a heavy workload for him. The father said, "my whole concept of it was 'well the kid's supposed to be at home studying' … and it was either [miss the team event] or miss games and practices." Thus parents may 'dose' stress experiences by limiting the extent to which athletes participate in multiple activities. A hockey coach reported that athletes on his team perceived scouts in the stands as stressors during hockey games. As a result, the coach said "we try to really limit who talks to [them], and the scouts know that … you just try and block some of those, those extra pressures out" (Coach 2). One implication of dosing stress experiences is that parents and coaches may inadvertently shelter athletes from the opportunity to experience stressors and learn through trial and error. Therefore, there appears to be a delicate balance between dosing stress experiences and allowing athletes to try and cope independently with stressors.

Initiating informal conversations. A practice parents (but not coaches) reported was initiating informal conversations with athletes about coping. Parents said that driving to and from sport practices or games provided opportunities to initiate informal discussions about coping. A mother said, "sometimes driving home if there was just the two of [us] in the car then that would be an opportunity just to kinda say, so, how are you doing?" (Mother 3). Another mother said "I don't want to bombard him with a bunch of questions, right? So I try to open the conversation kinda probing but not, like, you know, asking things outright" (Mother 2).

Creating learning opportunities. Coaches created opportunities in practices for athletes to learn to cope, particularly in terms of coping with performance stressors. Father 5, who was also a coach, reported that he structured learning opportunities "to

create incremental pressure on them [athletes] … I'll ask them, 'by pushing back what does that allow you to do?' to evoke some, some thought process out of them." This example also demonstrates that strategies (e.g., creating learning opportunities and questioning) were used in combination to help athletes learn to cope. Athletes said these opportunities were useful for learning about coping. One soccer player said:

> If I was a, like a coach or something like that, I would make [athletes] mess up on stuff, I would do drills that were really hard that they couldn't understand, that they didn't get, and then they'd get really ticked off, but eventually you could change things or be like 'well, what do you wanna change about it?' so that they had an input and they would start to think like 'I can do stuff like this, I can change what happens,' and maybe then like they would start to learn to, to understand how to, how to deal with things. (Athlete 15)

Direct instruction. Coaches in this study also provided direct instruction about coping through 'classroom' sessions with teams and by inviting sport psychology consultants to work with their teams. A soccer player said "[my coach] used to do mental training stuff and like visualize, and visualize yourself succeeding, take a deep breath, close your eyes, all that kind of stuff" (Athlete 9). Coach 4 said "we did bring in a sports psychologist a couple times to kinda help with [coping]."

A Grounded Theory: Learning About Coping and the Role of Parents and Coaches

This grounded theory attempts to explain the process by which adolescent athletes learned about coping and the role of parents and coaches in this process. The grounded theory explanation is visually depicted in Figure 3-2. Learning about coping was an

experiential process whereby athletes needed exposure to potential stressors to try out coping strategies on their own. The athlete engages in learning about coping through trial and error, bringing to each new situation their past experiences and personal characteristics which contribute to the ongoing learning process (signified by (a) in Figure 3-2). Coping with stressors was followed by (b) engagement in reflective practice about the stressors and their coping attempts. Some athletes reported difficulties in reflecting on coping, however they reported that discussing coping with others (i.e., when parents and coaches shared their experiences with athletes) was helpful in stimulating reflective practice. Participants reported that exposure to stressors, coping attempts, and engaging in reflective practice generally led to positive coping outcomes (c) which included performance consistency, persistence in coping, and independence in coping. Coping outcomes are displayed on a continuum in Figure 3-2, as athletes reported variation in the extent to which they felt they could achieve these outcomes.

Parents and coaches played an important role in athletes' process of learning about coping by (d) creating a supportive context for learning and (e) employing specific strategies to help athletes learn about coping. A supportive context for learning was established by listening and monitoring their own reactions, reading the athlete, fostering independence, and building trust and respect between the athlete and the coach. Having established a supportive context for learning about coping, parents and coaches could then use a range of specific strategies to help the athletes. For example, parents and coaches who 'dosed' stress experiences limited the extent to which athletes actually faced particular stressors from the outset of the learning process.

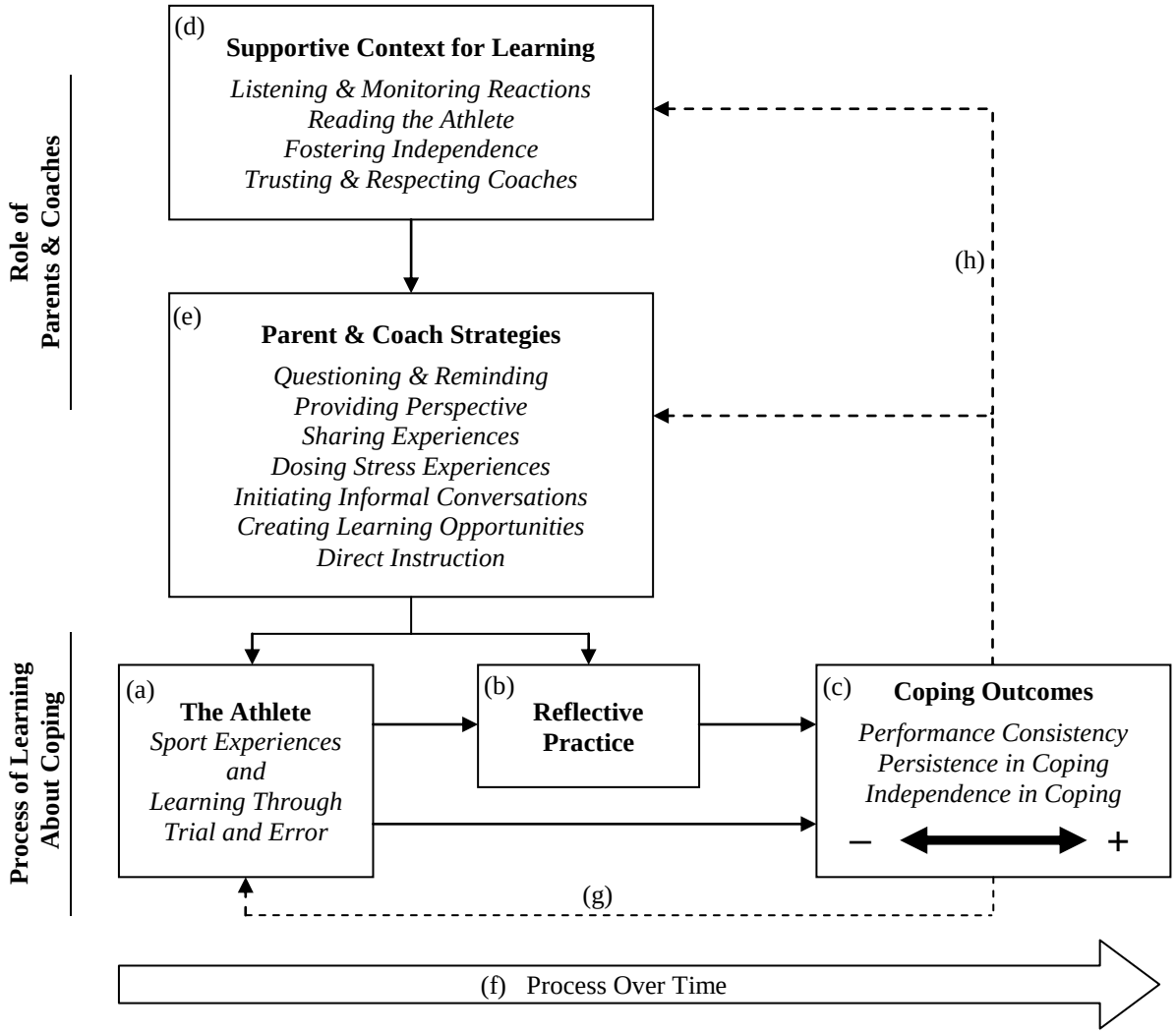

Figure 3-2. A grounded theory of athletes' process of learning about coping and the role of parents and coaches.

Strategies such as questioning and reminding, providing perspective, sharing experiences, initiating informal conversations about coping, and direct instruction were used either during athletes' attempts to cope with specific stressors, or to engage the athlete in reflective practice. Thus, these strategies were used to help the athlete cope

with a stressor ‘in the moment,’ or to help the athlete ‘look back’ on coping attempts. In situations when parents and coaches used strategies to help athletes learn about coping without first establishing a supportive context for learning, athletes were uncomfortable and unwilling to accept help from their parents or coaches.

Overall, athletes’ learning about coping was a process occurring over time (f), and the resulting coping outcomes are hypothesized to (g) recursively influence athletes’ subsequent sport experiences as well as (h) the role parents and coaches play in the coping process. For example, if an athlete appears to be achieving generally positive coping outcomes (i.e., consistent performance, coping independently and persistently with stressors), parents and coaches may adjust the strategies they use and allow the athlete to experience more stressors (i.e., less ‘dosing’ of stress experiences). If parents or coaches perceive that an athlete is not achieving positive coping outcomes, they may limit the stressors the athlete encounters or perhaps attempt to engage the athlete in more reflective practice regarding his or her coping attempts. Perceived coping outcomes may also influence the way parents and coaches manage a supportive context for learning. Parents may recognize that the athlete is not achieving positive coping outcomes, and they may work to create a more supportive environment which would encourage the athlete to discuss stressors and coping more openly. The supportive context could be created to facilitate ways to use strategies effectively to help athletes learn to cope. Thus, learning about coping is predicted to be an interaction between athletes’ taking an active role in dealing with stressors within a supportive social context.

Discussion

The first aim of this study was to examine the process through which adolescent athletes learned about coping, and the second aim was to examine the role of parents and coaches in adolescent athletes' learning process. The overall grounded theory suggests that learning about coping was an experiential process, and that parents and coaches played an important role in athletes' learning about coping by creating a supportive context for learning and by using specific strategies to help athletes.

Athletes went through stressful experiences and dealt with stressors at an episodic level which then contributed to their overall learning about coping. This is consistent with the central tenet of experiential learning, which is that individuals learn best by doing (Kolb, 1984; Walter & Marks, 1981). The current study examined athletes' process of learning about coping on a long-term or adaptive scale and did not specifically examine coping at an episodic level. However, it is thought that coping with day-to-day stressors at an episodic level may be indicative of patterns of coping at an adaptive level (e.g., Compas et al., 2001). That is, long-term outcomes of coping may be influenced by the ways in which athletes cope with stressors in the short term. To build on the findings of the current study, future research should examine the correspondence between episodic coping and adaptive patterns of coping, and how coping behaviours (or profiles of coping, see Gaudreau & Blondin, 2004) that are considered effective on a short-term basis relate to adaptive long-term outcomes. The grounded theory presented here may help guide future research in long-term adaptation because it specifies mechanisms through which athletes learn about coping.

