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## Develop or Diminish? An Exploration of Adolescent Athlete Flow Experiences

Hayes Mayfield Bennett

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DEVELOP OR DIMINISH? AN EXPLORATION OF ADOLESCENT ATHLETE FLOW  
EXPERIENCES

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## DEDICATION

This dissertation is dedicated in memory of my mother, Melanie Bennett, who passed away during this process. Without her spirit of determination that now resides within me, I would never have been able to complete this work. Thank you for always believing in the best of us all, and for providing me with the tools to be successful in this life. This dissertation is also dedicated in memory of Dr. Mihaly Csikszentmihalyi, who passed away near this dissertation's end. Thank you for leading the way forward in uncovering some of life's most special moments, may you flow on.



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## ABSTRACT

The concept of flow was birthed from positive psychology specifically to uncover individuals' most positive experiences and "understand the roots of happiness" (Csikszentmihalyi, 2004). Because of the nature of flow experiences, individuals continually seek out opportunities to have more of these experiences (Seifert & Hedderson, 2010; Swann et al., 2018), however, little is known regarding how adolescents experience flow. For early-adolescents (11-14 years old: Holt, 2007), sports represent an environment that often produces physical, psychological, and social benefits (Crane & Temple, 2015), and combats negative factors (Pluhar et al., 2019). Unfortunately, adolescent athletes are particularly vulnerable to burnout and sports attrition (Bell et al., 2019) and their voices have been largely unheard in the literature (Harrist & Witt, 2015). Mirroring the community-based participatory research (CBPR) methodology of Lile (2014), this research explored adolescent athletes' sport-related lived experiences through virtual, peer-led interviews and group discussions, and identified how adolescent athletes describe flow and clutch experiences using the nine dimensions of flow (Jackson & Eklund, 2002) and the Integrated Model of Flow and Clutch States (Swann et al., 2021). Adolescent athletes appear to experience flow and clutch states amidst complex, dynamic existences, supporting emerging research on optimal experience. Such findings inform future research, particularly in creating developmentally appropriate measurements for flow and clutch during adolescence.

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## CHAPTER ONE

### INTRODUCTION

The physical, psychological, social and overall health benefits to participating in sport are abundant, and yet, while sport environments can be protective agents for athletes (Eime et al., 2013; Kerr et al., 2019; Snyder et al., 2010), participation decreases over time (Eime et al., 2016). According to Bell and colleagues (2019), up to 70% of children will drop out of sport by the time they are 13 years old. One of the most common reasons for sport attrition during adolescence is a lack of fun or lack of enjoyment (Eime et al., 2019; Fraser-Thomas et al., 2008; Weiss & Williams, 2004). Particularly for adolescent athletes and early specializers, increased training demands, stress, and pressure to perform takes a mental and physical toll and can lead to burnout (Côté & Hay, 2002; DeFreese & Smith, 2014; Merkel, 2013; Scotto di Luzio et al., 2019). Burnout in sport is defined as a multidimensional construct consisting of three symptoms: emotional and physical exhaustion, reduced sense of accomplishment, and sport devaluation (Raedeke & Smith, 2001). Emotional and physical exhaustion includes feelings of fatigue from the demands of training and competing; Reduced sense of accomplishment includes feelings of inadequacy and negative evaluation of oneself related to sport performance; Sport devaluation is a negative, detached attitude and lack of concern toward sport and performance quality (Raedeke & Smith, 2001; Scotto di Luzio et al., 2019). Not only are these symptoms related to sports attrition (Scotto di Luzio et al., 2019), but they are also associated with diminished physical wellbeing, as

well as anxiety and depression risks (DeFreese & Smith, 2014; Li et al., 2013; Madigan et al., 2020). It is therefore imperative to uncover the experiences of adolescent athletes in order to better understand the path to continued participation and overall wellbeing.

While the vicious cycle of negative experience, burnout and attrition continues for adolescent athletes, researchers and practitioners remain vigilant in understanding and combating these issues. Factors such as fun, success, freedom and positive social environments (e.g. peers, parents and/or coaches) serve as protective mechanisms of sport adherence (Committee on Sports Medicine and Fitness, & Committee on School Health, 2001; Eime et al., 2019), and as such must be further examined as combatants to burnout. A novel perspective for potentially counteracting the symptoms of burnout in sport is through flow experiences. Flow is defined as a deeply rewarding and optimal experience characterized by intense focus on and total absorption in a specific activity, and excluding all other thoughts (Csikszentmihalyi, 1975, 1990; Swann et al., 2012). Csikszentmihalyi (1975, 1990) originally examined this optimal experience with artists, music composers, dancers and others who would become “lost” in their work or activities. Even more intriguing, he believed these individuals to be highly intrinsically motivated toward their activities; they participated simply because the activity was rewarding in and of itself (Nakamura & Csikszentmihalyi, 2002; Ryan & Deci, 2000).

The root of the flow construct is the enjoyment derived from one’s feeling competent at achieving a perceived challenge (Cassie, 2011; Csikszentmihalyi, 1990). Intuitively, this aspect of flow would directly counteract the symptom of reduced sense of accomplishment in burnout. The burnout symptom of physical and emotional exhaustion could also be counteracted by flow experiences, specifically with athletes feeling



energized as a result of flow and looking forward to their next experience (Bakker et al., 2011; Swann et al., 2017; Swann et al., 2019). By having a strong sense of enjoyment, competence, and success through a flow experience (Csikszentmihalyi, 1975; Jackson et al., 2001; Swann et al., 2012), a devaluation of sport, the last symptom of burnout, would be less likely to occur. Interestingly, however, the relationship between burnout and flow experiences has yet to be examined, particularly with adolescent athletes.

Flow experiences in sport research have typically been represented by nine dimensions: challenge-skill balance, clear goals, action-awareness merging, unambiguous feedback, concentration on the task, sense of control, loss of self-consciousness, transformation of time, and autotelic experience (Jackson & Eklund, 2002; Jackson et al., 2001; Jackson & Marsh, 1996; Nakamura & Csikszentmihalyi, 2002). However, there have been recent critiques related to flow conceptualization and measurement quality involving its nine dimensions (Clementson, 2019; Morkink et al., 2010; Swann et al., 2018). Swann and colleagues (2018) perhaps best explained this issue by describing flow research as reaching a “crisis point,” in that while past conceptualizations aided in new ideas and our current understanding of flow, continuing down the path of “normal science” can only hinder progress. It is high time to diverge from normal science, or problem solving, and stop simply accepting the underlying framework of flow by challenging assumptions about its existence in a progressive manner (Swann et al., 2018). As such, a reconceptualization of flow has led to the emergence of clutch states: superior performance in pressure situations that result in exhaustion (Swann et al., 2017; Swann et al., 2021; Swann et al., 2019; Swann et al., 2018). While flow states and clutch states seem to be similar experiences, sharing some characteristics and outcomes, the two have

been described as distinct experiences that cannot occur at the same time (Swann et al., 2021). Most recently Swann and colleagues (2017, 2021) developed the Integrated Model of Flow and Clutch States, which depicts the differences and similarities between flow and clutch contexts, processes of occurrence, experiences, and outcomes. Although this innovative work as led to the preliminary validation of a new Flow-Clutch Scale (FCS: Swann et al., 2021), most of what is understood about clutch has been through qualitative inquiry with a very specific population: elite, adult athletes and exercisers.

Adolescence is a known developmental stage embodied by dynamic and often intense physical, cognitive and social changes (Ryan et al., 2017). For most adolescents, their bodies grow drastically, they become capable of thinking abstractly and about their own thoughts (e.g. metacognition) and their social circles expand with peers becoming more influential than ever (Ryan et al., 2017). They also become aware of, and begin developing, their identity through bi-directional influences within the world around them (Lile, 2014; Bronfenbrenner & Morris, 2006). Coincidentally, adolescence is also marked by heavy sports attrition (Crane & Temple, 2015; Scotto di Luzio et al., 2019), where sport-specific stressors such as intense training demands, emotional and physical exhaustion, fear of failure, and negative affect towards sport drives adolescents out of sport (Gustafsson et al., 2017). This ultimately leaves individuals in this stage of development exposed to burnout and other mental health risks such as anxiety and depression (Bitsko et al., 2018; Ghandour et al., 2019).

While the many benefits of sport adherence are well documented, little is known about the lived experiences of adolescent athletes from their own perspectives (Harrist & Witt, 2015). One approach for closing this gap in the literature is through community-

based participatory research (CBPR), an orientation in which a researcher partners with participants in research design to highlight individual participants as experts on their own lives by centering them in the research process (Israel et al., 2005; Lile, 2014). CBPR has commonly been used in public health research with the aim of equitably collaborating with community members and organizations throughout the research process to increase knowledge about community health and improve the lives of community members (Becker et al., 2005; Israel et al., 2005). The overall aim of CBPR is using the knowledge gained about a certain phenomenon to make actionable change in the lives of a community, also known as a unit of identity or membership in a socially constructed dimension of identity (Israel et al., 2005). Recognizing a community as a unit of identity, where individuals feel emotionally connected to other members and share common norms, values and interests, represents a key principle of CBPR (Israel et al., 2005; Israel et al., 1998). Other key principles include building on strengths and resources within a community, equitable partnership throughout all research phases through empowerment and power-sharing, encouraging capacity building and co-learning among all individuals, disseminating findings to all individuals and including them in the dissemination process, and committing to long-term sustainability (Israel et al., 2005). Typically, each partnership should equally agree to the guiding principles and values, using the above-mentioned principles.

Peer interviews, while receiving limited attention in qualitative research, particularly with adolescents (Lile, 2014), provide an opportunity for individuals to be actively involved in the research process by speaking freely with an equal and intentionally restricting interaction with the researcher. Qualitative research methods such

as peer interviews take into account the natural power dynamics that exist between adolescents and adults (Delgado, 2006) and avoids placing adolescents in a position where they feel compelled to enact certain behaviors they believe better fit an audience outside of their own (Lile, 2014). Thus, a novel way to for uncovering adolescent athletes' lived experiences is diverging from adult questioning, and instead, empowering adolescents to interact with peers, and enriching data quality (Lile, 2014; McGarry, 2016).

It remains to be seen whether adolescent athletes can truly experience flow, which appears unclear given the imposition of adult-focused models of flow and research methods that have excluded the voices of adolescents. That flow is possible and could have counteractive effects on burnout and sports attrition, particularly given the prominence of early sport specialization and sport training loads accompanied by expectations from the sport environment (e.g. coaches, parents, and peers) (Bell et al., 2018; Scotto di Luzio et al., 2019) is of great consequence for adolescents. Further complicating this conundrum is the reasonable assumption that constraints associated with adolescents' multifaceted development would direct flow experiences to be quite different than those experienced by adults, if they are even experienced at all during this tumultuous stage of development. Consider the altering effects of growth and maturation on an adolescents' motor skills, whereby an individual who experiences rapid physical changes in body composition (e.g. bone length, muscle mass) may have to re-acquaint themselves with skills that were once proficient (Brown et al., 2017; Manna, 2014). To uncover this mystery, it is important to explore the sport-related lived experiences of

adolescent athletes amid developing their sport skills, and concurrent physical, cognitive, and social development (Ryan et al., 2017).

### **Purpose, Significance and Context**

The Coronavirus disease of late 2019 (COVID-19) became a global pandemic and physically and psychologically impacted the lives of all humans around the world (Fitzpatrick et al., 2020). Health and education systems, as well as daily activities were abruptly upended by COVID-19. This global pandemic is particularly invasive for children and adolescents, resulting in diminished mental, social, emotional, and behavioral wellbeing (Fitzpatrick et al., 2020; Hawke et al., 2020). School delays and closings further exacerbated physical and social isolation for adolescents during a stage where social interactions are crucial in development (Loades et al., 2020; Ryan et al., 2017). Organized sports offer numerous benefits (e.g., physical, social, mental) for adolescents, however the COVID-19 climate ended all sport participation in early 2020, disrupting usual sport environments and decreasing opportunities to have meaningful connections, adding untimely stress into 2021 (Ghandour et al., 2019; Lippke et al., 2021).

Interestingly, when comparing the mental health of adult athletes and non-athletes during the pandemic, Knowles and colleagues (2021) found athletes with strong athletic identities were likely to experience more anxiety than their non-athlete counterparts. That is, athletes unable to be physically active, attend regular practice, and interact with their team struggled more so than non-athletes. Findings such as these increase the need to understand the thoughts and feelings of an already vulnerable population: adolescent athletes. Because adolescence is a dynamic developmental period that can induce

emotional stress, it is appropriate now more than ever to provide avenues for these individuals to safely connect with one another (Loades et al., 2020). While the suppression and eradication of COVID-19 might not yet be clear, a unique opportunity exists to provide virtual safe spaces for adolescents to connect with their peers, filling multiple needs: offering social interaction with friendly individuals during a time of limited human contact, growing understanding of the experiences that matter most to adolescent athletes, and reaching a milestone by centering voices of adolescent athletes in flow and clutch literature in sport.

This study is the first of its kind to explore flow experiences from adolescent athletes' perspectives to determine the prospect of flow as a buffer for symptoms of burnout in their quest to live more harmonious lives (Csikszentmihalyi, 2002; Jackson, 1995, 2000; Madigan et al., 2020; Swann et al., 2012; Swann et al., 2019). Thus, the purpose of this research is to explore adolescent athletes' lived experiences in sport settings through a qualitative design to better understand how they interpret and describe their most optimal experiences. Ultimately, adolescent athletes' descriptions of flow and clutch states will aid in the development of conceptually relevant measurements to examine associations between these elusive states and burnout, which impacts sports attrition. Therefore, this dissertation will 1) explore adolescent athletes' sport-related lived experiences through reciprocal peer interviews, group discussions and participant-led analysis, and 2) identify how adolescent athletes describe flow and clutch experiences by deductively examining their interview responses using the nine dimensions of flow and the newly Integrated Model of Flow and Clutch States.