Coping outcomes were independence in coping, persistence in coping, and consistent performance. These characteristics were all described positively and they give some indication as to the participants' assessment of adaptive coping. Although the focus of this research was not to examine perceptions of effective coping *per se*, the findings provide a starting point for further investigation in this area. Different conceptualizations of coping effectiveness have been proposed, such as the goodness-of-fit approach, which suggests that coping effectiveness depends on individuals' appraisals of the stressor and its controllability and their use of particular (problem-focused or emotion-focused) coping strategies (Folkman, 1984); the choice hypothesis, which suggests that effective coping depends on the choice of particular coping strategies in a given context (Nicholls, Holt, & Polman, 2005); or the automaticity perspective, which suggests that athletes with well-learned coping strategies are able to employ them automatically and thus display more effective coping (Dugdale, Eklund, & Gordon, 2002; Gould, Eklund, & Jackson, 1993).

Effective coping has variously referred to the degree to which a coping strategy alleviates negative emotions caused by stressor (Nicholls & Polman, 2007a), the outcome of a competition (Nicholls, Holt, & Polman, 2005), or it may also be thought of in terms of long-term outcomes (i.e., prolonged sport participation, overall psychosocial adjustment). The current findings suggest that 'successful coping' was described with regard to the short-term (i.e., consistent performance and persistence in dealing with stressors) and long-term (i.e., independence in employing coping strategies) outcomes of coping. It should be noted that the long-term outcome was only reported by parents, who may be more reflective regarding their children's overall development and adjustment

than the coaches or the athletes themselves. Nonetheless, the current findings may be useful because they provide sport-specific ways of viewing coping effectiveness, which is important because to date there is little consistency or clarity in the way coping effectiveness is viewed among sport researchers (for a review see Nicholls, 2010).

This study is conceptually related to research on social support. Several studies concerning social support and coping with athletes have been done in the context of sport injury and rehabilitation (e.g., Rees & Hardy, 2000; Udry, Gould, Bridges, & Tuffey, 1997). Social support may function as a potential buffer for athletes prior to appraising stressors, or alternatively as a resource which may help athletes to cope with stressors once they have been appraised (Cohen & Wills, 1985; Holt & Hoar, 2006; Rees & Hardy, 2000). Within the youth sport coping literature, seeking social support has often been cited as a strategy employed by young athletes to cope with stressors (Gaudreau, Blondin, & Lapierre, 2002; Kolt, Kirkby, & Lindner, 1995; Smith, Smoll, & Ptacek, 1990). However, there is a growing emphasis on the importance of understanding the social context in terms of the development of adolescent athletes' coping, as perceptions of support have been implicated in the development of adaptive and maladaptive coping (Compas et al., 2001; Lafferty & Dorrell, 2006).

Adolescents' adaptive coping has been associated with family environments which are perceived as cohesive, expressive and supportive (Kliewer et al., 1996; Lafferty & Dorrell, 2006). In the current study, parents reported that they attempted to create a supportive context for learning by listening and by monitoring their own reactions when discussing stressors with their child. Some athletes said that they trusted their parents and felt comfortable approaching them for assistance, however other athletes

reported that they did not approach their parents to discuss stressors and coping. Since family contexts appear to influence the development of adaptive and maladaptive coping among adolescents (Grant et al., 2006; Kliewer et al., 1996; Lafferty & Dorrell, 2006), the fact that some athletes did not feel comfortable approaching their parents and coaches for assistance is cause for concern. This finding suggests that providing coping information to help parents would be useful.

The creation of a supportive context may underpin the effectiveness of parental and coach strategies in helping athletes learn about coping. Parent and coach strategies may limit learning about coping in the absence of a supportive context. For example, the parental strategy of using informal opportunities to discuss coping (i.e., in the car on the way home from competitions) in an unsupportive context may create a potentially uncomfortable and threatening situation for the athlete if the parent has not previously established a supportive context for learning to cope. The implication here is that parents and coaches should not simply seize upon informal opportunities for discussions about coping. Rather parents and coaches should consider the environment they create and whether it is a supportive context for athletes. Researchers have suggested that coping intervention programs need to address parenting practices and communication within family environments (e.g., Blount, Davis, Powers, & Roberts, 1991); the current findings support this proposition.

This research also has conceptual connections to research on parenting styles and practices within sport. Findings from this study revealed specific strategies which parents used to help athletes learn about coping which are similar to parenting practices identified in the child psychology literature. Parenting practices are domain or context-specific

behaviours which reflects parents' values and goals for their children (Darling & Steinberg, 1993; Holt, Tamminen, Black, Mandigo, & Fox, 2009). These practices are influenced by parenting style, which is a "constellation of attitudes toward the child that are communicated to the child and create an emotional climate in which the parent's behaviours are expressed" (Darling & Steinberg, 1993, p. 493). Parenting styles are global approaches to parenting across domains (e.g., academics, sports, etc.) whereas parenting practices are specific behaviours which are thought to have a direct influence on children's behaviours (Grolnick, 2003; Holt et al., 2009).

Within the sport psychology literature, researchers have found that autonomy-supportive parents provide appropriate structure for their children, allow children to be involved in decision making and maintain open bidirectional communication with their children. Conversely, controlling parents provide little or no autonomy support, and they engaging in controlling behaviours (Holt et al., 2009). In a study of parenting styles and perfectionism among youth soccer players, Sapieja, Dunn, and Holt (2011) showed a link between athletes' perceptions of authoritative parenting (e.g. highly demanding but also responsive/supportive of their child's needs; Baumrind, 1971) and healthy perfectionist orientations in sport, as opposed to unhealthy perfectionist orientations. The implication from these studies is that athletes whose parents are autonomy-supportive or authoritative may contribute positively to young athletes' sport experiences. The current study identified some specific strategies (e.g., listening and monitoring reactions, fostering independence, questioning and reminding, etc.) which may be indicative of autonomy-supportive or authoritative parenting. This study did not explicitly set out to examine

parenting styles and practices, however in the future it would be important to consider how different parenting styles and practices influence athletes' learning about coping.

Athletes reported that engaging in reflective practice helped them learn to cope. Some athletes reported that hearing others' experiences allowed them the opportunity to reflect upon coping, while other athletes reported increased engagement in reflective practice as they progressed through higher levels of competition. Reflective practice has been found to be useful for athletes in generating knowledge and understanding of competitive experiences, which can be used to initiate changes to improve performance (Faull & Cropley, 2009; Hanton, Cropley, & Lee, 2009). Hanton et al. (2009) suggested that athletes ought to be trained and guided in reflective practice, and that significant others could assist reflective practice for athletes. However, to date there is little research examining the use of reflective practice as it relates to learning about coping. While reflective practice may facilitate athletes' learning, it has been reported that reflective strategies such as wishful thinking, rumination, and intrusive thoughts may be potentially maladaptive coping strategies (Skinner & Zimmer-Gembeck, 2007). It is generally accepted that no single coping strategy is universally effective or ineffective in coping with stressors, but when such strategies are used exclusively and prevent necessary adaptive action they are likely to be harmful (Lazarus, 1999). Reflective practice may be useful in helping athletes to understand how they cope with stressors and what may be done to improve coping. However, if reflective practice is ruminative and generally negative in nature, it may be detrimental to learning about coping. The current findings suggest that engagement in reflective practice within a supportive context would be most beneficial for athletes' learning about coping.

Participants reported that athletes' sport experiences and exposure to prior stressors played an important role in learning to cope. This is consistent with reviews of sport coping research which suggest that older adolescents (who presumably have more experience playing sport and greater cognitive development) may possess a wider repertoire of coping strategies to deal with stressors than younger athletes (Holt et al., 2005; Nicholls & Polman, 2007b). Parents and coaches played an important role in this process by dosing stress experiences for athletes, or limiting the extent to which athletes faced potential stressors. One implication of limiting athletes' exposure to stressors is that by being overly protective of athletes and preventing them from facing potential stressors, parents and coaches may actually inhibit the extent to which athletes may learn about coping. However, these findings *do not* suggest that parents and coaches should expose athletes to as many potential stressors as possible in order to encourage athletes' learning to cope. Rather, these findings suggest that a key task for parents and coaches lies in negotiating the extent to which athletes are exposed to potential stressors, and how athletes may be supported in coping with the stressors they face. The key appears to be allowing athletes to experience and deal with stressors in a supportive environment.

The decision to allow athletes to face potential stressors was a delicate one negotiated by parents and coaches, and was influenced by the concept of fostering independence (i.e., wanting the athlete to face stressors yet wanting to protect them from discomfort). The degree to which parents endorsed athletes' eventual ability to cope independently may influence the strategies they use to help athletes learn about coping. For example, some parents may be less likely to dose or limit stress experiences for athletes. These parents may use more informal discussions about coping, questioning and

reminding, and providing perspective during the athletes' coping episodes and to engage the athlete in reflective practice. Rather than protect athletes from potential stressors, parents may instead use specific strategies to support athletes' efforts to cope independently. Furthermore, athletes who are exposed to greater potential stressors in sport should have a supportive network of individuals in place who are able to help them through such experiences. This suggests the possibility of a bidirectional process wherein parents may adjust their protective practices as athletes develop a repertoire of coping skills (Power, 2004; Skinner & Wellborn, 1994).

The current findings should be considered with the study's limitations. One limitation was sampling only team sport athletes. Through the theoretical sampling process athletes who had participated in multiple sports (team and individual sports) were recruited to attempt to sample a breadth of experiences, however the focus on team sport athletes may restrict the extent to which the findings can be generalized to individual sports. Similarly, athletes' peers on their particular teams were not sampled and therefore the current research did not address peer influences on athletes' learning about coping within a team settings. Questions in initial interviews were intentionally broad to allow athletes to comment on the role of peers in learning about coping. Nonetheless, as peers are considered to be an important part of young athletes' sport experiences (Brustad, 1996), peer influences could be incorporated into future investigations of learning about coping among adolescent athletes.

Another limitation is the possibility that athletes participating in these interviews may consider themselves to be 'successful copers' which could present a self-selection bias. It may be that the athletes who do not cope effectively with stressors may not

participate in sports at a highly competitive level, because they may burn out or withdraw from sports and are therefore deselected from participating in research about coping (Butcher, Lindner, & Johns, 2002). Therefore, future research examining stressors and coping may benefit from examining the experiences of athletes who do not cope effectively with stressors. These 'negative cases' (Patton, 2002) could help shed light on our understanding of adolescent athletes' coping and ways in which learning about coping is facilitated or impeded.

Finally, personality and individual differences were not assessed within this study. Athletes were asked about previous experiences and ways in which they coped with past stressors, which began to elucidate information regarding individuals' perceptions about their coping. Despite attempts to investigate athletes' personal experiences in learning about coping, individual differences are likely best measured with established inventories using quantitative methodologies. Future research which extends the grounded theory presented here would benefit from consideration of the role of adolescent athletes' individual differences and personality characteristics, which may provide more insight into athletes' processes of learning to cope.

Evaluating Grounded Theory

Charmaz (2005) offered four criteria for evaluating grounded theory within an interpretivist paradigm, namely credibility, originality, resonance, and usefulness. Corbin and Strauss (2008) found these to be "the most comprehensive" (p. 299) list of criteria for evaluating grounded theory because they "address both the scientific and creative aspects of doing qualitative research" (p. 299). Credibility refers to the degree to which the researcher has provided enough evidence for their claims and strong logical links

between the data and the analysis, and that the findings are trustworthy and believable in that they reflect participants' experiences with a phenomenon. Originality refers to new insight and the degree to which the work extends and builds upon current ideas and concepts. Resonance concerns the portrayal of the fullness of the described experience and the degree to which the researcher's interpretations make sense to the members portrayed in the study. Usefulness refers to the ways in which the interpretations may be used in everyday life, and the analysis providing avenues for future research. Taken together, these criteria offer ways in which the value of a given grounded theory may be evaluated within an interpretivist paradigm.

In the current study, the criteria outlined by Charmaz (2005) and supported by Corbin and Strauss (2008) were met in the following ways. First, the credibility of the study was enhanced by engaging in theoretical sampling and by pursuing areas of investigation until concepts reached theoretical saturation. This research is original in that it makes a unique contribution to the literature by examining coping from a long-term, adaptive perspective and by uncovering parents' and coaches' contributions to athletes' learning about coping. Resonance was sought by presenting participants with a model of the emerging theory and asking them to provide feedback about the extent to which it represented their own experiences. Finally, this research is useful in that it proposes several areas for future investigation, and it also provides interpretations which can be used by parents, coaches, and sport psychology practitioners to help athletes learn to cope in sport.

A strength of this study was its methodological coherence, which is the congruence between the researcher's epistemological and ontological viewpoint, the

research question, and the research process (Holt & Tamminen, 2010; Mayan, 2009). That is, this research was approached from an interpretivist perspective, which entailed the co-construction of multiple participants' perspectives through dialogue and interactions (Denzin & Lincoln, 1994). The research question was to understand how adolescent athletes learned to cope, and the role of parents and coaches in that process. Thus, the grounded theory was constructed to represent the multiple perspectives of the athletes, coaches, and parents using Corbin and Strauss' (2008) variant of grounded theory. There was an interaction between data collection and analysis, with analysis guiding subsequent theoretical sampling towards areas which required further data saturation. The data analysis was conducted according to the guidelines described by Corbin and Strauss, and the final product is a theoretical account of athletes' experiences of learning about coping and the role parents and coaches played to help athletes' learning. Such methodological coherence is a hallmark of high quality and rigorous qualitative research (Mayan, 2009).

The creation of this grounded theory is by no means a 'final step' in researching athletes' process of learning to cope. However, it presents several avenues for future research in order to test and refine the model. Key among these are: a) examining the conceptualization of coping effectiveness in terms of both short- and long-term outcomes and ways in which constellations of coping strategies (or coping profiles) contribute to positive outcomes, b) discovering ways in which reflective practice can be supported and guided by parents and coaches in a positive manner to facilitate learning to cope, and c) examining how parents and coaches create a supportive context for learning, and ways in which they negotiate protective practices among adolescent athletes. In conclusion, the

findings of the current study have addressed an important gap in the literature by specifying mechanisms by which parents and coaches influence the way adolescent athletes learn to cope (cf. Tamminen & Holt, 2010b). Furthermore, the grounded theory presented contributes to knowledge in its own right by providing a sport-specific conceptualization of learning to cope and provides a framework for advancing future research.

References

Annells, M. (1996). Grounded theory method: Philosophical perspectives, paradigm of inquiry, and postmodernism. *Qualitative Health Research, 6,* 379-393.

Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology 4,* 1–103.

Blount, R. L., Davis, N., Powers, S. W., & Roberts, M. C. (1991). The influence of environmental factors and coping style on children's coping and distress. *Clinical Psychology Review, 11,* 93-119. doi:10.1016/0272-7358(91)90139-L

Brustad, R. J. (1996). Parental and peer influence on children's psychological development through sport. In F. L. Smoll & R. E. Smith (Eds.), *Children and youth in sport: A biopsychosocial perspective* (pp. 112-124). New York: McGraw-Hill.

Butcher, J., Lindner, K. J., & Johns, D. P. (2002). Withdrawal from competitive youth sport: A retrospective ten-year study. *Journal of Sport Behavior, 25,* 145-163.

Charmaz, K. (2005). Grounded theory in the 21st century: Applications for advancing social justice studies. In N. K. Denzin & Y. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 507-535). Thousand Oaks, CA: Sage.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98,* 310-357.

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin, 127,* 87-127. doi:10.1037//0033-2909.127.1.87

Corbin, J. (2009). Taking an analytic journey. In J. M. Morse, P. N. Stern, J. Corbin, B. Bowers, K. Charmaz, & A. E. Clark (Eds.), *Developing grounded theory: The second generation* (pp. 35-53). Walnut Creek, CA: Left Coast Press.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.

Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin, 113,* 487–496.

Denzin, N. K., & Lincoln, Y. S. (1994). Entering the field of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 1-17). Thousand Oaks, CA: Sage.

Dugdale, J. R., Eklund, R. C., & Gordon, S. (2002). Expected and unexpected stressors in major international competition: Appraisal, coping and performance. *The Sport Psychologist, 16,* 20-33.

Ellis, J. (2006). Researching children's experiences hermeneutically and holistically. *The Alberta Journal of Educational Research, 52*(3), 111-126.

Faull, A., & Cropley, B. (2009). Reflective learning in sport: A case study of a senior level triathlete. *Reflective Practice: International and Multidisciplinary Perspectives, 10,* 325-339. doi:10.1080/14623940903034655

Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. *Journal of Personality and Social Psychology, 46,* 839-852.

Gabb, J. (2010). Home truths: Ethical issues in family research. *Qualitative Research, 10,* 461-478. doi: 10.1177/1468794110366807

Gaudreau, P., & Blondin, J. P. (2004). Different athletes cope differently during a sport competition: A cluster analysis of coping. *Personality and Individual Differences, 36,* 1865-1877. doi:10.1016/j.paid.2003.08.017

Gaudreau, P., Blondin, J. P., & Lapierre, A. M. (2002). Athletes' coping during a competition: Relationship of coping strategies with positive affect, negative affect, and performance-goal discrepancy. *Psychology of Sport and Exercise, 3,* 125-150. doi:10.1016/S1469-0292(01)00015-2

Giacobbi, P. R., Lynn, T. K., Wetherington, J. M., Jenkins, J., Bodenforf, M., & Langley, B. (2004). Stress and coping during the transition to university for first-year female athletes. *The Sport Psychologist, 18,* 1-20.

Gould, D. (1996). Sport psychology: Future directions in youth sport research. In F. L. Smoll & R. E. Smith (Eds.), *Children and youth in sport: A biopsychosocial perspective* (pp. 405-422). New York: McGraw-Hill.

Gould, D., Eklund, R. C., & Jackson, S. (1993). Coping strategies used by U.S. Olympic wrestlers. *Research Quarterly for Exercise and Sport, 64,* 83-93.

Grant, K. E., Compas, B. E., Thurm, A. E., McMahon, S., Gipson, P., Campbell, A., Krochock, K., & Westerholm, R. I. (2006). Stressors and child and adolescent psychopathology: Evidence of moderating and mediating effects. *Clinical Psychology Review, 26,* 257-283. doi:10.1016/j.cpr.2005.06.011

Grolnick, W. S. (2003). *Psychology of parenting control: How well-meant parenting backfires.* Mahwah, NJ: Erlbaum.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). London: Sage.

Hanton, S., Cropley, B., & Lee, S. (2009). Reflective practice, experience, and the interpretation of anxiety symptoms. *Journal of Sports Sciences, 27,* 517-533. doi:10.1080/02640410802668668

Hauser, S. T., Borman, E. H., Jacobson, A. M., Powers, S. I., & Noam, G. G. (1991). Understanding family contexts of adolescent coping: A study of parental ego development and adolescent coping strategies. *Journal of Early Adolescence, 11,* 96-124. doi:10.1177/0272431691111005

Holt, N. L., & Hoar, S. (2006). The multidimensional construct of social support. In S. Hanton & S. D. Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 199-226). New York: Nova Science.

Holt, N. L., Hoar, S., & Fraser, S. N. (2005). How does coping change with development? A review of childhood and adolescent sport coping research. *European Journal of Sport Science, 5,* 25-39. doi:10.1080/17461390500076915

Holt, N. L., & Tamminen, K. A. (2010). Moving forward with grounded theory in sport and exercise psychology. *Psychology of Sport and Exercise, 11,* 419-422. doi:10.1016/j.psychsport.2010.07.009

Holt, N. L., Tamminen, K.A., Black, D. E., Mandigo, J. L., & Fox, K. R. (2009). Youth sport parenting styles and practices. *Journal of Sport & Exercise Psychology, 31,* 37-59.

Holton, J. A. (2007). The coding process and its challenges. In A. Bryant & K. Charmaz (Eds.), *The Sage handbook of grounded theory* (pp. 265-289). Thousand Oaks, CA: Sage.

Hutchison, A. J., Johnston, L. H., & Breckon, J. D. (2009). Using QSR-NVivo to facilitate the development of a grounded theory project: An account of a worked example. *International Journal of Social Research Methodology, 13,* 283-302. doi: 10.1080/13645570902996301

Kliewer, W., Fearnow, M. D., & Miller, P. A. (1996). Coping socialization in middle childhood: Tests of maternal and paternal influences. *Child Development, 67,* 2339-2357. doi:10.1111/j.1467-8624.1996.tb01861.x

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development.* New Jersey: Prentice Hall.

Kolt, G., Kirkby, R. J., & Lindner, H. (1995). Coping processes in competitive gymnasts: Gender differences. *Perceptual and Motor Skills, 81,* 1139-1145.

Lafferty, M. E., & Dorrell, K. (2006). Coping strategies and the influence of perceived parental support in junior national age swimmers. *Journal of Sports Sciences, 24,* 253-259. doi:10.1080/17461390500188702

Lazarus, R. S. (1999). *Stress and emotion: A new synthesis.* New York: Springer.

Lerner, R. (1984). *On the nature of human plasticity.* New York: Cambridge University Press.

Lerner, R. (1995). *America's youth in crisis.* Thousand Oaks, CA: Sage.

Lerner, R. (1996). Relative plasticity, integration, temporality, and diversity in human development: A developmental contextual perspective about theory, process, and method. *Developmental Psychology, 32,* 781-786.

Mayan, M. J. (2009). *Essentials of qualitative inquiry.* Walnut Creek, CA: Left Coast Press.

McGhee, G., Marland, G. R., & Atkinson, J. (2007). Grounded theory research: Literature reviewing and reflexivity. *Journal of Advanced Nursing, 60,* 334-342. doi:10.1111/j.1365-2648.2007.04436.x

Meesters, C., & Muris, P. (2004). Perceived parental rearing behaviours and coping in young adolescents. *Personality and Individual Differences, 37,* 513-522. doi:10.1016/j.paid.2003.09.022

Nicholls, A. (2010). Effective versus ineffective coping in sport. In A. Nicholls (Ed.), *Coping in sport: Theory, methods, and related constructs* (p. 263-276). New York: Nova Science.

Nicholls, A., Holt, N. L., & Polman, R. C. J. (2005). A phenomenological analysis of coping effectiveness in golf. *The Sport Psychologist, 19,* 111-130.

Nicholls, A., Holt, N. L., Polman, R. C. J., & James, D. W. G. (2005). Stress and coping among international adolescent golfers. *Journal of Applied Sport Psychology, 17,* 333-340. doi:10.1080/10413200500313644

Nicholls, A., & Polman, R. C. J. (2007a). Stressors, coping, and coping effectiveness among players from the England under-18 rugby union team. *Journal of Sport Behavior, 30,* 199-218.