## **Credibility & Trustworthiness**

To enhance the rigor of this research design, credibility and trustworthiness was established through peer review and engaging two “critical friends” during data analyses (Fouger, 2010); keeping a reflective journal during the research process and providing thick description of the data (Glesne, 2016); and member checking the findings with participants (Birt et al., 2016; Glesne, 2016). Peer review and the inclusion of two critical friends, both being well-versed in qualitative research, was to provide the researcher with fresh, alternative perspectives and protect against bias throughout the research process (Fouger, 2010). For example, critical friends were asked specifically to examine codes, categories, and higher-ordered themes to assist the researcher in organizing and displaying findings. In keeping a reflective journal since the outset of the research process, the researcher was able to provide thick description of the data in Study’s 1 and 2, which allows readers to understand the basis for the claims made (Glesne, 2016). Member checking, or participant validation, involves sharing information (e.g., transcripts, analyzed data) with participants to further assess trustworthiness of findings (Birt et al., 2016; Glesne, 2016). After data analysis, participants were provided the first and final iteration of themes and salient points from Study 1 and asked for their feedback. The lead researcher conducted member checking to preserve the integrity of adolescent voices and include participants in the fourth phase of participatory research, as outlined by Jacquez et al., (2013).

## **Positionality**

Positionality is defined as the social, locational and ideological placement of the researcher related to research and participants (Hay, 2005), and has a major impact on

qualitative research processes. Considering that a researcher cannot be controlled for or removed from their own research (Moradi & Grzanka, 2017), having an awareness of one's positionality can benefit both the research and data analyses, as intersubjectivity enables researchers to critically analyze their involvement and the involvement of others in the research process (Glesne, 2016; McGarry, 2016; Nicholls, 2009). My positionality as the researcher in this study includes being a white, cisgender, and non-disabled female working in higher education. My passion for sports and desire to expand our current understanding of adolescent sport experiences is framed as a former collegiate athlete, and someone who has either participated in or been around sports for most of my life. I also maintain that identifying my positionality is a reflexive process that takes consistent reflection throughout the research process. In their recent work, Braun and Clarke (2019) clarified their intentions regarding their well-known qualitative method, thematic analysis: "Qualitative researchers are always thinking, reflecting, learning and evolving – we do not reach a point where we have nothing more to learn. We are journeying, not arriving!" (p.592). Through transparency and acknowledgment of my own privileges and the power dynamics that exist within the study, I aim to develop trustworthy research that shows respect for the participants' voices and their experiences from their perspective.

Contextually, this study has been conducted during a global pandemic involving COVID-19. Given the devastating and disruptive nature of COVID-19 on nearly all facets of life, particularly for the vulnerable population of interest (Loades et al., 2020) it would be irresponsible not to address the potential impact of the pandemic on this study. However, because of the unprecedented period in history an obligation exists to engage those most vulnerable as coresearchers and storytellers of their experiences (Hawke et al.,



2021), in order to enhance their lives in the immediate and the future, as well as addressing a gap in the literature.

## CHAPTER TWO

### LITERATURE REVIEW

The following review of literature begins with a deep dive into the history of flow research, how its conceptualization has typically been put into practice, issues with the measurement of flow, and how this elusive construct applies to adolescents. I will then explore the construct of burnout in sport contexts and how its multidimensional nature impacts the lives of adolescents. Finally, I will provide an outline of our current understanding of adolescent development and a theoretical framework from which to view their dynamic existence and examine what exists and what is missing from research conducted with this population, particularly from a qualitative lens.

#### **Flow**

The concept of flow was birthed from positive psychology, specifically to uncover individuals' most positive experiences in life and "understand the roots of happiness" (Csikszentmihalyi, 2004). It has been stated that a person who is not bored and rarely anxious, deeply involved and in a flow state may be said to have an autotelic self; meaning they are capable of easily translating potential threats into enjoyable challenges, and can thus maintain inner harmony (Csikszentmihalyi, 1990). Further, anxiety and psychological distress are believed to oppose flow states based on Csikszentmihalyi's (1988, 1990) conceptualization of the construct. If true, flow experiences may be able to buffer not only symptoms of burnout, but also symptoms of mental illness that disrupt inner harmony.

Understanding the flow experiences of athletes has long been the interest of researchers in the realm of sport psychology and exercise science (Jackson & Eklund, 1992; Jackson & Roberts, 1992; Jackson et al., 2001). Flow is known to be associated with peak performance (Swann et al., 2016), increased self-concept (Martin et al., 2010), and well-being (Jackman et al., 2020). Being in a state of flow allows athletes to tap into the very best of their abilities, which creates a desire to seek out these opportunities continuously (Jackson et al., 2008; Swann et al., 2017). According to Mao et al., (2016) creating a culture that provides the necessary space for an individual to have optimal experiences brings individual benefits related to personal growth, but also benefits others who occupy that space by fostering a “greater sense of psychological and socio-cultural adjustment across a variety of cultures and domains” (p. 3). While flow experiences have been heavily sought after by the field of sport psychology and are believed to offer an abundance of benefits, the construct continues to elude.

Most often in the literature, flow experiences are explained by nine dimensions: challenge-skill balance, clear goals, action-awareness merging, unambiguous feedback, concentration on the task, sense of control, loss of self-consciousness, transformation of time, and autotelic experience (Jackson & Eklund, 2002; Jackson et al., 2001; Jackson & Marsh, 1996; Nakamura & Csikszentmihalyi, 2002). These nine dimensions can be broken down into conditions necessary for flow and characteristics of the experience (Nakamura & Csikszentmihalyi, 2002; Swann et al., 2018). Conditions necessary for flow consist of challenge-skill balance, which is a perceived balance by an individual between their skill level and the challenge of an activity; clear goals an individual comprehends and works towards; and unambiguous feedback that informs the individual

if changes are needed or not in the activity (Nakamura & Csikszentmihalyi, 2002; Swann et al., 2018). The characteristics of flow experiences include action-awareness merging where an individual is completely absorbed in an activity and leads to automaticity; concentration on the task at hand with no distractions by other thoughts or activities; sense of control during an activity and over the outcome; loss of self-consciousness where thoughts of the self are decreased; transformation of time where time is of no concern, speeds up or slows down; and autotelic experience where an activity is rewarding simply because it exists (Nakamura & Csikszentmihalyi, 2002; Swann et al., 2018). While these nine dimensions of flow have generally been understood to represent a flow experience, there is no agreement about how many of the dimensions are required for a flow state to occur (Hassmén et al., 2016; Swann et al., 2018).

Flow has largely been measured through self-report methods after the experience has occurred. The Flow State Scale (FSS, FSS-2) and Dispositional Flow Scale (DFS, DFS-2) (Jackson & Eklund, 2002, 2004; Jackson & Marsh, 1996; Jackson et al., 2008), as well as the Experience Sampling Method (ESM) (Csikszentmihalyi & Larson, 2014), are all popular methods of data collection involving flow experiences. The FSS-2 measures an individuals' flow experience from a situational perspective, whereas the DFS-2 measures flow as a trait or disposition (Jackson & Eklund, 2002, 2004; Jackson et al., 2008; Jackson & Marsh, 1996). Jackson (1995) originally interviewed 28 elite athletes across seven sports to better understand the factors that contribute to flow and found evidence through content analysis to support the nine dimensions outlined by Csikszentmihalyi (1990); this work directly contributed to the previously mentioned scales. Both measures include 36-items with nine subscales representing the nine

dimensions of flow. With adult populations, the FSS-2 was found to have acceptable reliability estimates ranging from .76 to .90 Cronbach's alpha, (Jackson et al., 2008), and the DFS-2 also yielded acceptable reliability with Cronbach's alpha ranging from .80 to .89 (Jackson et al., 2008).

While the FSS-2, DFS-2 and ESM are believed to be valid and reliable measures of flow, these instruments only capture the experience of the individual in retrospect, thus illuminating an obvious limitation to our understanding of flow. Due to the nature of flow, an individual would no longer be completely immersed in a task in order to report on the experience in question. This means, someone would have to break their focus, disengage, or remove themselves from "the zone" to record what is currently happening, which explains why the majority of measurements that seek to capture flow are reflective. For example, the ESM requires an individual to respond to a pager-like alert at random times throughout a given day and record what was happening at that time (Csikszentmihalyi & Larson, 2014; Slot et al., 2019). Because of these limitations, what we know about flow as a construct is largely reminiscent, however scientists remain hopeful and vigilant in exploring efficient measurement tools.

Interestingly, flow has since been examined using 12 features for exercise, because the original explanation for flow occurrences was believed to be incomplete (Swann et al., 2019). The 12 features include: absence of negative thoughts; absorption; altered perceptions; automatic skill execution; confidence; ease/reduced effort; effortless attention; enjoyment; feeling in control; optimal arousal; motivation for more; and positive-in-the-moment feedback. This reconceptualization of flow has also led to the emergence of separating flow states from what are known as clutch states (Swann et al.,

2017; Swann et al., 2018; Swann et al., 2019). Defined as superior performance in pressure situations that result in exhaustion (Swann et al., 2017; Swann et al., 2021), clutch states were originally believed to be conflated within the nine dimensions of flow. While flow states and clutch states appear to represent similar experiences, the two have been separated as distinct experiences that cannot occur concurrently (Swann et al., 2021). Flow states are recognized as experiences that you “let happen”, while clutch states you “make happen”, the latter state being contradictory of classic flow conceptualization (Swann et al., 2017). Swann and others (2021) recently validated the Flow-Clutch Scale (FCS) with elite athletes using the Integrated Model of Flow and Clutch States which depicts the contexts, processes of occurrence, actual experiences, and outcomes of both states, with certain overlaps (Swann et al., 2017). However, much of the clutch research has been studied primarily through a qualitative lens with a very specific population: elite, adult athletes. While decades of research have been conducted to understand the relationships among flow and athletic performance and “a gold measurement standard for flow has yet to be achieved” (Moneta, 2021, pp. 31-32), perhaps examining flow and clutch states with other populations, especially populations vulnerable to sport dropout (cite), will assist in creating more complete picture of the athlete experience.

Research is beginning to shift to discussing flow experiences from a developmental lens as well as relating these experiences to personality type (Tse et al., 2020), but because these perspectives are in their infancy little is known empirically. Tse et al., (2020) found flow experiences to be a mediating factor between autotelic personality and well-being in two studies with 390 and 127 Amazon Mechanical Turk

participants, respectively. These participants had an average age of roughly 41 and 49 years, and 49% were female in study 1 and 53% were female in study 2 (Tse et al., 2020). Following ESM, participants would be primed to record what they were doing and how they felt at three random times throughout the day. They found flow experiences did indeed mediate the relationship between autotelic personality and well-being, and further inferred a link to living a happy life (Tse et al., 2020); however, we do not have full pictures of who these participants were and why they may experience flow while others do not.

The majority of literature involving adolescent flow experiences has focused on music settings, virtual reality, online gaming, and electronic game addiction (Lemmens et al., 2009; Stavropoulos, 2018; Wan & Chou, 2006). However, no consensus exists regarding flow measurement methods with this population. Clementson (2019) used a mixed methodology with middle school band students and determined the present language related to flow might not be fully conceptualized by individuals at this developmental stage. While questionnaires may be useful in generalizing quantitative data, Saldaña (2013) suggests mixed-methods studies afford the ability to “quantify” qualitative data to be used for statistical analysis or for survey development. Considering the lack of consensus measuring flow (Swann et al., 2018), coupled with developmentally inappropriate language to describe these experiences for adolescents (Clementson, 2019), existing measurements of flow are to be re-examined from the adolescent perspective. Qualitatively examining the lived experiences of adolescent athletes related to flow affords an opportunity to enrich current scale concepts in questionnaires that were largely developed with adult samples.

Altogether, little is known about adolescent flow experiences, even less for athletes in sport settings. Increasing understanding about adolescent flow experiences, particularly from the perspective of these individuals offers unparalleled data quality, as well as insight to flow as a potential buffer to increased youth sport attrition, as early adolescents (~10-14 years) continue to rapidly drop out of sport (Breuner, 2012; Fraser-Thomas et al., 2008; Merkel, 2013; Teare & Taks, 2021).

### **Burnout**

Burnout in the realm of sport is recognized as a multidimensional construct consisting of three dimensions: 1) Emotional and physical exhaustion, which is characterized by feelings of fatigue stemming from psychosocial and physical demands of sport; 2) reduced sense of accomplishment, which is characterized by feelings of inefficacy and negative evaluation of the self in a sport context; and 3) sport devaluation which is characterized as a negative attitude and lack of concern for sport (Raedeke & Smith, 2001; Raedeke & Smith, 2009; Scotto di Luzio et al., 2019). These dimensions have been related to negative consequences of athletes' psychological well-being including depression and anxiety (DeFreese & Smith, 2014), which can impair performance, lead to athlete attrition (Scotto di Luzio et al., 2019) and a diminished quality of life.