Nicholls, A., & Polman, R. C. J. (2007b). Coping in sport: A systematic review. *Journal of Sports Sciences, 25,* 11-31. doi:10.1080/02640410600630654

Nicholls, A., & Polman, R. C. J. (2008). Think aloud: Acute stress and coping strategies during golf performances. *Anxiety, Stress and Coping, 21,* 283-294. doi:10.1080/10615800701609207

Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd ed.). Newbury Park, CA: Sage.

Power, T. G. (2004). Stress and coping in childhood: The parents' role. *Parenting: Science and Practice, 4,* 271-317. doi:10.1207/s15327922par0404_1

Ptacek, J. T., Pierce, G. R., Eberhardt, T. L., & Dodge, K. L. (1999). Parental relationships and coping with life stress. *Anxiety, Stress, and Coping, 12,* 427-453. doi:10.1080/10615809908249320

Rees, T., & Hardy, L. (2000). An investigation of the social support experiences of high-level sports performers. *The Sport Psychologist, 14,* 327-347.

Reeves, C. W., Nicholls, A., & McKenna, J. (2009). Stressors and coping strategies among early and middle adolescent Premier League academy soccer players: Differences according to age. *Journal of Applied Sport Psychology, 21,* 31-48. doi:10.1080/10413200802443768

Sapieja, K. M., Dunn, J. G. H., & Holt, N. L. (2011). Perfectionism and perceptions of parenting styles in male youth soccer. *Journal of Sport & Exercise Psychology, 33,* 20-39.

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin, 129,* 216-269. doi:10.1037/0033-2909.129.2.216

Skinner, E. A., & Wellborn, J. G. (1994). Coping during childhood and adolescence: A motivational perspective. In D. Featherman, R. Lerner, & M. Perlmutter (Eds.), *Life-span development and behavior* (pp. 91-133). Hillsdale, NJ: Erlbaum.

Skinner, E. A., & Zimmer-Gembeck, M. J. (2007). The development of coping. *Annual Review of Psychology, 58,* 119-144. doi: 10.1146/annurev.psych.58.110405.085705

Smith, J. K. (2008). Interpretive inquiry. *The Sage Encyclopedia of Qualitative Research Methods.* Retrieved from http://www.sage-ereference.com/research/Article_n233.html

Smith, F. L., & Smoll, R. E. (1996). The coach as a focus of research and intervention in youth sports. In R. E. Smoll & F. L. Smith (Eds.), *Children and youth in sport: A biopsychosocial perspective* (pp. 125-141). Toronto: Brown & Benchmark.

Smith, R., Smoll, F. L., & Ptacek, J. T. (1990). Conjunctive moderator variables in vulnerability and resiliency research: Life stress, social support and coping skills, and adolescent sport injuries. *Journal of Personality and Social Psychology, 58,* 360-370.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Newbury Park, CA: Sage.

Tamminen, K. A., & Holt, N. L. (2010a). Female adolescent athletes' coping: A season-long investigation. *Journal of Sports Sciences, 28,* 101-114. doi:10.1080/02640410903406182

Tamminen, K. A., & Holt, N. L. (2010b). A meta-study of qualitative research examining stressor appraisals and coping among adolescents in sport. *Journal of Sports Sciences, 28,* 1563-1580. doi: 10.1080/02640414.2010.512642

Trussell, D. E. (2008). Unique ethical complexities and empowering youth in the research process. *Journal of Park and Recreation Administration, 28,* 163-176.

Udry, E., Gould, D., Bridges, D., & Tuffey, S. (1997). People helping people? Examining the social ties of athletes coping with burnout and injury stress. *Journal of Sport & Exercise Psychology, 19,* 368-395.

Walter, G. A., & Marks, S. E. (1981). *Experiential learning and change: Theory, design, and practice.* New York: Wiley.

Weed, M. E. (2009). Research quality considerations for grounded theory research in sport & exercise psychology. *Psychology of Sport and Exercise, 10,* 502-510

Zimmer-Gembeck, M. J., & Locke, E. M. (2007). The socialization of adolescent coping behaviours: Relationships with families and teachers. *Journal of Adolescence, 30,* 1-16. doi:10.1016/j.adolescence.2005.03.001

CHAPTER FOUR

GENERAL DISCUSSION AND CONCLUSIONS

Two studies were presented in this Dissertation. Study 1 was a metastudy of the qualitative adolescent sport stress and coping literature; study 2 was a grounded theory of adolescent athletes' process of learning to cope and the role of parents and coaches within that process. Taken together, these studies shed light on the current state of knowledge regarding adolescent athletes' stressor appraisals and coping, and provide new theoretical insights into the role of social agents as adolescent athletes learn about coping.

The results of the first study revealed that adolescent athletes' stressor appraisals and coping were contextual and dynamic, in that they changed over short and long periods of time and in response to changing contextual conditions. The development of coping appeared to be related to the availability of coping resources (Eubank & Collins, 2000), which were greater among older athletes (Reeves, Nicholls, & McKenna, 2009), and coping resources were developed through reflection and learning (Tamminen, 2007). Social networks were posited as potential assets or liabilities for athletes' coping (Udry, Gould, Bridges, & Tuffey, 1997), depending on whether individuals assisted athletes in coping or were perceived as potential stressors by athletes. One area which was identified as lacking in terms of our understanding of adolescent athletes' coping was the process by which athletes learn to cope. Gilbert (2000) noted athletes were "largely unable to unpack and discuss this process" (p. 200).

The second study presented a grounded theory of how adolescent athletes perceived they learned to cope and the role of parents and coaches in this process. The main category of adolescent athletes' process of learning about coping was comprised of

the athlete – sport experiences and learning through trial and error, reflective practice, and coping outcomes (performance consistency, persistence in coping, and independence in coping). Parents and coaches felt that they assisted athletes by creating a supportive context for learning and by using specific strategies to help athletes learn about coping. It was important for parents and coaches to focus on creating a supportive context for learning prior to using strategies to help athletes.

Social Influences on Coping

Taken together, the studies in this Dissertation emphasized the importance of the social context as adolescent athletes learn to cope with stressors in sport. The social context of youth sport has been studied in regards to parenting and sport socialization (Fredricks & Eccles, 2004), young athletes' motivation and achievement goals (Weiss & Williams, 2004), and social support has previously been implicated in the coping process as an important factor for athletes recovering from injury (see Holt & Hoar, 2006; Udry et al., 1997). This Dissertation represents one of the first steps toward understanding the social context as it relates to the development of adolescent athletes' coping.

One major contribution of this research was drawing attention to the paradoxical role of parents and coaches as potential assets and liabilities in adolescent athletes' coping. Study 1 drew together several findings from the youth sport coping literature and emphasized the fact that social networks influenced athletes' appraisal of stressors and their use of coping strategies. Athletes who perceived high standards and social evaluation on the part of significant others (i.e., coaches and parents) may appraise more stressors as potentially threatening (Sagar, Lavallee, & Spray, 2007; Udry et al., 1997). However, having a supportive environment may protect athletes from appraising

stressors, or it may alleviate the severity of the stressors (Giacobbi et al., 2004). In terms of coping, athletes who reported supportive social networks also reported positive coping which may have facilitated the development of adaptive coping strategies (Eubank & Collins, 2000). Furthermore, in Study 2, athletes reported that they sometimes hesitated to seek social support in the absence of a supportive context. Thus, the social context in which athletes cope on a day-to-day basis appears to play an important role in shaping athletes' long-term coping.

The importance of athletes' social networks surrounding the coping process is certainly complex. A second major contribution of this research was the identification of specific mechanisms by which parents and coaches appeared to influence the development of coping among young athletes. Parents and coaches appeared to facilitate the process of learning to cope by dosing stress experiences and creating learning opportunities for athletes to gain experience in coping, sharing experiences and providing perspective during informal conversations about coping, questioning and reminding athletes regarding specific coping strategies, and by using direct instruction about coping. Several of these strategies were used to engage athletes in reflective practice, which enabled the athletes to consider their own coping efforts and determine effective coping strategies to use in the future. Parent and coach strategies were hypothesized to be most useful in assisting athletes' learning about coping if they were used within a supportive context. The identification of these strategies and emphasizing the importance of a supportive context for learning is another step toward developing coping interventions targeted towards parents and coaches. This research draws attention to the need for interventions to engage individuals within athletes' social networks, as well as the

athletes themselves. Such suggestions have been raised in the developmental psychology literature (see Power, 2004); embracing such suggestions would be a beneficial step forward in adolescent sport coping research.

Research Contributions

By first conducting a meta-study of the adolescent sport stress and coping research, it was possible to identify linkages between studies in ways which might not have been possible with a single study of stressors and coping. For example, Study 1 highlighted the importance of social networks as both assets and liabilities, and emphasized interventions that target coaches, parents, and even team/peer interactions in addition to athlete-centered interventions. This finding has been suggested in the developmental psychology literature but has not been widely suggested within the sport psychology literature. The metastudy also identified important theoretical and methodological implications of this body of research. Furthermore, it identified several avenues for future research. Of these, examining social networks and adolescents' personal resources as they influence the coping process, and embracing the use of diverse methodologies such as ethnographic or case study approaches appear to be particularly promising in understanding adolescent athletes' coping process.

Another unique contribution of this research was the grounded theory of adolescent athletes' process of learning to cope, which represents a perspective that has not been adequately considered within the sport literature to date. Researchers have examined various aspects of the coping process including stressor appraisals, emotion, coping, and coping effectiveness, as well as ways in which coping changes over single competitive episodes, 28- and 31-day periods, and over entire competitive seasons (e.g.,

Nicholls, Holt, Polman, & James, 2005; Nicholls & Polman, 2007). Extending this area of research, developmental differences in stressors and coping have also been examined between early and middle adolescents (Reeves et al., 2009). However, the grounded theory produced in Study 2 appears to be the first to explore the ways in which adolescent athletes' coping is developed or learned over time, thus making a unique contribution to the literature in this area.

By describing athletes' process of learning about coping within Study 2, the grounded theory presented in this Dissertation provided some useful explanations and predictions about athletes' coping. First, athletes' learning about coping was an experiential process of trial and error, which was facilitated by exposure to stressors and support from parents and coaches. This supports research which suggests older, more experienced athletes cope more effectively with stressors (Holt, Berg, & Tamminen, 2007). However, this area of research requires further examination. For example, it remains unclear what happens if adolescent athletes are 'over-exposed' to stressors in the absence of parental and coach support. Research is required to identify whether these athletes withdraw from sport altogether, or perhaps they may develop resilience and learn to cope independently, without a great deal of guidance or assistance from parents or coaches. Future work in understanding the development of coping among adolescent athletes will likely benefit from drawing upon research which considers resilience and adjustment among adolescent athletes (Holt & Dunn, 2004; Smith, Smoll, & Ptacek, 1990).

A third implication of this research concerns the concept of reflection and learning identified in Study 1, and reflective practice in Study 2. Taken together, these

findings would suggest that learning to cope involves reflection on the part of the athlete. To date, researchers have identified similar concepts such as rumination, cognitive reappraisal, planning, and strategizing as they have been used by athletes at an episodic level to deal with specific stressors. By examining coping at an adaptive level instead of an episodic level, the current research has identified a potentially unique finding in the sport stress and coping literature. It would be useful in future research to examine the role which reflection and reflective practice play in the long-term (adaptive) process of coping among adolescent athletes. One way of examining this concept would be to conduct a time-lagged study in which a group of athletes is prompted to engage in reflective practice following coping attempts (e.g., what did you learn from dealing with this stressor?), while another group of athletes reports only the stressors and coping strategies they used (without prompting any reflective practice). It may be possible to determine whether engaging athletes in reflective practice facilitates effective coping and learning about coping.

Although few studies in sport have specifically examined the development of coping skills among adolescent athletes, studies which have examined the development of mental skills and mental toughness provide an area for comparison. Connaughton and colleagues (Connaughton, Wadey, Hanton, & Jones, 2008; Connaughton, Hanton, & Jones, 2010) reported that the development of mental skills among elite athletes (such as developing a precompetitive routine, focusing, and imagery) occurred over three developmental phases (initial involvement to intermediate level, intermediate to elite level, elite to Olympic/World Champion level) and a final maintenance stage. In Study 2 of this Dissertation, participants described learning to cope as an ongoing process;

however they did not describe learning to cope in terms of different stages of development or sport participation, and they were unable to define a concrete 'end point' in learning to cope. It would be interesting to examine how learning to cope is manifested at different stages of adolescent athletes' development, and whether there are any discernable phases in learning about coping. It may be that certain contributing factors are more or less important at different developmental stages. For example, coaches are seen to play an increasingly important role in athletes' development and their influence may extend into other areas of athletes' lives (Smith & Smoll, 1996). Coach practices may become more important for older adolescents than younger adolescents as parents become less involved in sport instruction as athletes progress through higher levels of competition (Côté & Fraser-Thomas, 2010); however these hypotheses require further investigation.

Theoretical Implications

Lazarus' cognitive-motivational-relational theory of emotion. The current findings identified that researchers examining coping in youth sport continue to adhere Lazarus' (1999) CMRT, which has increased our knowledge of athletes' appraisals of stressors and the transactional nature of the coping process. The grounded theory in Study 2 did not explicitly set out to test Lazarus' CMR theory. Instead the current research adopted a developmental perspective as a way of viewing the process of learning about coping. This perspective is in line with a view of coping as an adaptive process rather than an episodic perspective, as outlined by Skinner and Zimmer-Gembeck (2007).

Although Study 2 adopted a wider perspective than Lazarus' theory would suggest, there is conceptual coherence in terms of the way participants described the

process of learning to cope. Athletes, parents and coaches reported that learning to cope was a process of trial and error, with past coping efforts influencing subsequent coping efforts. This is theoretically coherent with Lazarus' (1999) description of coping as a process, with past transactions shaping subsequent coping attempts; theoretically there is a reciprocal change in both the individual and the environment following an appraisal and coping attempt. The current research suggested that parents and coaches likely adjust their strategies to help athletes learn to cope depending on their perception of the athlete's achievement of coping outcomes. However, it did not specifically examine the reciprocal transaction between athletes and their parents and coaches. Future research in the area would do well to examine the reciprocal influence an athlete's coping may have on his or her environment. For example, researchers may examine how parents and coaches adjust their assistance to athletes based on perceived adaptive or maladaptive coping on the part of the athlete. Moving forward in the area of social influences on learning about coping, it would be necessary to examine how parents and coaches regulate or negotiate exposing athletes to stressors and employing protective practices, as well as understanding how parents and coaches judge athletes' ability to cope with increasingly stressful situations.

A motivational perspective of coping. An understanding of the motivational aspects of coping provide further context for the examination of adolescent athletes' coping. Findings from study two were conceptually coherent with Skinner and Wellborn's (1994) motivational theory of coping, which has gained empirical support in the social and sport psychology literature (see Amiot & Gaudreau, 2010). Rooted in self-determination theory (Deci & Ryan, 1985), it suggests that a social environment which fulfills the psychological needs of relatedness, competence, and autonomy may predict

the development of coping actions which are engaged (i.e., effortful or active) versus withdrawn or disaffected (i.e, passive or avoidant). Creating a supportive context for learning was conceptually similar to a social context which supports relatedness by providing involvement and warm, connected relationships (Skinner & Wellborn, 1994; Skinner, 1999). Parents reported that they attempted to create a safe environment in which their child would be comfortable discussing stressors and coping by listening to their child and by monitoring their own reactions. Although Study 2 did not specifically examine perceptions of family environment and associated coping actions, the findings do provide some support for a motivational theory of coping within sport psychology.

In a review of coping in the academic domain, Skinner and Wellborn (1997) endorsed a motivational perspective of coping and suggested that interventions for improving youths' coping should optimize involvement, structure, and autonomy support. The current research revealed conceptual linkages to a motivational view of coping which are particularly relevant when considering coping among adolescent athletes from an adaptive, long-term perspective. Future research which incorporates a motivational perspective or theoretical framework could lead to the implementation of interventions which support athletes' learning to cope by enhancing autonomy and by creating "optimal challenges and [helping] children move through them" (Skinner & Wellborn, 1997, p. 415).

Another conceptual link to a motivational theory of coping resides in the outcomes of learning to cope, which were described as consistent sport performance, persistence in dealing with stressors, and the ability to cope independently. These last two characteristics in particular, persistence and independence, are theoretically related to a

motivational perspective of coping. Skinner (1999) suggested that the central outcomes of motivational processes are patterns of action which are either engaged or disaffected. Engaged patterns of action are active, goal-directed, flexible, constructive, and persistent, while disaffected patterns of action are those which are inactive, withdrawn, and avoidant. Thus, learning to cope adaptively may be displayed through engaged patterns of action. The current findings suggest that athletes, parents, and coaches viewed adaptive coping as consisting of engaged patterns of action which included persistence in dealing with stressors and the ability to engage in coping independently. This provides direction for a promising area of research, namely the identification of engaged patterns of action among athletes and exploring their relationship to performance and adaptive psychosocial outcomes.

A motivational perspective of coping may provide further insight into conceptualizations of coping effectiveness. To date, sport researchers have conceptualized coping effectiveness according to the goodness-of-fit perspective (Folkman, 1984), the automaticity perspective (Dugdale, Eklund, & Gordon, 2002; Gould, Eklund, & Jackson, 1993), or the choice of coping strategies from available resources (Folkman & Moskowitz, 2004; Nicholls, Holt, & Polman, 2005). Outcomes of learning to cope were cited as persistence and independence in coping, as well as consistent performance, reflecting short-term and long-term perspectives of coping effectiveness which may be related to individuals' needs for competence and autonomy (Amiot & Gaudreau, 2010; Deci & Ryan, 1985). Researchers have found that global self-determination predicts the use of more task-oriented coping and less disengagement-oriented coping (Amiot, Blanchard, & Gaudreau, 2008), which in sport contexts is

associated with perceptions of coping effectiveness (Nicholls, Polman, Levy, & Borkoles 2010), positive affect, and goal attainment (Gaudreau & Blondin, 2004). Thus, from a motivational perspective, effective coping may be conceptualized as athletes' ability to use coping strategies which enable them to reach their goals or to manage stressors which are appraised as threatening to their autonomy, competence, or relatedness (see Amiot & Gaudreau, 2010; Skinner, Edge, Altman, & Sherwood, 2003). This would also be conceptually coherent with the choice perspective of coping effectiveness which is currently favoured within sport psychology (Nicholls, 2010); however it provides scope for expanding effectiveness research to examine athletes' coping strategy use in relation to motivational processes.

Limitations and Future Research

This research was designed to contribute to the understanding of adolescent athletes' coping. Study 2 in particular examined the process of adolescent athletes' coping on a long-term basis, and therefore one limitation is that it did not examine coping at an episodic level. Researchers have suggested that patterns of coping with day-to-day stressors on an episodic level may be indicative of long term adaptive or maladaptive coping outcomes (e.g., Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Thus, future research should examine the relationship between athletes' episodic coping and long-term outcomes of their coping behaviours. Such research could entail a prospective research design which measures athletes' coping on an episodic basis at particular points during adolescence. Following this, outcomes such as prolonged sport participation, psychosocial adjustment, and coping effectiveness may be measured during

late adolescence or into adulthood to examine their relationship to episodic coping during adolescence.

There was a relative absence of information regarding athletes' individual differences and personality constructs within each study. Within Study 1, the findings of the metasynthesis were founded upon qualitative studies in the sport psychology literature. Qualitative research does not emphasize comparison between individuals and it is not well-suited to examining personality and individual differences. Therefore it was not surprising that there were no qualitative studies which examined personality and individual differences in the sample of studies retrieved for the metasynthesis. Within Study 2, the research question was related to the examination of social processes surrounding athletes' learning about coping in sport. Individual differences such as gender or personality factors (e.g., neuroticism, perfectionism, reactivity, etc.) have been found to play a role in the ways in which athletes might appraise and cope with stressors (Polman, Clough, & Levy, 2010), however these are difficult to assess using qualitative methodologies and they were not the focus of this particular Dissertation. Nonetheless, incorporating personality variables and individual differences represents an important area for consideration in future research in order to expand and test the grounded theory presented in Study 2.

Another limitation of Study 2 was the sample of team sport athletes and therefore its findings should be interpreted accordingly. Team sport coaches may structure a supportive context for learning in distinctly different ways than individual sport coaches, resulting in different relationships which may influence the way coaches help athletes in learning to cope. The relationships between team sport and individual sport coaches and

their athletes should be examined to determine how they may differ in terms of providing coping support.

Despite the advantages of using qualitative methodologies for the research questions posed in this Dissertation, there are certain limitations to qualitative investigations of coping. In particular, the current research did not engage in hypothesis-testing, but rather focused on hypothesis-generation. It proposed a number of predictions about athletes' process of learning to cope and it also hypothesized the relationships between parental and coach influences and athletes' coping. These findings will need to be further explored, tested, and evaluated. Future research questions to test such predictions/hypotheses may be addressed with the use of quantitative research approaches, which would be well-suited for testing relationships such as those identified within qualitative studies. For example, it would be useful to examine the ways in which particular coping strategies are modeled, coached, or otherwise socialized by parents and coaches (Kliewer, Fearnow, & Miller, 1996) and their effect on athletes' use of particular coping strategies.

Practical Implications and Suggestions

In addition to the empirical and theoretical intentions of this research, there was a strong practical component. Parents and coaches require practical information in order to help adolescent athletes dealing with stressors in sport. Overall, the current research emphasized the importance of social networks for athletes' learning about coping, and in particular the paradoxical influence that social networks may have on athletes' appraisal of stressors and use of coping strategies.

Study 1 showed athletes' social networks influenced the appraisal of stressors as well as the coping strategies used to deal with stressors. Athletes who had supportive, positive interactions with members of their social network appraised stressors as challenges rather than threats. Negative interactions were characterized by athletes' perceptions of high standards, and parents and coaches may unintentionally create a stressful sport environment which emphasizes pressure to win. Thus, to minimize this consequence parents and coaches should strive for positive communication with athletes which de-emphasizes the outcome of a particular competition and focus on helping the athlete to cope with stressors. In creating a supportive atmosphere for athletes to discuss stressors, parents and coaches should be attentive to the athlete's mood and receptivity to such conversations. It would also be worthwhile for parents and coaches to become aware of and monitor their own reactions during conversations about stressors and coping. By building an awareness of their own reactions and by listening to the athlete's concerns, parents and coaches are likely to be more successful in creating an open, athlete-centered environment in which the athlete may learn to cope successfully with stressors.