The concept of burnout has been popular in research involving early sport specialization, defined as participation in a single sport and excluding others (Bell et al., 2018), because playing high-level sports in adolescence can lead to negative mental and physical health consequences, such as stress and overuse injuries (Gustafsson et al., 2007; Merkel, 2013; Scotto di Luzio et al., 2019). Adolescent athletes become exposed to an



increase in training demands, along with pressure to perform competitively, which can lead to burnout (Scotto di Luzio et al., 2019). Thus, children who specialize early and experience burnout in sport may initially lack the enjoyment they once felt (Côté & Hay, 2002; Gustafsson et al., 2017; Petlichkoff, 1993). It is known that having fun in sport is a major predictor of continued participation, as well as dropout (Crane & Temple, 2015; Eime et al., 2019; Gardner et al. 2017). The question then becomes, how can enjoyable environments be created for adolescent athletes to ensure continued participation?

In an effort to understand the necessary factors to create enjoyable environments that extend participation for adolescent athletes, we must understand the factors that contribute to their displeasure and burnout. One of the most prominent and well-established measurements of burnout in athletics is the Athlete Burnout Questionnaire (ABQ) (Raedeke & Smith, 2001). Raedeke & Smith (2001) originally developed the scale in an effort to better understand the athlete perspective utilizing past research on burnout in the workplace. The ABQ consists of 15 items with three subscales to mirror the three symptoms of burnout: emotional/physical exhaustion, reduced sense of accomplishment, and sport devaluation. Raedeke and Smith (2001) first validated the scale with a sample of 236 swimmers ranging in age from 13 to 18 with internal consistencies greater than .70. The ABQ has since been validated with athletes ages 11-14 with acceptable reliability (Cronbach's alpha) ranging from .74 to .94 (Harris, 2008). Pacewicz et al., (2019) conducted a meta-analysis on the relationship between sport burnout and social constructs using the ABQ subscales as part of their inclusion criteria to maintain measurement consistency. Twenty studies were included in the meta-analysis and three predominant social constructs were identified: social support, relatedness and

negative social interactions. Using a random effects model, global burnout effect sizes (Fisher's Z) ranged from -.39 to .31. They further suggest future research should examine the specifics of social support as well as expanding beyond the social constructs that have been predominantly studied (Pacewicz et al., 2019).

Most recently the ABQ has been examined involving the role of coping tendencies in predicting athlete burnout (Madigan et al., 2020). Madigan et al (2020) found avoidance coping tendency, also known as the propensity to use strategies to dodge sources of stress, predicted an increase in athlete burnout using conditional latent growth curve modeling with a sample of 141 junior elite athletes. This means athletes who deliberately disengage mentally and physically are at increased risk for heightened stress, illustrating the inability to cope with one's environment can result in burnout. These findings suggest sport stakeholders (e.g. peers, parents, coaches) should be aware how athletes handle stressful situations, whether they engage or disengage, and the results of their responses on sport participation. While these findings offer direction for future research, the issue of adolescent athlete burnout continues to ensue.

The research base involving athlete burnout continues to grow, although this growth is not without its limitations. Indeed, there are commonly known psychological antecedents believed to influence the syndrome of athlete burnout, such as negative social interactions and negative affect (Eklund & Defreese, 2020; Pacewicz et al., 2019), yet less is known about other potential influences. However, burnout literature suggests negative interactions and negative affect in sport settings (Eklund & Defreese, 2020), and debilitating coping strategies in high-stress environments (Madigan et al., 2020; Nixdorf et al., 2020) can have adverse effects on the behavioral and mental capabilities of

adolescent athletes. This speaks to the ever-pressing need for novel solutions towards understanding the connections between these constructs in a vulnerable population.

### **Adolescents and Qualitative Research**

Although generally thought of as a developmental period spanning the teenage years, the concept of adolescence as a developmental stage has been recognized as a social construct in the West since the early 20<sup>th</sup> century (Ryan et al., 2017). Generally thought of as spanning the “second decade of life” (Malekoff, 2015, p.4), adolescence is a tumultuous time of life related to physical, psychological, and social development. Due to variations in maturation over time, it remains nearly impossible to assign stringent age ranges to the beginning and end of this developmental period interestingly implying no unified definition for adolescence (Malekoff, 2015; Ryan et al., 2017). While adolescence may be brimming with contradictions, particularly related to pubertal timing and cognitive development (Ryan et al., 2017), for the purpose of this research early adolescence will be defined as individuals who are the age of typical middle school students in the U.S., participants between the ages of 11 to 14 years (Holt, 2007).

Because of its interdisciplinary focus on childhood and adolescence, the researcher adopted a theoretical approach following the Bioecological Model of Human Development, which centers on how an individual develops within a multilayered system of influences (Bronfenbrenner & Morris, 2006; Ryan et al., 2017). This multilayered system begins with the individual at the center, surrounded by a close social system layer (microsystem), a layer of linkages between certain microsystems (mesosystem), followed by a larger more distant social system layer (exosystem) and a final layer for the culture or society in which one lives (macrosystem) (Bronfenbrenner & Morris, 2006; Ryan et

al., 2017). These qualitatively different levels have multidirectional influence on the others; for example, the macrosystem influences the individual and the individual can also influence the macrosystem (Figure 2.1).

A similar approach to Bronfenbrenner and Morris's (2006) working model is Lerner's (1992) concept of developmental contextualism, whereby an individual joins with their dynamic environment made up of distinct levels of interrelated organizations throughout the lifespan. Lile (2014) utilized this concept in the development of her adolescent peer interview methodology and claimed, "under this framework, children and youth influence their own development through bi-directional interactions with others in their context, and adolescents strive to make intentional choices and sculpt their own developmental pathways" (Lile, 2014, p. 11). Considering both the Bioecological Model and developmental contextualism, it appears plausible to perceive the life of an adolescent as constantly evolving, riddled with multidirectional complexity.

Due to the above-mentioned complexity, it is inconceivable why the perspectives and input of this population is largely missing from the literature. However, community-based participatory research (CBPR), a research orientation typically used for public health purposes, partners with communities to highlight individuals as experts on their own lives and center them in the research process (Israel et al., 2005), is but one approach for closing this literature gap. Although peer interviews have received little attention in qualitative research, particularly involving adolescents, this methodology offers an innovative approach of allowing participants to speak freely with one another, while restricting interaction with an adult researcher known to affect their behavior, discussion and the data quality (Lile, 2014). Past research suggests because adolescence is a

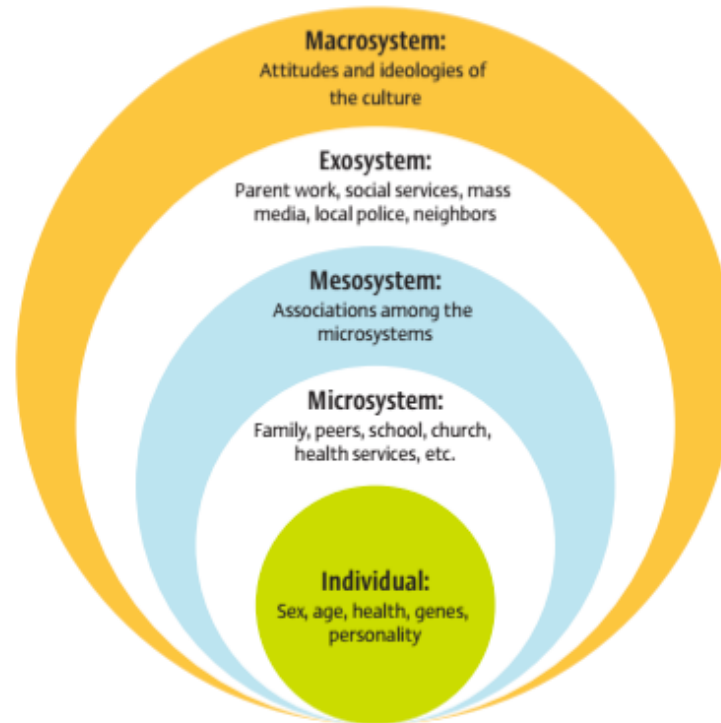


Figure 2.1 Bioecological Model of Development.  
*Source: Based on Bronfenbrenner & Morris (2006).  
In Ryan et al., (2017).*

developmental stage beleaguered by change, growth and multidirectional interaction at multiple levels (e.g., individual to peers, peers to individual) (Bronfenbrenner & Morris, 2006), this is a stage where adolescents inherently begin to explore identity through their interactions with different people. For example, adolescents might feel comfortable trying out new roles and self-concepts after interacting with individuals in a research process, or more specifically, they might feel the need to behave in a way that is acceptable to someone from an audience different than their own (Lile, 2014; Ryan et al., 2017).

This research line hinges on the missing voices of adolescent athletes in the literature (Harrist & Witt, 2015), particularly regarding their flow and burnout experiences, which is cause for concern. Therefore, this research will highlight the voices, perspectives and lived experiences of adolescent athletes surrounding flow and burnout by providing them the opportunity to be their own researchers through a mixed-methods design. In an effort to minimize the influence of an “outsider,” and acknowledge the power dynamics that exist between an adult researcher and adolescent participants, this research begins by mirroring a CBPR approach that engages participants in reciprocal peer interviews, group discussions and informal data analyses (Lile & Richards, 2018; Williams et al., 2020).

Saldaña (2013) stated that because “emotions are a universal human experience, our acknowledgement of them in our research provides deep insight into the participants’ perspectives, worldviews, and life conditions” (p. 106). By inviting adolescent athletes to express their thoughts and emotions with a peer instead of an adult where obvious power dynamics exist, one could argue we will better capture the genuine language spoken between these individuals and inform future interactions and research with this

population. Instead of adult researchers developing, designing and interpreting research to fit an adult-based theoretical phenomenon (Grover, 2004), the design of this research line encourages participants to become more engaged in the research process, thus providing invaluable data richness and addressing a glaring literature gap.

# CHAPTER THREE

## STUDY 1: EXPLORING THE SPORT-RELATED LIVED EXPERIENCES OF ADOLESCENT ATHLETES THROUGH VIRTUAL, PEER-LED INTERVIEWS

For adolescents, sports provide environments that offer physical, psychological, and social benefits (Crane & Temple, 2015), however, the voices of this population have in some ways been missing from our current understanding of youth sport experiences (Harrist & Witt, 2015). Adolescence is understood as a tumultuous time of developmental change (Ryan et al., 2017), that is also characterized by athletes leaving sport in sweeping amounts (~ 70%) (Bell et al., 2019). To reduce this sport attrition trend, researchers are challenged to discover factors underlying sport adherence (Committee on Sports Medicine and Fitness, & Committee on School Health, 2001; Eime et al., 2019), specifically for vulnerable adolescent athletes. Flow, a deeply rewarding optimal experience (Csikszentmihalyi, 1975, 1990; Swann et al., 2012), was originally explored among professionals who became “lost” in their activities and found them so rewarding that they would continue to seek out opportunities to have more of those experiences (Seifert & Hedderson, 2010; Swann et al., 2018). It remains to be seen how adolescents experience flow, or if they even have these experiences at all, which is unclear given the imposition of adult-based models (Clementson, 2019; Swann et al., 2018). To examine this quandary, it is important to explore the perceptions and sport-related lived



experiences of adolescent athletes amid developing their sport skills, while concurrently developing physically, psychologically, and socially (Ryan et al., 2017).

The Bioecological Model of Human Development (Bronfenbrenner & Morris, 2006) is a framework used for describing human development within a multilayered system of reciprocal influences, where each part of the system influences the others (Ryan et al., 2017). The multilayered system includes five layers with the individual at the center, surrounded by close social systems (microsystem), linkages between microsystems (mesosystem), an expanded social system (exosystem) and a final layer involving the larger society and culture in which one lives (macrosystem) (Bronfenbrenner & Morris, 2006; Ryan et al., 2017) (Figure 2.1). These qualitatively different levels are understood to have multidirectional influence on the others; for example, the macrosystem influences the individual and the individual can also influence the macrosystem. Because of this model's interdisciplinary focus on dynamic experiences across childhood and adolescence, as well as its acknowledgment that both subjective and objective elements of experience drive development (Bronfenbrenner & Morris, 2006), this study utilizes the Bioecological Model of Human Development as an underlying theoretical framework for understanding adolescent athletes' multilayered experiences. For example, in the middle school years, young athletes are in critical periods of physical growth and development oftentimes while participating in various sport environments, enabling the learning and refinement of sport skills (Brown et al., 2017). Alongside sport competence gains, youth sport contexts are rich in social interactions between athletes and peers, as well as athletes and adult leaders, who can be skilled at eliciting enjoyable experiences for athletes that drive interest and motivations for further development

(Weiss & Fretwell, 2005). When applying Bronfenbrenner and Morris' (2006) model, Smith and colleagues (2019) suggest specifying the processes of interaction across ecological levels (e.g., individual, and micro-system) in relation to youth athletes' developmental experiences and outcomes through participatory methods, where research objectives and directions are shaped by youth athletes to offer meaningful advancements in understanding youth sport from a systems-based perspective.

Based on direct suggestions for qualitative inquiry regarding flow-related developmental language (Clementson, 2019), the lack of literature involving the voices of adolescent athletes (Harrist & Witt, 2015), and a call for quality research involving flow experiences (Swann et al., 2018), this study used processes of semi-structured, virtual peer-led interviews and group discussions to better understand adolescent athletes' sport-related lived experiences. Peer interviews, while receiving little attention in qualitative research, are an innovative method for allowing participants to speak freely with "insiders," or individuals within their own audience, while restricting interactions with "outsiders," or someone outside their audience (Lile, 2014; Lile & Richards, 2018; Williams, 2020). As a developmental stage beleaguered by growth, change and multidirectional interaction across systems (e.g. individual to peers, peers to individual) (Bronfenbrenner & Morris, 2006), adolescence inherently involves individuals exploring identity through their interactions with others. For example, adolescents could feel comfortable trying out new roles and self-concepts when interacting in a research project with adults, and more specifically, they may feel the need to behave differently around someone from an audience outside of their own (Lile, 2014; Ryan et al., 2017). Affording adolescent athletes the opportunity to express their thoughts, emotions and overall

experiences with a peer instead of an adult, where obvious power dynamics exist (Grover, 2004), can better capture the genuine interactions between these individuals by limiting interactions with adult researchers, which can affect adolescent behavior, discussions and the data quality (Lile, 2014; Lile & Richards, 2018). Succinctly, instead of adult researchers developing, designing, and interpreting research to fit an adult-based theoretical phenomenon (Grover, 2004), this study highlights the limited voices of adolescent athletes by centering them as experts of their experiences, thus informing future interactions and research with this unique population. Therefore, the aim of this study was to explore the lived experiences of adolescent athletes related to sport, specifically their most optimal experiences, by engaging participants as experts and co-researchers in peer-led interviews and group discussions. The research question guiding this study is: What are the sport-related lived experiences of adolescent athletes?

### **Methodology and Research Design**

Through an exploratory, collaborative qualitative design, this study sought to develop a richer understanding of adolescent athletes' lived experiences in sport contexts. The study incorporated an interpretivist paradigm approach, which assumes that reality is co-constructed, interpreted and ever changing (Glesne, 2016). By recognizing the multiple realities that exist between and among researchers, participants, and stakeholders, this research design used the CBPR methodology of Lile (2014) as a guide to develop a unique research design based on semi-structured, virtual peer interviews and group discussions.

As a reflective researcher, one must consider the power dynamics that exist between adolescent participants and adults, which can limit the understanding of youth-

peer cultures (Campos-Holland et al., 2016; Corsaro, 2014). This study enabled participants to express their ideas with a peer of their choice and intentionally limited their interaction with the researcher. Minimizing the researcher, particularly during the peer-led interview process, allowed participants to co-create knowledge without direct influence of an “outsider” (Williams, 2020), and was a “valid means of empowerment” (McGarry, 2016, p. 340). Partnering with youth in this way is supported by the findings of Jacquez and others’ (2013) meta-analysis of CBPR-focused research studies with children and adolescents. While only 56 of the 399 studies included youth in any part of the research process, Jacquez and colleagues (2013) were able to identify five different phases of research in which adolescents can participate in the research process: 1) actively provide input by a formal group, 2) identifying goals or research questions, 3) being involved in designing and conducting research, 4) participating in data analysis, and 5) participating in disseminating findings (Jacquez et al., 2013, p.179). Participants in this study were involved in phases three and four of the Five Phases of Research by 3) conducting peer-led interviews, and 4) participating in informal data analysis during the group discussion (Jacquez et al., 2013). These two phases were chosen specifically for this study because phase three is one of the most common phases, and phase four is least likely to be used in CBPR research involving youth (Jacquez et al., 2013). Rather than mapping an adult-based theoretical framework with pre-determined dimensions onto adolescents (Clementson, 2019), the researcher instead chose to involve participants in these phases of the research process to recognize the theoretical roots of flow while concurrently challenging assumptions about its existence in the lives of adolescent athletes.

## **Participant Criteria and Selection**

Utilizing maximum variation and snowball sampling (Glesne, 2016; Patton, 2002), 14 participants (7 pairs, ~ 50% female) with ages ranging from 11-14 years were purposively selected from middle schools in the United States. Following an initial stage of analysis, an additional 6 participants (3 pairs) of the same age range and inclusion criteria participated, totaling 20 adolescents in this study. Participants were selected by collaborating with middle school principals, athletic directors, coaches, and parent/guardians, and were included in the study if they participated in an organized sport within the last year at the time of recruitment. Principals, athletics directors, and coaches were emailed regarding the purpose of the research, what would be required of participants, and asking them to forward study information to a diverse range of athletes (i.e., age, sex, race, and sport-type) they believed would be interested and willing to participate. Participants were from the Southeast and Midwest regions of the US. The sports represented by this sample include baseball, basketball, cheerleading, football, lacrosse, soccer, softball, swimming, and tennis. Participants were selected because they are believed to represent a heterogeneous sample of adolescent athletes by age and sport. The researcher did not ask participants to self-identify their gender or race.

## **Procedures and Data Collection**

Research procedures involved 1) the creation of interview protocols, 2) contacting middle school principals, athletic directors, coaches, and parents to recruit participants, 3) obtaining parental consent via email or text, 4) scheduling peer interviews, 5) receiving participant assent prior to beginning the interviews, and 6) scheduling a group discussion after 3-4 peer interviews were completed.

Two semi-structured interview protocols (Appendices A-B), known to the participants as “interview guides,” were developed with the assistance of an expert in qualitative methodology and followed the previous works of Lile and Richards (2018) and Jackson (1995). The purpose of the first protocol for the peer interviews was to explore the experiences and perceptions of adolescent athletes. Open-ended questions aimed to uncover thoughts and feelings about their optimal sport experiences, continued sport participation and best memories as athletes. While the researcher acted as a moderator for introducing the peer interview protocol to the participants and recording the virtual interview, the researcher was not present during the actual interview. The second protocol was developed for subsequent group discussions involving the peer interview participants and designed to encourage participants to expand on their peer interview experiences and dive deeper into their most optimal sport experiences. The researcher was responsible for planning, recording, and moderating the group discussions after the peer interviews were completed.

The peer interview protocol was first tested in a pilot study for feasibility, and adjustments were made based on participant understanding and clarity. After receiving IRB approval from the university, middle school principals, athletic directors, coaches, and parents/guardians from the U.S. were contacted to recruit possible participants. Parental consent (see Appendix C) was collected by the researcher electronically via email or text, followed by an additional email providing the semi-structured peer interview protocol, instructions on selecting a peer and scheduling a virtual peer interview. A date and time were set with the participants to conduct the virtual interviews with the researcher as the moderator via Zoom and a private link was provided.

Participant assent was collected through a verbal script (Appendix D) read aloud to participants before they conducted the virtual peer interviews.

After completing the interview, the researcher saved the recording in a password-protected folder on Microsoft OneDrive, and participants were contacted to join a group discussion after six to eight participants completed peer interviews. The group discussion invited participants to share and compare interview experiences with one another (Lile & Richards, 2018), as well as provide invaluable insight for deductive analysis. The researcher acted as a moderator during the group discussions and took notes in a reflective journal to ensure participants spoke freely, assist in identifying salient points and noteworthy ideas that emerged during the interview process, and inquire about the nine dimensions of flow (Jackson & Eklund, 2002; Jackson et al., 2008). To further the rigor of this research design, credibility was established by peer review throughout the research process and member checking the findings. Member checking, or participant validation, involves the sharing of information (e.g., transcripts, analyzed data) with participants to assess trustworthiness of findings (Birt et al., 2016; Glesne, 2016). Participants were provided the first and final iteration of themes and salient points and asked for their feedback. Interviews were conducted until reaching a point of saturation, or informational redundancy, which Lincoln and Guba (1985) describe as a point where no new codes or information emerges from the data. In keeping a reflective journal since the outset of the research process, as well as a log of codes and code mapping, the researcher determined no new codes or information emerged and discontinued interviews, supported by Lincoln and Guba's (1985) suggestions of saturation.

## **Data Analysis**

Peer interviews and group discussions were video recorded and transcribed verbatim, whereby all personal identifiers were removed, and each participant assigned a pseudonym. Reflexive thematic analysis, an inductive approach, was used to expand the researcher's understanding of participants' sport-related lived experiences through the generation of patterns and themes (Battaglia et al., 2017; Braun & Clarke, 2019). First cycle coding of the peer interviews included in vivo coding – salient points in the participants' language; emotion coding – salient points of participants' feelings; and concept, or descriptive coding – salient topics and issues described by participants (Saldaña, 2013). A similar approach was used for first cycle coding of the group discussions. The researcher included in vivo, emotion, and concept coding, plus the addition of versus coding (i.e., contrasting ideas) due to the nature of group discussion questions and participant responses (Glesne, 2016; Saldaña, 2013).

Transcripts of peer interviews and group discussions for the first 14 participants were analyzed to determine if and where participants became confused by both peer and group interview protocols. This examination included reading through all transcriptions to look for statements such as “I feel like we’re doing this wrong” (Allison, PI5) and “Don’t we just take turns?” (Evan, PI7). After this review, both peer interview and group discussion protocols were refined to enhance the research design, robustness of the data and participant clarity. An organized list of corrections was documented in an excel spreadsheet to track changes over time, with adjustments ranging from the wording of interview questions to the addition of questions and instructions based on participant



suggestions. The updated protocols (Appendices E-F) were then used with six additional participants (n=6), totaling 20 participants for this study.

Following the first cycle of coding, the researcher participated in code mapping to keep track of the categorization, re-categorization, and conceptualization of codes (Saldaña, 2016) while also reviewing a reflective journal kept during the interviews. This provided a succinct view of the data to develop higher order themes. For example, the versus codes gleaned from the group discussions were extracted and listed in no specific order to represent the first iteration of code mapping, followed by continued categorization of those codes among which the researcher sought patterns to address the research question (Saldaña, 2013). Peer review and the inclusion of a “critical friend” (Foulger, 2010) to examine codes, categories, and themes developed followed the above processes. Further, to expand the study’s trustworthiness, member checking was conducted electronically by emailing participants the first and final iteration of themes and salient points, asking them for feedback (Jonsen & Jehn, 2009; Lather, 2003) (Appendices G-H).

The design of this analysis closely follows the suggestions of Patton (1982) for inductive approaches. The process allowed for the most salient dimensions to emerge without assuming what the important dimensions would be in advance. Further, the inductive design supported the exploratory nature of this study by highlighting the voices and ideas of adolescent athletes to better understand their sport-related lived experiences from their perspectives.

## Findings

A total of 10 virtual peer interviews and 3 group discussions were conducted for this study, with group discussions having 3-6 participants each (Glesne, 2016). Peer interviews and group discussions lasted approximately 8 minutes, 50 seconds and 44 minutes, 03 seconds, respectively. Participant information, as well as corresponding interview information is included in Table 3.1. Findings are presented below starting with four major themes, corresponding sub-themes and overlapping topics, followed by five salient points, or important ideas represented by participants that did not reach saturation but provide developmental context into adolescent athletes' sport-related lived experiences.

### **Theme 1: Sports “keep you healthy altogether”**

The first theme, *Sports “keep you healthy altogether”* (Willy, PI3), encompasses participant recognition of the physical benefits and demands of sport, as well as the additional social, mental, and emotional benefits that accompany being involved in sports.

#### ***Sub-theme 1.1: Physical demands and benefits***

Participants understand there are numerous benefits to participating in sports, from the tangible to the not-so tangible. The physical demands of sports and the physiological benefits one can receive from participating were discussed frequently during the peer interviews and group discussions. Learning and performing sport-specific skills like “getting a back-handspring” (Rebecca, PI1), getting exercise and staying in shape, and releasing energy were just a few areas mentioned by participants:

Table 3.1 - Participant and Interview Information

<b>Participant Pseudonyms</b>	<b>Age</b>	<b>Sport(s)</b>	<b>Peer Interview (PI), (Date)</b>	<b>Group Discussion (G), (Date)</b>
Anna	12	Softball	1 (12/8/2020)	1 (2/26/2021)
Rebecca	13	Cheerleading		n/a
Jax	14	Soccer, Football, Basketball	2 (1/14/2021)	2 (4/18/2021)
Marcus	14	Football, Basketball		n/a
Willy	13	Football	3 (1/15/2021)	1 (2/26/2021)
Edward	14	Football		1 (2/26/2021)
Maddie	12	Soccer	4 (2/12/2021)	1 (2/26/2021)
Kendall	12	Soccer		1 (2/26/2021)
Tamera	14	Cheerleading	5 (3/19/2021)	2 (4/18/2021)
Allison	14	Cheerleading		2 (4/18/2021)
Brooks	14	Baseball	6 (3/19/2021)	2 (4/18/2021)
Landon	14	Baseball		2 (4/18/2021)
Miller	13	Swimming	7 (3/21/2021)	n/a
Evan	13	Lacrosse		n/a
Roger	12	Football	8 (5/21/2021)	n/a
Wyatt	12	Football, Baseball		n/a
Clarissa	13	Tennis, Basketball	9 (8/17/2021)	3 (10/2/2021)
Chelsea	13	Soccer, Volleyball		3 (10/2/2021)
Grant	12	Baseball, Basketball, Football	10 (9/11/2021)	3 (10/2/2021)
Daniel	11	Baseball, Basketball, Football		n/a

“some points you just, you gotta stay in shape and so... cheerleading’s... a good way to stay in shape and also I like it so I continue to play it” (Tamera, PI5)

“it keeps you out of the house, it keeps me active, you really get the exercise from the sports. You’re running for baseball, basketball and football. You get the physical strength... pushing.” (Grant, PI10)

Tamera describes one of the main motivators for continuing to participate in cheerleading as maintaining physical health by staying in shape. Grant also appears to recognize this through playing multiple sports of interest. Tamera and Grant indicated an acceptance and enjoyment derived from testing their physical limits through sports play, as well as an understanding of skill expansion that occurs from participating in sport, such as increases in strength and endurance (Brown et al., 2017).