Specific strategies were identified in Study 2 which may be used to help athletes to cope with stressors 'in the moment' as well as to engage athletes in reflective practice about their coping efforts. Strategies such as questioning and reminding and direct instruction about coping are likely to be useful in helping athletes learn to cope with stressors. Posing questions such as "have you experienced this type of [stressor/event/situation] before?" and "what have you done in the past to deal with this kind of situation?" would be helpful to guide athletes towards more independence in coping. Informal conversations about coping, providing perspective, and sharing

experiences would be useful for parents and coaches to help athletes reflect on stressors and coping in order to learn from past experience and apply their learning to dealing with future stressors.

Finally, parents and coaches may want to reflect on their own role in dosing stressors for adolescent athletes. As noted in Study 2, parents and coaches played a role in negotiating the extent to which athletes faced potential stressors in sport, which was likely influenced by their perceptions of athletes' coping abilities. In reflecting on their role in exposing athletes to stressors, parents and coaches are encouraged to maintain open communication with athletes about what situations are seen as 'too stressful' and to discern those which require additional support for the athlete.

Overall, this Dissertation makes an important contribution towards understanding how athletes learn to cope. It addressed some of the mechanisms underlying athletes' development of coping, and it suggested ways in which athletes' coping may be facilitated by parents and coaches. It is hoped that future research and applied work may build upon this foundation to improve athletes' experiences in sport in order to enable enhanced performances and prolonged engagement in sport.

References

Amiot, C. E., Blanchard, C. M., & Gaudreau, P. (2008). The self in change: A longitudinal investigation of coping and self-determination processes. *Self and Identity, 7*, 204-224.

Amiot, C. E., & Gaudreau, P. (2010). Coping and self-determination in sport: Underlying mechanisms and empirical evidence. In A. Nicholls (Ed.), *Coping in sport: Theory, methods, and related constructs* (pp. 177-193). New York: Nova Science.

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin, 127,* 87-127. doi:10.1037//0033-2909.127.1.87

Connaughton, D., Hanton, S., & Jones, G. (2010). The development and maintenance of mental toughness in the world's best performers. *The Sport Psychologist, 24,* 168-193.

Connaughton, D., Wadey, R., Hanton, S., & Jones, G. (2008). The development and maintenance of mental toughness: Perceptions of elite performers. *Journal of Sports Sciences, 26,* 83-95. doi:10.1080/02640410701310958

Côté, J., & Fraser-Thomas, J. (2010). Youth involvement and positive development in sport. In P. R. E. Crocker (Ed.), *Sport and exercise psychology: A Canadian perspective* (pp. 226-255). Toronto: Pearson.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.

Dugdale, J. R., Eklund, R. C., & Gordon, S. (2002). Expected and unexpected stressors in major international competition: Appraisal, coping and performance. *The Sport Psychologist, 16,* 20-33.

Eubank, M., & Collins, D. (2000). Coping with pre- and in-event fluctuations in competitive state anxiety: A longitudinal approach. *Journal of Sport Sciences, 18,* 121-131.

Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. *Journal of Personality and Social Psychology, 46,* 839-852.

Folkman, S., & Moskowitz, J. T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology, 55,* 745-774.

Fredricks, J. A., & Eccles, J. S. (2004). Parental influences on youth involvement in sports. In M. R. Weiss (Ed.), *Developmental sport and exercise psychology: A lifespan perspective* (pp. 145-164). Morgantown, WV: Fitness Information Technology.

Gaudreau, P., & Blondin, J. P. (2004). Differential associations of dispositional optimism and pessimism with coping, goal attainment, and emotional adjustment during sport competition. *International Journal of Stress Management, 11,* 245-269. doi: 10.1037/1072-5245.11.3.245

Giacobbi, P. R., Lynn, T. K., Wetherington, J. M., Jenkins, J., Bodenforf, M., & Langley, B. (2004). Stress and coping during the transition to university for first-year female athletes. *The Sport Psychologist, 18,* 1-20.

Gilbert, J. N. (2000). *The female adolescent team sport athlete: Stress and ways of coping.* (Unpublished Doctoral dissertation). Available from ProQuest Dissertation and Theses database. (ProQuest Publication No. NQ58275)

Gould, D., Eklund, R. C., & Jackson, S. (1993). Coping strategies used by U.S. Olympic wrestlers. *Research Quarterly for Exercise and Sport, 64,* 83-93.

Holt, N. L., Berg, K. J., & Tamminen, K. A. (2007). Tales of the unexpected: Coping among female collegiate volleyball players. *Research Quarterly for Exercise and Sport, 78,* 117-132.

Holt, N. L., & Dunn, J. G. H. (2004). Toward a grounded theory of the psychosocial competencies and environmental conditions associated with soccer success. *Journal of Applied Sport Psychology, 16,* 199-219.

Holt, N. L., & Hoar, S. (2006). The multidimensional construct of social support. In S. Hanton & S. D. Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 199-226). New York: Nova Science.

Kliewer, W., Fearnow, M. D., & Miller, P. A. (1996). Coping socialization in middle childhood: Tests of maternal and paternal influences. *Child Development, 67,* 2339-2357. doi:10.1111/j.1467-8624.1996.tb01861.x

Lazarus, R. S. (1999). *Stress and emotion: A new synthesis.* New York: Springer.

Nicholls, A. (2010). Effective versus ineffective coping in sport. In A. Nicholls (Ed.), *Coping in sport: Theory, methods, and related constructs* (pp. 263-276). New York: Nova Science.

Nicholls, A., Holt, N. L., & Polman, R. C. J. (2005). A phenomenological analysis of coping effectiveness in golf. *The Sport Psychologist, 19,* 111-130.

Nicholls, A., Holt, N. L., Polman, R. C. J., & James, D. W. G. (2005). Stress and coping among international adolescent golfers. *Journal of Applied Sport Psychology, 17*, 333-340. doi:10.1080/10413200500313644

Nicholls, A., & Polman, R. C. J. (2007). Stressors, coping, and coping effectiveness among players from the England under-18 rugby union team. *Journal of Sport Behavior, 30*, 199-218.

Nicholls, A., Polman, R. C. J., Levy, A. R., & Borkoles, E. (2010). The mediating role of coping: A cross-sectional analysis of the relationship between coping self-efficacy and coping effectiveness among athletes. *International Journal of Stress Management, 17,* 181-192. doi: 10.1037/a0020064

Polman, R. C. J., Clough, P. J., & Levy, A. R. (2010). Personality and coping in sport: The Big Five and mental toughness. In A. Nicholls (Ed.), *Coping in sport: Theory, methods, and related constructs.* New York: Nova Science.

Power, T. G. (2004). Stress and coping in childhood: The parents' role. *Parenting: Science and Practice, 4,* 271-317. doi:10.1207/s15327922par0404_1

Reeves, C. W., Nicholls, A., & McKenna, J. (2009). Stressors and coping strategies among early and middle adolescent Premier League academy soccer players: Differences according to age. *Journal of Applied Sport Psychology, 21,* 31-48. doi:10.1080/10413200802443768

Sagar, S. S., Lavallee, D., & Spray, C. M. (2007). Why young elite athletes fear failure: Consequences of failure. *Journal of Sports Sciences, 25*, 1171-1184.

Skinner, E. A. (1999). Action regulation, coping, and development. In J. Brandtstadter & R. M. Lerner (Eds.), *Action and self-development: Theory and research through the life span* (pp. 465-503). Thousand Oaks, CA: Sage.

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin, 129,* 216-269. doi:10.1037/0033-2909.129.2.216

Skinner, E. A., & Wellborn, J. G. (1994). Coping during childhood and adolescence: A motivational perspective. In D. Featherman, R. Lerner, & M. Perlmutter (Eds.), *Life-span development and behavior* (pp. 91-133). Hillsdale, NJ: Erlbaum.

Skinner, E. A., & Wellborn, J. G. (1997). Children's coping in the academic domain. In S. A. Wolchik & I. N. Sandler (Eds.), *Handbook of children's coping: Linking theory and intervention* (pp. 387-422). New York: Plenum Press.

Skinner, E. A., & Zimmer-Gembeck, M. J. (2007). The development of coping. *Annual Review of Psychology, 58,* 119-44. doi:10.1146/annurev.psych.58.110405.085705

Smith, F. L., & Smoll, R. E. (1996). The coach as a focus of research and intervention in youth sports. In R. E. Smoll & F. L. Smith (Eds.), *Children and youth in sport: A biopsychosocial perspective* (pp. 125-141). Toronto: Brown & Benchmark.

Smith, R., Smoll, F. L., & Ptacek, J. T. (1990). Conjunctive moderator variables in vulnerability and resiliency research: Life stress, social support and coping skills, and adolescent sport injuries. *Journal of Personality and Social Psychology, 58,* 360-370.

Tamminen, K. A. (2007). *Proactive coping among female adolescent athletes*. Unpublished Master's thesis). Available from ProQuest Dissertation and Theses database. (ProQuest Publication No. MR33157)

Udry, E., Gould, D., Bridges, D., & Tuffey, S. (1997). People helping people? Examining the social ties of athletes coping with burnout and injury stress. *Journal of Sport & Exercise Psychology, 19*, 368-395.

Weiss, M., & Williams, L. (2004). The why of youth sport involvement: A developmental perspective on motivational processes. In M. R. Weiss (Ed.), *Developmental sport and exercise psychology: A lifespan perspective* (pp. 223-268). Morgantown, WV: Fitness Information Technology.

APPENDIX I

INFORMATION LETTERS & INTERVIEW GUIDES

Principal Investigator:
Katherine Tamminen, PhD Candidate
Faculty of Physical Education and Recreation
University of Alberta

Supervisor:
Dr. Nicholas Holt, Associate Professor
Faculty of Physical Education and Recreation
University of Alberta

Dear Parent/Guardian:

My name is Katherine and I am a graduate student in the Faculty of Physical Education and Recreation at the University of Alberta. I am asking for you and your child to help with a new study. **The purpose of this study is to learn about how athletes deal with stress in sport.** I will be very grateful if you and your child help us with this study. It is important that you and your child know that taking part in this study is voluntary. **You do not both have to participate in this study: if one of you wants to participate and the other does not, that is fine. There will be no negative consequences if you and your child choose not to participate.**

If you and your child agree to participate, you will be asked to complete a pre-interview activity describing your/your child's sport involvement. Then I will conduct an interview with you and your child individually at the University of Alberta at a time that is convenient for you. During the interview, I will ask questions about what is stressful for your child in sport and how he or she deals with these situations. The interviews will be tape-recorded and will last about 45 - 60 minutes. In some cases I might want to conduct a second interview with you and/or your child at a later date. During the second interview, I will ask some more questions about how your child learned to deal with stressful situations. I will also ask some questions about my results and to check that I got it right. The second interview is voluntary and will last about 30-45 minutes.