Participants also acknowledged how obtaining sport-specific skills can not only increase enjoyment, but can also improve performance and provide a sense of belonging:

“I know an aggressive sport, like when you’re playing football you can feel it when you’re dominating everybody else, like when you like score a touchdown, get a pick, get a pick-six...” (Roger, PI8)

“One of my memories as an athlete...was getting my back handspring and not feeling behind...cause most of my friends would’ve already had better tumbling skills than me... when I got it I was like ‘oh I’m actually with them now’”

(Rebecca, PI1)

Roger emphasizes how playing your best versus playing at other times is evident by dominating an opponent and accomplishing sport-related goals such as scoring or getting

a turnover. Rebecca extends this line of thinking by explaining her favorite memory as successfully completing a back handspring and feeling like she fits in with her peers. Both Roger and Rebecca's descriptions of the physical benefits of sport lend themselves to the social contexts of sport for adolescent athletes, whether in competitive or practice settings, and how feelings of accomplishment in these settings provides feedback about the quality of one's performance and contribute to a sense of belonging (Allen, 2003; Bean et al., 2019).

### ***Sub-theme 1.2: Social benefits***

While the physical benefits of playing sports are important for these participants, they also spoke at length about the social benefits they receive from playing. One of the first such benefits was that sport affords you the opportunity to make friends:

“I was like trying to make friends because I thought that that would be better than just going out there.” (Kendall, PI4)

Participants described additional social benefits to playing sports as getting to work with other people including, learning to work as a team, interacting with coaches and building your social skills in general.

“I choose to continue playing softball because I love working with my coaches and the older girls that help me... and I want to help other people (PAUSE) that are younger.” (Anna, PI1)

Anna's altruistic spirit is inspired by the help received from coaches and older teammates. Other participants also detailed building their social skills in sport environments. Landon and Roger described what stands out the most about their sport and what it means to play at your best:

“Like in games and just at practices is where you build... cooperation and you know... just stuff like that.” (Landon, PI6)

“Uh... (PAUSE) what stands out to me the most is probably just the teamwork, just because I like making new friendships and all that... so, it’s just... very like fun.” (Roger, PI8)

Being able to cooperate with others and working as a team appears to be a main pillar to having fun and being successful (Merkel, 2013), not only in sports, but perhaps in other areas of life. This is echoed by Jax when saying:

“sports just brings a WHOOLEE ‘nother level of fun and like it works on like your social skills too cause you have - you need to be able to be like... compatible and have good teamwork with like anyone.” (PI2)

Jax’s description of gaining social skills through sports extends to non-sport-related contexts, supporting past research regarding the capability of sport environments to evoke prosocial behaviors for youth participants (Bruner et al., 2017; Fraser-Thomas et al., 2005).

### ***Sub-theme 1.3: Mental and Emotional health***

Participants discussed topics related to their mental and emotional health, such as having fun, building confidence, persevering through tough times, building confidence, and maintaining wellbeing. Participant responses followed being asked questions related to their sport adherence, what it feels like to play their best, and recalling their best memories:

Brooks: “Like, uh... like whenever you’re playing at your best you like... feel amazing.”

Landon: Mmhmm

Brooks: “And like, you feel like you’re popping off and like hitting bombs you know what I’m saying.”

(PI6)

“Um, playing at my very best is just... like you’re, it’s awesome it feels so amazing... just hitting them balls, hitting the baseballs everywhere, just out of the park and your coach is just giving you “Oh yeah, atta boy Grant. Good job” he’s giving you all those compliments.” (Grant, PI10)

Playing at your best feels “amazing” for Brooks, Landon and Grant when they can witness the results of their efforts. Making contact with the ball and receiving compliments from coaches appears to boost confidence, which tends to have a positive effect on performance; thus, creating a feedback loop (Dorsch et al., 2020). Engaging in such experiences can make one feel as if they know what is going to happen next:

“when I’m playing at my best it just makes me feel good... it-it like (PAUSE) I want the ball more and I KNOW I’m gonna do good (PAUSE) and so it just it makes me feel good inside and it makes everybody else feel good because they know that WE’RE doing good because of me.” (Willy, PI3)

Based on the above descriptions of playing at your best, adolescent athletes can continue to build confidence when they receive balanced feedback from the self, their current task, and the sport environment. Given the dynamic development of adolescents, however, variations in performance as well as sport settings are inevitable (Brown et al., 2017; Teare & Taks, 2021).

“right before halftime is uh... it was a good feeling cause everybody got excited and then... we end - an everyone - even though we didn't win it was just fun to play.” (Jax, PI2)

“Going 110% and never giving up on myself even when I don't make the best play or have the best at bat.” (Anna, PI1)

Jax's description of being able to enjoy sport experiences by having fun even when the team doesn't win and Anna's explanation of never giving up despite a poor performance suggest sport settings can promote positive perspectives in the face of undesirable outcomes (Fraser-Thomas et al., 2005). Persevering when faced with challenges in the realm of sport is also echoed by Daniel's description of the change in mentality from first playing sports to now:

“Then I thought it wasn't gonna be a good sport for me because I was just really bad (\*clears throat\*), but I didn't realize that... all sports take a bunch of practice and hard work sooo you need to keep doing it and you'll get better.” (PI10)

Daniel's recollection of overcoming his initial limitations and recognizing the importance of hard work and perseverance appears to be connected to sport adherence.

For Evan, the memories and connections made while involved in sports can have far reaching impacts for mental health beyond the realm of sport:

“playing sports is... awesome, like you... you get so many experiences like even if you quit like after or whatever, you have so many memories and friends that will last your whole life... and your- the friends that you get... can help you with like other things, like you- if you have a group they can help support you... and



make sure you kinda don't fall behind or get lonely, depressed, I think they make sure you're okay" (Evan, PI7)

Evan's details about why sports are so "awesome", specifically not being lonely because of a sport-built support system, are extremely relevant given the current COVID-19 context and the impact of loneliness on adolescents (Loades et al., 2020). It appears sport environments can mediate feelings of loneliness and isolation, which have been exacerbated due to COVID-19 restriction (Lippke et al., 2021).

***Energy and stress relief: overlap.*** The sub-themes of *Physical demands and benefits* and *Mental and Emotional health* appeared to overlap for participants related to releasing energy and reducing stress:

"I continue playing sports cause I feel like I need to be doing something a lot... like I feel like I have too much energy and I don't know what to do with it" (Marcus, PI2)

"I love the sports that I play and it's one thing after school that you not only can look forward to, but it helps to get that, get your brain flowing, so after soccer practice if you know have any homework or something I can definitely um, do whatever I have to do better after soccer, because I released all the energy." (Chelsea, PI9)

For both Marcus and Chelsea, playing sports is an important area of their lives where they are able to release energy in a healthy way. For Chelsea specifically, playing sports allows one to concentrate on other areas of life, such as academic life, and complete other tasks more effectively (Merkel, 2013).

Sports for others, however, are viewed as an outlet from external stresses:

“I continue playing sports cause it’s kinda like a getaway from like all the stress like school” (Maddie, PI4)

Maddie’s main reason for sport adherence involves escaping from the stresses of life (Fraser-Thomas et al., 2005), specifically academic pressures. Participants’ reasons for playing sports, and importantly sport adherence, appear to overlap across physical and mental benefits, as well as across social and emotional benefits.

***Support system: overlap.*** The *Mental and Emotional health* sub-theme and the *Social benefits* sub-theme overlapped when participants spoke about the support systems created in their sport environments:

“It’s different from playing at different times because you know when you struggle but it’s like I said earlier you build family when you are playing those sports and you have those teammates to pick you up so even when you know you’re not playing the best you always have those people there to help you” (Edward, PI3)

Edward’s description of the difference between playing your best and playing at other times rests on having a support system to uplift him when struggling and help him get you back on track.

Support systems can also act as motivators:

“What motivates you the most?... Mine’s probably just like everybody’s support, like teammates’ support like everybody’s parents’ support... like just getting out there every day and like knowing that like somebody’s going to be cheering for you” (Kendall, PI4)

Kendall recognizes a main motivator behind one's sport adherence is the support one receives from influential figures like teammates and even their parents. Knowing that someone will be cheering for you daily appears to be monumental in the persistence and continuance of sport for youth (Weiss, 2000).

## **Theme 2: What keeps me going**

The second theme, *What keeps me going*, highlights the powerful influence that participants believe other individuals have on their sport entrance as well as adherence.

### ***Sub-theme 2.1: "Being with my friends" (Anna, P11)***

Participants spoke at length about the influence of other individuals when asked questions related to what stands out the most about their sports, why they chose to get started with sports and why they continue to participate.

"I think about being with my friends and playing my best all the time" (Anna, P11)

"Uhh I like playing with my friends... and just being able to uh... grow with them when we're playing." (Marcus, P12)

Anna and Marcus spoke similarly when beginning their peer interviews about what stands out the most for them when thinking about their sports. Being with friends, growing together and playing at one's very best appears to be at the forefront of their minds, conditions that research on sport environments has demonstrated. Sport participation promotes and enhances friendships and social identity (Dorsch et al., 2020).

It also appears that friends have a strong influence over the decision to get involved in sports and which sport and individual chooses to play:

“I chose my sport, the sport I play uh right now, lacrosse, I chose it about... 2 years ago, cause at the time I was playing soccer, but... my friend (PAUSE) a couple friends that I had were playing lacrosse and it was just like a one season rec thing, and they wanted me to try it out so I did so I did it for one season... and... I loved it so... now I keep playing it.” (Evan, PI7)

Evan mentions the impact friends have on convincing one to transition from a sport, as well as motivating one to try something new, which reinforces the deepening influence by peers during adolescence (Ryan et al., 2017). In thinking about what is most fun about sports, being with friends before, during and after competitions emerged:

“Definitely the competitions, like especially like the competition mornings. Getting ready with your friends and then getting to compete with them and then like awards and all that kind of stuff, I think that’s the most fun part” (Tamera, PI5)

For Tamera, the entire competition day spent with friends is what makes cheerleading so enjoyable, starting with getting ready in the morning, competing with those close to you and experiencing rewards together.

### ***Sub-theme 2.2: Family connection to sport***

Whether a parent, sibling or family lineage, many participants discussed a familial connection to sport that has led to sport entry or continued participation:

“I really like baseball... and it basically runs in my family so I just have to... go with that sport all the way.” (Brooks, PI6)

“Um I chose it because a lot of my family played baseball and softball and my dad coached it, so I wanted to play because of him.” (Anna, PI1)

For Brooks and Anna, their choice of sport stems from the connection their respective family has to specific sports. Brooks believes going with baseball “all the way” is warranted because of general family ties, while Anna specifically mentions how paternal experiences with coaching was a main source of motivation for playing softball. Kendall and Maddie’s conversation about why they chose their sports also echoes the previous sentiments and extends reasons for participation to siblings:

Kendall: “Why did you choose soccer?” (PAUSE)

Maddie: “Ummm I guess because all my sisters played it and I thought that’d be fun like to learn how to play it” (PAUSE)

Kendall: “Same for me. My mom played it so... I just wanted to follow in her footsteps”

(PI4)

Immediate family members appear to have a tremendous amount of influence over these participants’ decisions of which sports to select for themselves, suggesting Bronfenbrenner and Morris’ (2006) interpretation of the multidirectional system of influence between the individual and the microsystem is an accurate representation of the dynamic experiences of adolescent athletes.

### ***Sub-theme 2.3: Making my own family***

Deeper than just being with friends, participants discussed what it’s like to build a family-like bond on a team, the importance of those bonds, how they can improve performance and how they transcend beyond the traditional realm of sports:

“going to practice every day and seeing my teammates, that bond we have with each other is just... something you can’t break” (Landon, PI6)

“Uh, it’s like a brotherhood. I know at least for football... (PAUSE) like you can rely on each other, and they’ve got your backs and it becomes like a family.” (Jax, G2)

“it’s like I said earlier you build family when you are playing those sports and you have those teammates to pick you up so even when you know you’re not playing the best you always have those people there to help you” (Edward, PI3)

Landon, Jax and Edward all suggest that the bonds built within sports are unbreakable and can be useful during tough times. Choosing ones family for oneself motivates sports adherence (Allen, 2003) and acts as a buffer for undesirable experiences. Interestingly, participants also detailed how being part of a bonded team creates an environment of accountability and constructive criticism, where one feels comfortable to push oneself and others to be the best:

“I feel like if you like... if two teammates have a good bond together... they are kind of setting each other up for success cause you know... like... what you can do best and what you can’t do best and so... you make each other look better” (Willy, G1)

“I just think its like, good, because you know each other really well and you know, like, what they can do to improve to do like something better.” (Brooks, G2)

Willy and Brooks detail how being part of a bonded team where accountability and constructive criticism are welcomed can create environments of trust that lead to improved performance all around.

Allison and Clarissa also described team bonding experiences outside of the traditional sport contexts, and how getting to spend time away from sports with their teammates strengthens the bonds they have:

“I like the team bonding, like trips we take as a team. It really like, brings our team together.” (Allison, P15)

“One of my best memories is probably, um... this is kind of different, but the bus rides home from matches because not only do you get to, um... interact and have a relationship with your teammates on the court, but you also get to spend that time with them kind of away from, um... directly at the sport” (Clarissa, P19)

Allison and Clarissa’s descriptions of why they love their sports and their best sport memories reflects in research about the importance of connections with peers for adolescent athletes, associations among in-group ties (e.g., bonding) and positive youth development outcomes, such as personal and social skills, and initiative (Bruner et al., 2017).