The potential benefit from participating in this study is that you may learn how your child learns to deal with stressful situations in sport. Your child may also learn more about how he or she deals with stressful situations in sport. There are no known risks associated with participating in this study. If you or your child do not want to answer any questions this is fine. You can ask for a copy of your interview transcripts at any time, and your child can ask for a copy of his or her interview transcripts at any time. You will not be able to see each other's interview transcripts. If there is information you not wish to be there, I will remove it. At the end of the study I will send all participants a summary of the data. At this point, you and your child will be given editing privileges. This means that will I remove any data that you or your child do not wish to be included in the final report.

Instead of using your real names during the interview, you and your child will be assigned false names. Interviews will be typed and stored in a locked file cabinet (in a locked office). Only the research team will have access to this information. The information is kept for five years, after which it will be destroyed. When I have finished this study, I will present the results at a conference. I will also write a paper which will be published in an academic journal. When the results are presented, no one will be identified.

Participating in this study is voluntary. That means that you and your child do not have to help us. If you and/or your child decide to help, but later change your minds, that is fine. **You and your child can withdraw from the study at any time, for any reason.** Withdrawing from the study will not affect your child's participation on the team. If you or your child wants your information removed from the study, simply call or e-mail Katherine Tamminen at any time.

If you have concerns about this study, you may contact Dr. Kelvin Jones, who is the Chair of the Research Ethics Board for the Faculty of Physical Education and Recreation at the University of Alberta. Dr. Jones has no direct involvement in the study.

IF YOU OR YOUR CHILD WISH TO PARTICIPATE IN THIS STUDY, PLEASE COMPLETE AND SIGN THE INFORMED CONSENT FORM, AND RETURN IT TO YOUR CHILD'S COACH.

Principal Investigator:
Katherine Tamminen, PhD Candidate
Faculty of Physical Education and Recreation
University of Alberta
Edmonton, AB T6G 2H9

Supervisor:
Dr. Nicholas Holt, Associate Professor
Faculty of Physical Education and Recreation
University of Alberta
Edmonton, AB T6G 2H9

Dear Athlete:

My name is Katherine and I am a graduate student in the Faculty of Physical Education and Recreation at the University of Alberta. I am asking for your help with a new study. **The purpose of this study is to learn about how athletes learned to deal with stress in sport.** I will be very grateful if you help us with this study. It is important that you know that taking part in this study is voluntary. **You do not have to participate in this study. There will be no negative consequences if you choose not to participate.**

I am seeking individuals aged 19-24 who participated in competitive (organized school, city, or provincial league) sports between the ages of 15-18. You are still eligible to take part in this study if you still participate in sports. [alternate wording: I am seeking athletes aged 11-14 /15-18 who are currently participating in sports]. If you agree to participate, you will be asked to complete a pre-interview activity describing your sport involvement. Then, I will conduct an interview with you. Each interview will be conducted individually at your convenience. During this interview, I will ask questions about what was stressful for you in sport and how you learned to deal with these situations. The interview will be tape-recorded and will last about 45 - 60 minutes.

The potential benefit from participating in this study is that you may learn how you deal with stressful situations in sport. You may also learn new ways of dealing with stressful situations. There are no known risks associated with participating in this study. If you do not want to answer any questions this is fine. You can ask for a copy of the interview transcripts at any time. If you find any information you do not wish to be there, I will remove it. At the end of the study I will send all participants a summary of the data. At this point, you will be given editing privileges. This means that will I remove any data that you do not wish to be included in the final report.

Instead of using your real name during the interview, you will be assigned a false name. Interviews will be typed and stored in a locked file cabinet (in a locked office). Only the research team will have access to this information. The information is kept for five years, after which it will be destroyed. When I have finished this study, I will present the results at a conference. I will also write a paper which will be published in an academic journal. When the results are presented, no one will be identified by name.

Participating in this study is voluntary. That means that you do not have to help us. If you decide to help, but later change your mind, that is fine. **You can withdraw from the study at any time, for any reason.** If you want your information removed from the study, simply call or e-mail Katherine Tamminen at any time. If you have concerns about this study, you may contact Dr. Dr. Kelvin Jones, who is the Chair of the Research Ethics Board for the Faculty of Physical Education and Recreation at the University of Alberta. Dr. Jones has no direct involvement in the study.

IF YOU WOULD LIKE TO PARTICIPATE IN THIS STUDY, PLEASE COMPLETE AND SIGN THE INFORMED CONSENT FORM, AND RETURN IT TO KATHERINE TAMMINEN.

Principal Investigator:
Katherine Tamminen, PhD Candidate
Faculty of Physical Education and Recreation
University of Alberta
Edmonton, AB T6G 2H9

Supervisor:
Dr. Nicholas Holt, Associate Professor
Faculty of Physical Education and Recreation
University of Alberta
Edmonton, AB T6G 2H9

Dear Coach:

My name is Katherine and I am a graduate student in the Faculty of Physical Education and Recreation at the University of Alberta. I am asking for your help with a new study. **The purpose of this study is to learn about how athletes deal with stress in sport.** I will be very grateful if you help us with this study. It is important that you know that taking part in this study is voluntary. **You do not have to participate in this study. There will be no negative consequences if you choose not to participate.**

If you agree to participate, you will be asked to complete a pre-interview activity describing your sport involvement. Then, I will conduct an interview with you. Each interview will be conducted individually at your convenience. During this interview, I will ask questions about what is stressful for your athletes in sport and how they deal with these situations. The interview will be tape-recorded and will last about 45 - 60 minutes. In some cases I might want to conduct a second interview with you at a later date. During the second interview, I will ask some more questions about how your athletes learned to deal with stressful situations. I will also ask some questions about my results and to check that I got it right. The follow-up interview is voluntary and will last about 30-45 minutes.

The potential benefit from participating in this study is that you may learn how your athletes deal with stressful situations in sport. You may also learn new ways of dealing with stressful situations. There are no known risks associated with participating in this study. If you do not want to answer any questions this is fine. You can ask for a copy of the interview transcripts at any time. If you find any information you do not wish to be there, I will remove it. At the end of the study I will send all participants a summary of the data. At this point, you will be given editing privileges. This means that will I remove any data that you do not wish to be included in the final report.

Instead of using your real name during the interview, you will be assigned a false name. Interviews will be typed and stored in a locked file cabinet (in a locked office). Only the research team will have access to this information. The information is kept for five years, after which it will be destroyed. When I have finished this study, I will present the results at a conference. I will also write a paper which will be published in an academic journal. When the results are presented, no one will be identified by name.

Participating in this study is voluntary. That means that you do not have to help us. If you decide to help, but later change your mind, that is fine. **You can withdraw from the study at any time, for any reason.** If you want your information removed from the study, simply call or e-mail Katherine Tamminen at any time.

If you have concerns about this study, you may contact Dr. Dr. Kelvin Jones, who is the Chair of the Research Ethics Board for the Faculty of Physical Education and Recreation at the University of Alberta. Dr. Jones has no direct involvement in the study.

IF YOU WOULD LIKE TO PARTICIPATE IN THIS STUDY, PLEASE COMPLETE AND SIGN THE INFORMED CONSENT FORM, AND RETURN IT TO KATHERINE TAMMINEN.

Athlete Interview Guide (Original)

Preamble

I am interested in the way that athletes deal with stress in sports. The stressful experiences you may have could be different from other athletes. I would like you to answer the following questions. There are no right or wrong answers, I am only interested in your own opinions and experiences. This interview is voluntary and you do not have to participate if you do not want to. You do not have to answer any question that you do not want to.

A) Sport participation history/timeline

1. At what age did you start playing [your sport]?
2. Have you participated in any other sports?
    a. If yes, which ones? For how long?
3. At what level of competition have you participated?
4. How important is sport to you in your life?

B) Stressors encountered in youth sport

A stressful situation is one where you might feel anxious or worried. It might include feelings of butterflies in your stomach or sweaty palms, etc.

5. Can you describe an example of a stressful situation you have experienced in [your sport]?

6. Can you describe stressful situations in school, your family or other areas of your life?

C) Coping strategies used in youth sport

7. Thinking of a stressful situation in sport (use their example), what have you done to try and deal with that in the past?

8. How effective would you say you were in dealing with that situation? (alternate wording: how well do you think you dealt with that situation?

9. Do you deal with some situations differently than others?
    a. How? (probe for more detail)

D) Development of coping strategies

10. In the past, how have you dealt with stressful situations in sport?
    a. Can you give an example of a stressful situation that you deal with differently now than in the past?

11. Are there some things you do to deal with stressful situations now that you didn't do before?
    a. If so, what are they? How has the way you deal with stressful situations changed?

12. Have you stopped dealing with stressful situations in some ways? (Alternate wording: is there anything you used to do to deal with stress that you don't do anymore?)

13. Do you think you have changed in the way you deal with stressful situations?
    a. If so, how have you changed? Do you think you deal with stressful situations better or worse than you used to?

14. Do you think you've learned anything about dealing with stress from being involved in sport?

E) Social agents important in coping with sport stressors

15. Do you seek advice when you are confronted with a stressful situation?
    a. Who helps you deal with stress?

16. Has anyone ever talked to you or taught you about dealing with stressful situations?
    a. If so, who? (parents/coaches/teachers/friends?)
    b. What have you been told/taught about dealing with stressful situations?

17. How do you think you learn to deal with stressful situations?

18. Do you think there are some stressful situations that you deal with in the same ways as other people around you (parents/coaches/teachers/friends)?
    a. Probe: How/why?

19. Do you think there are some stressful situations that you deal with in different ways as other people around you (parents/coaches/teachers/friends)?
    a. Probe: How/why?

F) Follow-up

20. If someone you knew was faced with a stressful situation in [your sport], what would you say to them?
    a. Is there anything you would tell them based on your own experiences?

Athlete Interview Guide (Modified)

Preamble

I am interested in the way that athletes deal with stress in sports. The stressful experiences you may have could be different from other athletes. I would like you to answer the following questions. There are no right or wrong answers, I am only interested in your own opinions and experiences. You do not have to answer any question that you do not want to.

A) Sport participation history/timeline

1. At what age did you start playing [your sport]?
2. Have you participated in any other sports?
    a. If yes, which ones? For how long?
3. At what level of competition have you participated?
4. How important is sport to you in your life?

B) Stressors encountered in youth sport

A stressful situation is one where you might feel anxious or worried. It might include feelings of butterflies in your stomach or sweaty palms, etc.

5. Can you describe an example of a stressful situation you have experienced in [your sport]?

6. Can you describe stressful situations in school, your family or other areas of your life?

7. I'd like you to think back to when you first started playing competitive sport. Can you tell me about it? (probe: what team was it, what was the team like, what was your coach like, what did you like about it, what didn't you like about it?)

8. Now thinking of that team and that season, I'd like you to think of a stressful situation where you coped really well/dealt with it really well. (probe: what was the stressful situation/difficulty? How did it start? What did you think/feel? How did you react? What made you deal with it really well?)

9. Now thinking again of that team and that season, I'd like you to think of a stressful situation where you didn't cope well/didn't deal with it well. (probe: what was the stressful situation/difficulty? How did it start? What did you think/feel? How did you react? What was different between the two situations, why do you think you didn't cope well with the second situation?)

10. I would like you to think about this season and your team. Can you tell me more about it? (probe: what team is it, what is the team like, what is your coach like, what do you like about it, what don't you like about it?)

11. Now thinking of this team and this season, I'd like you to think of a stressful situation where you coped really well/dealt with it really well. (probe: what was the stressful situation/difficulty? How did it start? What did you think/feel? How did you react? What made you deal with it really well?)

12. Now thinking again of this team and this season, I'd like you to think of a stressful situation where you didn't cope well/didn't deal with it well. (probe: what was the stressful situation/difficulty? How did it start? What did you think/feel? How did you react? What was different between the two situations, why do you think you didn't cope well with the second situation?)

D) Development of coping strategies

13. Have you changed in the way you deal with difficult situations/stressors?

14. How have you gotten changed (better/worse)? What do you think has contributed to this change?

15. Do you think you've learned anything about dealing with stress from being involved in sport?

E) Learning to deal with stressful situations/coping

16. How do you think you have learned to deal with stressful situations?

17. Have there been past stressful situations that have influenced the way you deal with more recent situations?
    a. Can you provide an example?

18. Do you seek advice when you are confronted with a stressful situation?
    a. Who helps you deal with stress? Who do you turn to? What makes you want to turn to someone (coach/parent) for help?

19. Has anyone ever talked to you or taught you about dealing with stressful situations?
    a. If so, who? (parents/coaches/teachers/friends?)
    b. What have you been told/taught about dealing with stressful situations?
    c. Have you learned anything about coping/dealing with difficult situations from anyone?

20. If someone you knew was faced with a stressful situation in [your sport], what would you say to them?
    a. Is there anything you would tell them based on your own experiences?

Parent Interview Guide (Original)

Preamble
I am interested in the way that athletes deal with stress in sports. I would like you to answer the following questions. There are no right or wrong answers, I am only interested in your own opinions and experiences. This interview is voluntary and you do not have to participate if you do not want to. You do not have to answer any question that you do not want to.

A) Pre-interview: ask about sport experience, level of participation, involvement in child's sport history.

B) Stressors encountered in youth sport

A stressful situation is one where you might feel anxious or worried. It might include feelings of butterflies in your stomach or sweaty palms, etc.

1. Can you describe an example of a stressful situation you think your child has experienced in [his/her sport]?

2. Can you describe any other stressful situations your child has experienced (in school, family or other areas)?

C) Coping strategies used in youth sport

3. Thinking of a stressful situation in sport (use their example), what has your child done to try and deal with that?

4. How effective would you say your child was in dealing with that situation? (alternate wording: how well do you think your child dealt with that situation?)

5. Does your child deal with some situations differently than others?
    a. How? (probe for more detail)

D) Development of coping strategies

6. In the past, how has your child dealt with stressful situations in sport?
    a. Can you give an example of a stressful situation that he/she deals with differently now than in the past?

7. Are there some things your child does to deal with stressful situations now that he/she didn't do before?
    a. If so, what are they? How has the way he/she deals with stressful situations changed?

8. Has your child stopped dealing with stressful situations in some ways? (Alternate wording: is there anything your child used to do to deal with stress that he/she doesn't do anymore?)

9. Do you think your child has changed in the way he/she deals with stressful situations?
    a. If so, how has he/she changed? Do you think he/she deals with stressful situations better or worse than before?

10. Do you think your child has learned anything about dealing with stress from being involved in sport?

E) Social agents important in coping with sport stressors

11. Have you ever talked to your child about dealing with stress?
    a. If so, what have you told him/her?

12. Has anyone else ever talked to your child or taught your child about dealing with stress (other parent/relative/coach)?

13. How do you think your child learns to deal with stressful situations?

14. Can you describe stressful situations that your child deals with in the same ways as you do? (Examples?)

15. Can you describe stressful situations that your child deals with differently than you do? (Examples?)

16. [If siblings] Do your children deal with stressful situations similarly or differently from one another?
    a. Probe: How? Can you provide some examples?

F) Follow-up

17. If your child was faced with a stressful situation in [sport], what would you say to him/her?
    a. Is there anything you would tell them based on your own experiences?

Parent Interview Guide (Modified)

Preamble
I am interested in the way that athletes deal with stress in sports. I would like you to answer the following questions. There are no right or wrong answers, I am only interested in your own opinions and experiences. This interview is voluntary and you do not have to participate if you do not want to. You do not have to answer any question that you do not want to.

A) Pre-interview: ask about sport experience, level of participation, involvement in child's sport history.

1. Now thinking of a previous season, I'd like you to describe a stressful situation where your child coped really well/dealt with it really well.

2. Now thinking again of that team and that season, I'd like you to describe a stressful situation where your child didn't cope well/didn't deal with it well.

[repeat 1 & 2 for this season]

B) Creating Context

3. Does your child seek assistance from you or from coaches when dealing with stress?

4. Are there things that you do that makes your child more likely to seek assistance when dealing with stressors?

C) Strategies for Assistance

5. Are there things that you do or strategies you use that help your child to deal with stress?

6. Have you ever talked to your child about dealing with stress?

7. Can you tell me about the conversations you have had with your child about dealing with stress?

8. What do they "look like"? When do you talk about stress and coping? What kinds of things have you discussed with them? [balancing act: reading your athlete]

9. Do you have any strategies you use to discuss stress or coping with your child?
    a. Has anyone else ever talked to your child or taught your child about dealing with stress (other parent/relative/coach)?

D) Balancing Acts

10. Can you tell me about the level of stress your child faces? (high/low?)

11. Do you try to ‘manage’ the level of stress your child faces?

12. Some parents have said they struggle with knowing how to help or not knowing what to say when their child is experiencing stress or is seeking assistance. Can you comment on this issue?

E) Learning Coping Strategies

13. How do you think your child learns to deal with stressful situations?

14. Is there anything that helps your child in learning to deal with stress?

15. Is there anything that hinders your child in learning to deal with stress?

16. Do you think your child has learned about coping from past experiences?
    i. Can you provide an example?

F) Follow-up

17. If your child was faced with a stressful situation in [sport], what would you say to him/her?

18. What do you think your child has learned from you about dealing with stress?
    a. Have you learned anything from your child (or your experiences helping your child) about dealing with stress?

Coach Interview Guide (Original)

Preamble

I am interested in the way that athletes deal with stress in sports. I would like you to answer the following questions. There are no right or wrong answers, I am only interested in your own opinions and experiences. This interview is voluntary and you do not have to participate if you do not want to. You do not have to answer any question that you do not want to.

A) Sport participation history/timeline

1. How long have you been coaching [sport]?
2. Have you coached any other sports?
    a. If yes, which ones? For how long?
3. Have you participated in any sports?
    a. At what level of competition have you participated?
4. How important is sport to you in your life?

B) Stressors encountered in youth sport

A stressful situation is one where you might feel anxious or worried. It might include feelings of butterflies in your stomach or sweaty palms, etc.

5. Can you describe an example of a stressful situation your athlete[s] has experienced in [sport]?

6. Can you describe any other stressful situations your athlete[s] has experienced (in school, family or other areas)?

C) Coping strategies used in youth sport

7. Thinking of a stressful situation in sport (use their example), what has your athlete[s] done to try and deal with that?

8. How effective would you say your athlete[s] was in dealing with that situation? (alternate wording: how well do you think your athlete[s] dealt with that situation?

9. Does your athlete[s] deal with some situations differently than other situations?
    a. How? (probe for more detail)

D) Development of coping strategies

10. In the past, how has your athlete[s] dealt with stressful situations in sport?
    a. Can you give an example of a stressful situation that he/she deals with differently now than in the past?

11. Are there some things your athlete[s] does to deal with stressful situations now that he/she didn't do before?
    a. If so, what are they? How has the way he/she deals with stressful situations changed?

12. Has your athlete[s] stopped dealing with stressful situations in some ways? (Alternate wording: is there anything your athlete[s] used to do to deal with stress that he/she doesn't do anymore?)

13. Do you think your athlete[s] has changed in the way he/she deals with stressful situations?
    a. If so, how has he/she changed? Do you think he/she deals with stressful situations better or worse than before?

14. Do you think your athlete[s] has learned anything about dealing with stress from being involved in sport?

E) Social agents important in coping with sport stressors

15. Have you ever talked to your athlete[s] about dealing with stress?
    a. If so, what have you told him/her?

16. Do you think anyone else has talked to your athlete[s] or taught your athlete[s] about dealing with stress (parent/relative/other coach)?

17. How do you think your athlete[s] learns to deal with stressful situations?

18. [If team] Do your athletes deal with stressful situations similarly or differently from one another?
    a. Probe: How? Can you provide some examples?

F) Follow-up

19. If your athlete[s] was faced with a stressful situation in [sport], what would you say to him/her?
    a. Is there anything you would tell them based on your own experiences?

Coach Interview Guide (Modified)

Preamble

I am interested in the way that athletes deal with stress in sports. I would like you to answer the following questions. There are no right or wrong answers, I am only interested in your own opinions and experiences. This interview is voluntary and you do not have to participate if you do not want to. You do not have to answer any question that you do not want to.

A) Sport participation history/timeline

1. How long have you been coaching [sport]?
2. Have you coached any other sports?
    a. If yes, which ones? For how long?
3. Have you participated in any sports?
    a. At what level of competition have you participated?
4. How important is sport to you in your life?

B) Stressors encountered in youth sport

A stressful situation is one where you might feel anxious or worried. It might include feelings of butterflies in your stomach or sweaty palms, etc.

5. Can you describe an example of a stressful situation your athlete[s] has experienced in [sport]?

6. Can you describe any other stressful situations your athlete[s] has experienced (in school, family or other areas)?

7. I'd like you to describe a stressful situation this season where an athlete coped really well/dealt with it really well.

8. I'd like you to describe a stressful situation where the athlete didn't cope well/didn't deal with it well.

9. Do you think your athlete[s] has changed in the way he/she deals with stressful situations?
    b. If so, how has he/she changed? Do you think he/she deals with stressful situations better or worse than before?

C) Creating Context

10. Do your athletes seek assistance from you or from coaches when dealing with stress?

11. Are there things that you do that makes your athletes more likely to seek assistance when dealing with stressors?

D) Strategies for Assistance

12. Are there things that you do or strategies you use that help athletes to deal with stress?

13. Have you ever talked to your athletes about dealing with stress?

14. Can you tell me about the conversations you have had with your athletes about dealing with stress?

15. What do they "look like"? When do you talk about stress and coping? What kinds of things have you discussed with them? [balancing act: reading your athlete]

16. Do you have any strategies you use to discuss stress or coping with your athletes?

E) Balancing Acts

17. Can you tell me about the level of stress your athletes face? (high/low?)

18. Do you try to 'manage' the level of stress your athletes face?

19. Some coaches have described a tension between being open and friendly so that athletes will approach them and they will be able to help athletes facing stressful situations, but they still want to maintain a level of respect with their team. Can you comment on this issue?

20. Some coaches have described situations where they feel that they have 'given up' on athletes after a long process of trying to help the athlete deal with stress. Can you comment on this issue?

F) Learning Coping Strategies

21. How do you think athletes learn to deal with stressful situations?

22. Is there anything that helps athletes in learning to deal with stress?

23. Is there anything that hinders athletes in learning to deal with stress?

24. Do you think athletes have learned about coping from past experiences?
    a. Can you provide an example?

G) Follow-up

25. If your athletes were faced with a stressful situation in [sport], what would you say to them?