### **Theme 3: What could push me out**

The third theme, *What could push me out*, includes reasons why participants either left or considered leaving sports. Nearly every participant suggested injuries as the main reason they would stop, or at least consider stopping, playing sports. Other, more socially-charged reasons participants would stop playing sports were poor coaching experiences or having friends also leave the sport:

“The only reason I would stop doing cheer is because I would get injured and physically (PAUSE) could not cheer again.” (Rebecca, P11)

Wyatt: “And... what are some reasons why you might stop playing?”

Roger: “Maybe the injuries, like...some of them are like, gruesome and like... people can like tear stuff ... it’s just very, very like scary. What are some reasons you might stop playing?”

Wyatt: “Injuries and... coaches that don’t teach you like really how to do stuff, or like, coaches that are just, NOT good at coaching”

(PI8)

Rebecca, Roger and Wyatt shared how getting injured and not being able to physically participate in sports, something that may be out of their control, would be the main reason for stopping sports play. Wyatt’s reasons for stopping also involve a topic that is within one’s control: avoiding incompetent coaches (Fraser-Thomas et al., 2008; Weiss & Williams, 2004). Evan appears to agree with Wyatt, and provides additional reasons for why one might leave sports:

“some reason why I might stop playing... I’m not going to stop playing but ... if you move... and you don’t know anyone on your team or whatever you might quit, switch to a different sport... or like coach changes or a bunch of your friends quit or move to different sports you kinda follow them or you don’t like your coach you can... choose a different sport with a coach you do like.” (Evan, PI7)

Evan mentioned a mismatch with coaches, but also emphasized how important team friendships are. He might stop playing if his friends stopped or if he moved, which would demand creating all new friendships on a team. Participants further expressed potentially leaving sports to protect their mental and emotional health, by spending time elsewhere because sports can be overly time consuming:

Tamera: “K... um, what are some reasons why you might stop playing? Oh.”



Allison: “Ooh... uh, time consuming.”

Tamera: “Time”

Allison: “Cheer is very time consuming, it’s like every single day after practice.

Um, yeah. It’s every single day after practice until... you get done.”

(PI5)

“if I got to choose my stop maybe because like more family time and like we’re traveling a looot and like we don’t have tiime to like do like the stuff I need to do.” (Maddie, PI4)

Tamera, Allison and Maddie all agree about how the amount of time spent on a sport could contribute to deciding to quit, especially if sports participation limits one’s ability to complete other important tasks.

Other participants continued discussion about stopping sport participation and protecting their mental, emotional and physical health by avoiding unwanted stress and circumventing feelings of burnout:

“The more and more training I had the less and less I like had love for the sport, cause it just like...it didn’t seem fun anymore, it felt like a job and I just I thou- (\*cuts himself off\*) I needed to get out” (Jax, PI2)

“I guess if I didn’t have a choice if I got like injured or something.... but if I had a choice (PAUSE) it may be because like the stress level like it does help me get away from other things like school and stuff but at this age, especially this year, it’s become a lot different ... it’s just definitely a lot more stressful” (Kendall, PI4)

Descriptions by Jax and Kendall of added stress as a contributor to sport discontinuation aligns with past research on adolescent athlete exposure to increased training demands and pressures to perform, which takes a considerable toll on these individuals (Jowett et al., 2016; Scotto di Luzio et al., 2019), leaving them exposed to burnout. Evan and Miller discuss specifically and how symptoms of burnout could lead them to decide to discontinue sport participation:

Evan: “Uh what are some thing-reasons why you might stop playing?”

Miller: “Umm I mean maybe if I get hurt or I just lose interest in it... or if I just can’t do it anymore cause you know I’m just exhausted from it”

Evan: “Yeah so, some reason why I might stop playing, I’m not going to stop playing but...sometimes if you practice too much and you play like all the time you can get burnt out and then it becomes boring”

(PI7)

The discussion between Evan and Miller summarizes how intense, time consuming sports might leave one exhausted and with a devalued sense of sport, both being consistent with symptoms of burnout (Raedeke & Smith, 2001).

#### **Theme 4: Reap the rewards**

The fourth and final theme, *Reap the rewards* reflects the meanings made by participants related to having success in the context of sport and what it feels like to be in those special moments.

***Sub-theme 4.1: “Earn the trophy” (Rebecca, PI1)***

Participants described having success in sports by being a competitor and winning, improving performance, as well as helping the team succeed: all of which represent what it takes to earn a trophy:

“To play at my best it means to me that I earn the trophy at practice and go to competitions to pick the trophy up.” (Rebecca, PI1)

Rebecca recognizes that hard work and determination during practice translates over to winning in competition. Miller and Evan also discussed working hard and having it pay off:

Evan: “And what’s the most fun?”

Miller: “Umm... probably whenever we race against people because we get to like... you know all our work pays off and then (PAUSE) it’s always fun to win” (PI7)

For Miller, it’s fun to win and success includes winning. However, while winning and working hard is important for athletic improvement, it also appears participants understand natural development over time contributes to improvements in performance (Brown et al., 2017). For Brooks and Chelsea, getting better over time was part of how they both experience success. Brooks shared, “I had to progress to get better... even though, I was terrible when I was younger” (PI6). Chelsea also recognized a change in performance over time: “what you feel physically is definitely different because when I was little I know I wasn’t able to put as much effort as I am now being 13” (PI9).

Descriptions by Brooks and Chelsea about improvement in their abilities included markers of a natural progression of development for adolescent athletes, specifically

being able to use more physical force and effort as adolescents as opposed to earlier in life (Brown et al., 2017; Ryan et al., 2017).

For Landon and Anna, success was intertwined with their feelings of connection to their teams. Success does not just involve winning, but winning as a team

“I mean it’s just like a great feeling to know that like you’re doing good and you’re helping out your team... it’s just like stuff like that.” (Landon, PI6)

“we were in the championship and it was our last tournament with my best friends because they were going to different teams and we won and we were all just really excited” (Anna, PI1)

For these adolescent athletes, having success as a team leaves one with lasting memories and creates positive feelings about engagement in sports (Jowett et al., 2016).

#### ***Sub-theme 4.2: Good vibes***

Among the rewards that come with playing sports, participants discussed good vibes they have experienced as athletes, such as celebrating with their teams, receiving praise while making others proud, and surprising themselves along the way:

“I hit a game-winning homerun, a walk-off homerun. I just hit it straight ... it went that way, it was just really crazy cause like everyone was freaking out and we were just all freaking out. It was crazy.” (Grant, PI10)

“usually after winning you’ll... you know... high five your teammates or whatever and you just kinda smile or whatever and have a good time... and it’s- it’s just awesome” (Evan, PI7)

Team celebrations as described by Grant and Evan, such as high-fiving teammates and everyone freaking out after an outstanding performance feels amazing and supports

research on adolescent athlete's increased self-concept (Martin et al., 2010) and sense of belonging (Bean et al., 2019), which have both been associated with physical activity motivation.

Receiving praise from influential social contacts, such as teammates, coaches, and parents was also rewarding for participants:

“I love when I do something really good and my team is cheering for me ...

I think about how happy my parents and coaches would be because they taught me how to play.” (Anna, PI1)

For Anna, receiving praise from teammates and making coaches and parents proud because of a positive performance creates good vibes and is important for feeling successful.

Chelsea also admits to feeling successful during best play and being able to surprise oneself:

“when you KNOW you're playing at your best, you're doing new things that you didn't know you can do. You just start pulling things out of your hat, like (\*shaking head and smiling\*) nobody knew you could do.” (Chelsea, PI9)

Not only does playing at one's best open the door for surprising oneself, but according to Chelsea, best play includes surprising others by engaging in skills that no one thought were possible. Chelsea's description of this experience also highlights a context of novelty, which can be understood as the foundation for flow states (Swann et al., 2021).

#### ***Sub-theme 4.3: Be in the moment***

Participants were able to articulate what it means to play at their very best, and some of the physical and mental abilities, as well as consequences, that come with

optimal performance in sport. Giving 110% of your energy, making smart decisions, and staying in the zone are just a few ways participants expressed being able to stay fully present and achieve success:

“whenever you’re swimming as fast as you can you’re using all your oxygen and all your strength and so like whenever you get out of the pool you... if you don’t feel like you can’t walk then you didn’t do it right, so that’s basically using your all” (Miller, PI7)

For Miller, playing to the best of one’s ability means giving everything one has to the point of exhaustion. Performing correctly, or giving it all, means there should be physical signs after performance, such as not being able to walk. Other participants spoke about feeling motivated to keep going after giving maximum effort:

“Ummm what does it mean to play at your best? ... Going 110% and never giving up on myself even when I don’t make the best play or have the best at bat.”  
(Anna, PI1)

“When playing at my best ... it’s more of an excitement and that feeling you get is kinda like an adrenaline rush and it just pushes you more forward” (Edward, PI3)

“Uh... it’s really fun. It’s like you’re in a groove and you just keep it going.”  
(Daniel, PI10)

Anna, Edward and Daniel describe that playing at one’s best means giving maximum effort by performing to the limit and feeling as though you can keep going, regardless of outcome. Their expressions of giving maximum effort, feeling accomplished regardless of outcome, and being able to keep going, are reinforced by research involving intrinsic

motivation and autotelic experiences, where an activity is rewarding in and of itself (Csikszentmihalyi, 1990; Ryan & Deci, 2000). Autotelic experiences have been recognized as one of the six characteristics of a flow state (Swann et al., 2012), and intrinsic rewards represent a shared outcome between flow and clutch states (Swann et al., 2021). Participants appeared to extend this line of thinking:

“I just like feel more like... I’m working hard and it definitely feels more like carefree like I can just like... I’m trying but it’s a lot funner and I can just like... calm down more when I’m doing it.” (Kendall, PI4)

“Like you said, playing your best you get that certain feeling and you just feel happy, and... your mind’s clear so it’s... it’s easier for you to focus and it’s just fluent almost” (Willy, PI3)

Daniel, Kendall and Willy express being “in a groove,” feeling “calm” and “carefree”, where things are “fluent” and happen more easily during their best play. Descriptions such as these seem to mirror elite, adult athlete descriptions of flow experiences (Swann et al., 2015), where individuals become fully immersed in an activity to experience optimal performance, which promotes some of the most rewarding, memorable times and supports wellbeing (Jackman et al., 2020).

### **Salient points**

Salient points reflect data that was coded and categorized but was not developed into a theme. Themes were created from data that was saturated, however, the salient points below remain significant because they aid in explaining the dynamic nature of the sport-related lived experiences of participants.

***Salient point 1: From athletes to others: Just “try it”***

This first salient point includes participants’ passion about sports and suggestion to others to just give it a try, because you never know the benefits you might receive. Not only were participants articulate about their experiences during this interview process, but some appeared to be extremely passionate about simply trying sports. They believe that if you just give something a try, whether hesitant or not, you might really enjoy it and find additional benefits along the way:

“I thought ‘hey why not try football never played it yet’ (\*shoulder shrugs\*) and so I decided to try it and it was very fun so I kept on playing it.” (Willy, PI3)

Willy describes how trying a new sport can be beneficial and create opportunities for one to have fun. Jax and Miller echoed and expanded Willy’s views by suggesting how important sports can be in the lives of their peers:

“I feel like sports is a big step in... in every kid’s life that at least people should try it to know if they like it or not” (Jax, PI2)

“playing sports is really important cause you meet a lot of people and there’s a bunch of great experiences, and I mean you have the uh feeling when you win and it’s a good feeling so... I feel like everyone should experience that” (Miller, PI7)

The passion Jax and Miller have for sports translates into values involving the importance of sport participation. Both agree that playing sports offers numerous benefits, all it takes to harness those benefits is giving sports a try.

***Salient point 2: Incompetent to Confident***

This second salient point involves participants’ journey from starting sports to playing currently, where they may feel accomplished now but started as nervous, novices.



When entering sports, some participants expressed feeling nervous, scared and incompetent:

“I guess when I first started I was feeling like nervous - like I didn’t think I was gonna be like good.” (Maddie, PI4)

“That’s like, it’s just... very scary when you start playing football for your first time.” (Roger, PI8)

“Then I thought it wasn’t gonna be a good sport for me because I was just really bad” (Daniel, PI10)

Maddie, Roger and Daniel expressed feelings of nervousness, intimidation and even being unsure if the sport they selected would be good for them because of initial incompetencies. Other participants described feeling similar emotions when getting started, but compared themselves to more experienced players like teammates and family members and as a way of gauging their abilities:

“I was more like nervous that like everybody was going to be better than me...”  
(Kendall, PI4)

“When I first started softball I was very scared because I had had older cousins that were really good but I wasn’t ... I was scared I wouldn't be as good.” (Anna, PI1)

“Uh when I first started (PAUSE) it was really hard cause a lot of people I was with...or most of th- or all of them were older than me... and they’d all been playing before, so I was very bad” (Evan, PI7)

Comparing oneself to others in the realm of sport in the way Kendall, Anna and Evan have above is supported by research involving ego-goal orientations, or focusing on

competing and comparing performance to others, which appears to be less beneficial for adolescent athletes than a task-goal orientation, where one values skill growth and learning (Lee et al., 2020). However, other participants detailed their journey from incompetence to confidence by taking a more competitive approach, continuing to work hard, and developing mental skills to make their sport experiences enjoyable:

“compared to when I first started it was just really working on fundamentals but now it’s working at a competitive level and it’s a little bit more pressure.”

(Clarissa, PI9)

Clarissa recognizes a shift in focus from when first starting tennis to now experiencing more pressure at a competitive level.

Grant and Evan also mentioned what it was like to start playing their respective sports, but understanding it takes practice and dedication to improve past the stage of basic fundamentals:

“I thought I wouldn’t be good for the sport but it just takes a lot of practice.”

(Grant, PI10)

“I had to practice... all the time... to start to catch up because I was behind and it was really hard... but I kept doing it and I got better.” (Evan, PI7)

The amount of time spent practicing is important in order to improve performance, as well as staying the course and being motivated to keep going. Evan described how feeling behind and persevering through difficult periods ultimately provides a rewarding outcome.

Miller and Tamera both discuss how the adoption of mental skills such as attentional control and goal setting can benefit performance:

“I started just like... like playing songs in my head to like... make it like... time pass and then whenever I’m out I feel like... great so.” (Miller, PI7)

Allison: “What does it mean to play at your best?”

Tamera: “To put 100% effort in ... Give yourself a goal and then you just gotta go for it I guess.”

(PI5)

Miller expressed utilizing mental skills during sport performances to feel successful afterwards, and Tamera detailed setting goals as crucial to playing one’s best. Past research suggests mental skill adoption, specifically goal setting, helps athletes better channel their energy for self-regulatory and performance purposes (Kee & Wang, 2008).

### ***Salient point 3: Criticism as motivation***

The third salient point includes participant descriptions of avoidance behavior and being motivated by not wanting to be yelled at by coaches and parents, but also understanding how constructive criticism from peers helps to improve individual and team performance. Participants acknowledged the criticism they received from others (e.g. peers, parents, coaches) when playing sports, and admitted how their desire to avoid some criticisms acts as a motivator to perform at their best:

“what I thought about then was just try not to get the coach mad at me and just try to do ANYTHING to look good... (Willy, PI3)

“Some things I think about are...how good my dad will not yell at me in the car”

(Grant, PI10)

Willy and Grant both describe a desire to avoid disappointing coaches and parents during sport performance. Altogether, some participants appear to have their own ways of

thinking about criticism, while at the same time acknowledging that the criticism itself acts as an externally regulated motivation towards their performances (Podlog et al., 2015).

#### ***Salient point 4: Cycle of mistakes***

The fourth salient point reflects participant descriptions of how making mistakes can spiral, increasing stress, making you angry and creating a domino effect where mistakes keep happening. When discussing the difference between playing their best versus not playing their best, participants believe the difference lies in being present. While playing at your best involves hyper-focus and total energy exertion, not playing at your best means not being mentally present, which relates to increased mistakes, increased stress, and decreased enjoyment:

“And doing my best... is different when I’m tired and not g...giving 110 percent and just to just wanting to leave practice.” (Rebecca, PI1)

“When I’m like not playing my best it’s definitely more challenging. I have to like... think HARDER about everything and it’s just more stressful” (Kendall, PI4)

Rebecca and Kendall describe how when they aren’t playing their best things seem more difficult and they desire to get out of the current situation.

Other participants also felt tired, distracted, “down” on themselves, angry, and as if they’re letting others down when they aren’t playing their best:

“When I think that I’m not playing my best it’s when I’m like tired or I didn’t eat enough then I’ll be like sluggish and I won’t be like trying my best...” (Marcus, PI2)

“you feel like everything like every mistake you make is like a huge deal... and you get really mad at yourself” (Evan, PI7)

“when you’re not playing at your best you’re kind of like down on yourself, you carry it to the other... position.” (Brooks, PI6)

“Yeahh like when I’m playing my best I feel like... I’m doing like better... like but like playing at other time I feel like I’m like letting my team down.” (Maddie, PI4)

Ultimately, participants described the process of making mistakes cyclical, where once one mistake occurs they “just keep happening”:

“And when you’re not playing... as good as you can, then you can make errors and get mad and it just keeps happening” (Daniel, PI10)

“So like when I make a mistake, I then make more mistakes... cause I just get in my head and ...it takes me a minute to get out of it, but eventually I do.” (Anna, G1)

Other participants described ways to get out of this cycle of mistakes by relying on your support system within sport, or avoiding the cycle by reaching your optimal performance:

“I think those two might be interchangeable, like, I feel like I haven’t done the best but my teammates whether they’re just trying to lift me up or not, they’re telling me how good I’m doing.” (Clarissa, G3)

For Clarissa, the feedback received from teammates is uplifting whether accurate about performance or not. Having teammates in ones corner to boost the senses during

performance can be beneficial. Evan, on the other hand, describes avoiding the cycle of mistakes altogether by playing ones best:

“Um to-to play at my best...it’s-it’s like you feel relaxed, like you’re not too stressed out... like if you make a mistake kinda like just blow it off like who cares” (Evan, PI7)

For Evan, once optimal performance is reached mistakes are irrelevant because one has the ability to block out or “blow off” mistakes in order to maintain a relaxed, peaceful performance. It appears being fully immersed and totally absorbed in an activity acts as a buffer to making mistakes, such that nothing else really matters except giving maximum effort (Csikszentmihalyi, 1990, Tamminen & Holt, 2012).

#### ***Salient point 5: Athletic Identity***

The fifth and final salient point reflects sports being written into the DNA of some participants, whether discussing the time spent playing sports, or the motivators behind decisions to play; sports are a large part of who these individuals are and who they see themselves becoming. Participants appear to have a comprehensive understanding of their affinities for sport, as well as the role sports play in their lives. Whether discussing the time spent playing sports, or the motivators behind their decisions to play, sports are a large part of who these individuals are and who they want to become:

“I just love playing it- it’s just like something that I’m used to, I do everyday, it’s just part of my daily life so” (Kendall, PI4)

“Sports have just been intertwined into my daily life, so it’s just- so I’m used to it at this point and... it just seems different without them... and (PAUSE) it would just throw off everything.” (Willy, G1)

Kendall and Willy agree that sports are part of their daily lives and find it difficult to think about what life would be like without sports. Marcus continues this line of thought when saying, “without sports I don’t know what I would be doing I’d probably be playing Xbox all day or something” (PI2). For Marcus, life without sports appears to revolve around playing video games to pass the time. However, some participants described future sport-related goals, such as continuing in a professional capacity:

“I just don’t wanna... like, stay like, in one sp, specific place and just do one thing ... I wanna travel off and just play football for the rest of my life.” (Roger, PI8)

“what motivates me the most is... just like, all the people in the NFL and like... I wanna be there one day in their shoes playing, in the NFL where they’re at now” (Wyatt, PI8)

Both Roger and Wyatt describe long-term goals of playing professional football one day, where they dream of traveling and playing the sport they love and using current professional athletes as motivators to reach their goals. Similarly, Rebecca considers what the future might look like based on the talents she has and will attain from cheerleading:

“Doing my best in cheerleading makes me think about what I could do in my future with the talent I have and the talent I will have.” (Rebecca, PI1)

Rebecca appears to be motivated to continue cheering by thinking abstractly about acquired talent in the future. Descriptions such as these above appear to support research regarding adolescent development and suggest Rebecca, as well as Wyatt and Roger have achieved a cognitive milestone by being able to think abstractly and having a

strong working memory (Ryan et al., 2017). While some participants expressed understanding that they may one day reach a ceiling in their sport:

“Uh... well in baseball it’s like super hard to like, go pro or... to play at like a high level...” (Landon, PI6)

“I might stop playing because uh, if I get told to stop, or like injuries ... Like if I don’t make it as far and they just tell me to stop.” (Brooks, PI6)

Others went so far as explaining they can’t imagine quitting sports because of their love for them, and if they were forced to make a change, they would find new avenues for future play:

“Uhhh... I would never stop playing sports so yeah. I - yeah that’s all I have to say, I would never stop playing sports” (\*shakes head no\*) (\*giggles\*) (Marcus, PI2)

Grant: “What are some reasons why you might stop playing?

Daniel: “Huh... there’s no, none... I mean... yeah, there’s none” (\*Giggles\*) (PI10)

Marcus and Daniel confidently assert that they would never stop playing sports. Chelsea echoes their assertions by saying, “and mainly what motivates me is... the love for the sport, I mean I wouldn’t do it if I didn’t love both of the sports that I play, but I do” (PI9). Having a seemingly romantic connection with sports appears to be the lead motivator for Chelsea’s continued participation. Jax is also motivated to continue playing sports, even when reaching a ceiling:



“I don’t really think that... even if we like... we don’t make it pro or like.... have to go to like a D3 or something college to go play sports, I feel like I would never stop even when I’m older I’d probably go to like a summer league” (Jax, PI2)

The willingness to continue to seek out opportunities to play sports in any capacity as described by Jax above suggests sports are written into the DNA of participants and have a significant influence over who one believes they are and who they will become.

### **Discussion**

This study explored the sport-related lived experiences of adolescent athletes through a unique, peer-led, virtual interview process in the age of COVID-19. Four major themes were developed from the data. The first theme, *Sports “keep you healthy altogether”* involves the benefits of sport participant as recognized by participants including physical social, mental, and emotional benefits. The second theme, *What keeps me going*, includes participants reasons for sport entrance and adherence and the strong influence others have on their decisions. The third theme, *What could push me out*, includes participant descriptions for why they left or would consider leaving sports. The final theme, *Reap the rewards* includes participant descriptions of success in the context of sport and topics that matter most to them. Additionally, five salient points were identified in the data but did not reach saturation in order to become a theme.

Findings are aligned with an interpretivist, collaborative approach that highlights meanings made by participants through peer-led interviews and group discussions. Indeed, the lives of adolescent athletes remain dynamic as ever, even in the face of a global pandemic where adolescents are suffering physically, mentally and socially

(Loades et al., 2020). The in-depth responses and layered complexities of the data generated by participants further solidifies the position of Wilkinson and Wilkinson (2018), that youth have their own way of using language and their own way of knowing. For example, Grant mentions both friends and his coach when describing what it means to play at your best:

“What does it mean to play at your best? Well that just means giving all your effort, you know full out, just send it for the buds, that’s what it means, just full effort. Show your coach you want to be out there on the field.” (PI10)

In the above description, one’s optimal performance appears to be connected not only to the physical effort given, but to interactions with “buds” or buddies, and making coaches proud. Connection is crucial in the lives of human beings, but particularly for adolescents whose developmental period has been referred to as hypersensitive to social interactions (Orben et al., 2020; Scott et al., 2021). Creating opportunities for these individuals to connect and share their experiences with a peer, which simultaneously offers the chance to hear new perspectives, not only aids in adolescent cognitive development (Ryan et al., 2017), but offers a potential avenue to alleviate heightened feelings of social isolation and loneliness (Loades et al., 2020). During group discussions, participants were asked what they enjoyed most about their previous peer interview experiences and there was overwhelming participant agreement regarding what they enjoyed, particularly that it was cool getting to “compare likes and dislikes” (G1) and learn more about one another’s sports. Clarissa detailed what she liked most about the peer interview experience:

“I really liked about this peer interview that we were able to... get to know each other better and... figure out the struggles, what they enjoy, and just... more facts about our peers that we, otherwise probably wouldn’t have learned” (G3)

Creating virtual spaces where adolescents and their peers feel safe to interact during this unique time in history appears to have profound significance for them on multiple levels. By getting to better know their peers, examine similarities and differences, and learn new information, this study provided a much-needed channel for adolescents to flex their mental and social skills when these areas of life are being threatened by the COVID-19 pandemic (Scott et al., 2021). Yet, while this study’s interview process has been largely enjoyable for the adolescent participants, suggestions were made for how to improve the experience:

“I think there could be more like communication if we were like in person, but like I think it still works well for being virtual.” (Kendall, G2)

With regard to this study’s research question, adolescent athletes’ social spheres appear to permeate nearly every area of their lives within the context of sport. Adolescent athletes’ reasons for sport entry, continued sport participation and eventual discontinuation with sport are rife with the influence of other individuals. For example, family connections, such as parents and siblings, to a particular sport seem to influence adolescents to try that sport, whereas poor coaching experiences or friends leaving sports could convince an adolescent athlete to quit.

The complex, dynamic interactions among groups such as peers, parents and coaches, as described by participants, are supported by Bronfenbrenner and Morris’ (2006) Bioecological Model of Human Development, which provides a developmental

framework for examining multilayered interactions in the lives of adolescents. The “mesosystem”, where linkages are made between other close social systems, or within the “microsystem” (Figure 2.1), is of particular interest for this study. There appeared to be important links among influential social groups, for example, Evan described the influence of friends leaving a sport as well as disliking a coach as possible reasons for deciding to stop playing sports in the future. The interaction among peers and coaches is evident from the above description, where adolescents may take into account the influence of more than one social group at a time. Further complicating the above interactions, parents seem to have a significant influence on adolescents’ sport adherence. For example, Anna’s (PI1, G1) decision to play softball derived from a paternal connection to the sport, however Anna also recalls being nervous when getting started because of having more experienced cousins to compare abilities with. Ultimately, peers, parents, coaches, and other influential figures appear to leave lasting imprints on adolescents in the context of sport, which can enhance or diminish their experiences.

Practitioners and sport stakeholders are recommended to get to know their adolescent athletes and find creative ways to make sport experiences enjoyable by acquiring a positive, growth-mindset and offering these athletes supportive learning environments, autonomy, and praise for effort instead of outcomes (Tamminen & Holt, 2012; Weiss et al., 2021). Suggestions such as this for sport stakeholders are further supported by participant descriptions of their experiences, particularly related to having choices, not feeling forced to participate and working hard regardless of outcome. Participants understand that if sport-related outcomes (e.g. losses, poor performance) are not in their favor, giving 100% of their effort can be rewarding on its own:

“Score doesn’t matter. Nothing matters, it just matters that you showed everybody that you did your best, that you could, and you did do your best.” (Chelsea, P19).

“...when you give like 110% effort and you don’t do good, you’ll like at least know that you tried.” (Landon, G2).

Interestingly, knowing that you did your best regardless of the outcome naturally implies that failure is inherent in becoming “your best.” Participants have shown an ability to understand and even accept failure instead of adopting a fear of failure, which has typically been associated with increased worry, stress and overall wellbeing in sport (Sagar & Lavallee, 2010). Doing your best for these participants means building confidence in your abilities through maximum effort (“Giving 110%”), which acts as a coping mechanism when outcomes are undesirable and diverts feelings of failure (Tamminen & Holt, 2012).

Extending the previous line of thinking, having a mindset that revolves around working hard without necessarily receiving external rewards is highly intrinsic in nature and can be categorized as an autotelic experience: one that is rewarding in and of itself (Csikszentmihalyi, 1990; Jackson & Csikszentmihalyi, 1999). Generally discussed as the last of the nine flow dimensions (Swann et al., 2012), autotelic experiences can be thought of as wholly enjoyable experiences that are intrinsically rewarding on their own. Based on participant responses, it appears adolescent athletes are indeed capable of having these experiences. Expressing feelings of being “in the zone” and “in the groove” have often been associated with, and even used interchangeably in flow research (Swann et al., 2015).

Most recently, Swann and colleagues (2021) developed a model that highlights two psychological states underlying optimal performance: flow and clutch states. Clutch states, or enhanced performance under pressure situations (Schweickle et al., 2020; Swann et al., 2021), are the newest addition to the flow literature and has emerged largely on event-based interviewing with adult, elite athletes. While there are overlapping characteristics between flow and clutch states, such as absorption and automatic skill execution, Swann and others (2021) describe these states as distinct occurrences, one that starts as exploratory and has an energizing after-effect (flow), and the other that starts with pressure and leaves you feeling exhausted (clutch). Interestingly, participants in this study described contexts and characteristics of both states, ranging from effortless attention and abilities feeling easier, to effortful focus and exerting intense effort. Further, research expanding the unique descriptions of these adolescent athletes related to flow and clutch states is warranted.

Past research suggests reflexive, dyadic peer interviews are a valid means of increased participation and engagement in the research process for participants, as the interview becomes more conversational and less traditional (Ellis, 2004; Lile & Richards, 2018). This knowledge is particularly relevant when engaging adolescents in the research process, as participants in this age range benefit more from programs where they feel they have a voice (Serido et al., 2011). When asking for feedback during the member checking phase of data analysis, Anna, one of the peer-interview and group discussion participants, was quoted as stating: “These all make total sense”, “I agree with all she has here”, and “It is so cool how she figured all of this out by just talking to us.” Providing adolescent athletes “cool” opportunities to tell their own stories and flex their skills of

autonomy appears to have benefits of its own, perhaps due in part to the nature of these opportunities (virtually) during a time where connections with others have been limited (Scott et al., 2021).

### **Limitations and Future Directions**

A heterogeneous sample was used in this study to gain a better understanding of the developmental nature of flow experiences for adolescent athletes. Importantly, friendship appeared to be one of the most important aspects of the sport experiences for these individuals, therefore more homogenous samples are suggested for future research, perhaps even amongst teammates to strengthen rapport and build bonds. This might also allow for comparisons of interview data with other more objective outcomes, such as win/loss records and season-long performance.

Another limitation is the time it takes to gain access to the population of interest in the age of COVID-19. Parents, athletic directors and coaches are gatekeepers for adolescents and connecting with these individuals amongst an array of busy schedules during a global pandemic proved difficult. For example, one of the points of contact fell ill during the course of the study, therefore the participants contacted through this individual were no longer able to be contacted. Because proper ethical channels of communication involve contacting an adult for permission to gain access to adolescents, it would be wise in the future to consider the nature of the relationships between the gatekeepers and participants. Further, analyzing such relationships would be supported by the Bioecological Model of Human Development (Bronfenbrenner & Morris, 2006), particularly regarding the micro- and meso-systems, and the interconnectedness of an adolescent's world. This remained outside the scope of the present study and should be

examined in future research so we might better understand the role of these relationships, and their importance in the dynamic lives of adolescents. Future research should also consider the previously mentioned suggestion by participants to conduct peer interviews in person, as this may increase their comfortability as an interviewer/interviewee, however, the current COVID-19 climate made it nearly impossible to conduct research face-to-face.



## CHAPTER FOUR

### STUDY 2: EARLY-ADOLESCENT ATHLETES' DESCRIPTIONS OF FLOW AND CLUTCH EXPERIENCES

As physical activity levels and sport adherence declines over time for youth (Bell et al., 2019; Fraser-Thomas et al., 2008; Teare & Taks, 2021), researchers and practitioners are challenged to find ways to keep youth involved so they may receive the numerous benefits (e.g., physical, social, emotional) that come with participation (Eime et al., 2019; Eime et al., 2013; Jackman et al., 2020). Birthed from positive psychology, the concept of flow originally began with Csikszentmihalyi's (1975) desire to expand the understanding of the most optimal human experiences and roots of happiness. Flow, defined as a deeply rewarding experience characterized by intense focus and complete absorption in an activity (Csikszentmihalyi, 1990; Swann et al., 2012), has typically been characterized by nine dimensions in the literature; three representing conditions for flow to occur (i.e. challenge-skill balance, clear goals, and unambiguous feedback) and six that are characteristics of flow experiences. (i.e. action-awareness merging, concentration on the task at hand, sense of control, loss of self-consciousness, transformation of time, and autotelic experience) (Nakamura & Csikszentmihalyi, 2002; Swann et al., 2018). The flow construct has been of great interest in sport and exercise research because of associations with greater performance, improved self-concept, and increased wellbeing (Jackman et al., 2020; Jackson & Eklund, 2002; Martin et al., 2010). Further, the deeply

positive experience of being in a flow state is considered a highly intrinsic motivator where individuals tend to continuously seek out opportunities for more flow experiences (Seifert & Hedderson, 2010; Swann et al., 2018).

However, there have been recent critiques of the flow framework related to its conceptualization and measurement (Clementson, 2019; Swann et al., 2018). One such re-conceptualization of Csikszentmihalyi's optimal experience led to the emergence of clutch states: superior performance in pressure situations that result in feelings of physical exhaustion (Swann et al., 2017; Swann et al., 2019; Swann et al., 2021). While flow and clutch states appear to represent similar experiences, event-focused interviews conducted with professional golfers (Swann et al., 2015) revealed the two states to be distinct experiences, one where you "let it happen" and the other where you "make it happen", the latter being counterintuitive to original conceptualizations of optimal experience in the flow literature (Swann et al., 2017). Descriptions such as "making" something happen appears to match a clutch experience, where athletes report having a heightened awareness of their situations followed by increased effort and intensity (Swann et al., 2015; Swann et al., 2017; Swann et al., 2021). Subsequently, Swann and others (2015) suggested several refinements to Csikszentmihalyi's framework for clearer conceptualization of flow, such as separating the dimension of action-awareness merging into *absorption* and *automaticity*, and the addition of *altered cognitive and kinaesthetic perceptions*.

The most recent conceptualization of flow has been expanded by Swann and others (2021) with the development of the Integrated Model of Flow and Clutch States (Figure 4.1), which depicts the contexts, processes of occurrence, actual experiences, and

outcomes of both states, with certain conceptual overlaps (Swann et al., 2017; Swann et al., 2021). Flow experiences are believed to occur in novel, uncertain or exploratory contexts, whereas clutch experiences involve pressure situations where outcome achievement is most important (Swann et al., 2021). The distinct processes of occurrence for flow states involve feedback from a positive event which evokes confidence, followed by a challenge appraisal and setting open goals, while clutch states involve receiving situational feedback followed by a challenge appraisal, specific goal-setting, and a decision to maximize intensity and effort to accomplish the goal (Swann et al., 2021). Flow and clutch states share characteristics such as automatic skill execution, altered perceptions, absorption and confidence, while also having multiple distinct characteristics (flow - left circle; clutch - right circle) (Fig. 4.1). Finally, flow and clutch states share outcomes such as intrinsic motivation and perceived excellent performance and are differentiated by an energizing (flow) or exhausting (clutch) outcome (Swann et al., 2021).

This new model drove Swann and colleagues to develop the Flow-Clutch Scale (FCS: Swann et al., 2021), currently a four-factor, 22-item scale. The four factors include: characteristics of flow, characteristics of clutch, effortlessness of flow, and overlapping characteristics. Preliminary validation findings from a confirmatory factor analysis (CFA) of the four-factor model revealed a reasonable, yet imperfect model fit, leaving researchers to explore specific contingencies for model calibrations (Swann et al., 2021). While still in its infancy, much of the clutch research has been studied primarily through a qualitative lens with elite, adult athletes (Swann et al., 2015; Swann et al., 2019), warranting further examination of these states with other populations.

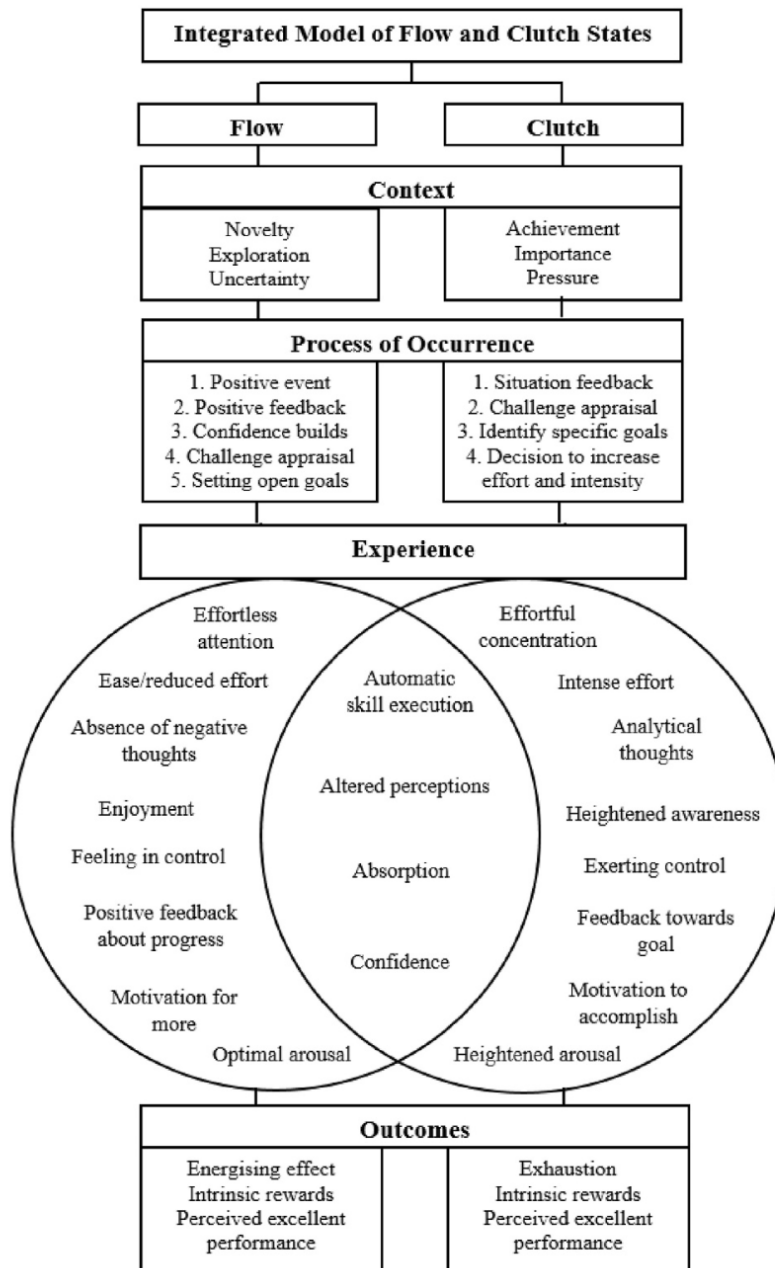


Figure 4.1 - Integrated Model of Flow and Clutch States

*Note: This is the most recently synthesized model (Swann et al., 2021)*

Interestingly, a recent recommendation was to examine the occurrence of flow and clutch states across a range of expertise levels and age groups, particularly with youth populations (Swann et al., 2021).

Early adolescence (11-14 years: Holt, 2007), or the middle school years, is considered a critical developmental period where sport development and a myriad of physical, cognitive and social changes occur simultaneously. A common framework for examining the dynamic lives of adolescents is the Bioecological Model of Human Development (Bronfenbrenner & Morris, 2006), which illustrates development through multilayered systems of interconnection among the individual, others and the environment (See Figure 2.1). For most adolescents this means they are influenced *by* and equally have an influence *on* layers outside of themselves while the body grows rapidly, emotions are heightened, cognitive capabilities expand (e.g. metacognition), and social circles become increasingly influential (Ryan et al., 2017). Adding to these complexities, adolescence is plagued by large quantities of sport dropout, with 70% of youth participants leaving sports by the age of 13 years (Bell et al., 2019). Thankfully, research indicates when adolescents experience positive affect and enjoyment in physical activity contexts, they're more likely to persist in physical activity (Jackman et al., 2020), warranting further exploration of the nature of their experiences.

As studies to date are limited to adult athletes and exercisers, the development of flow experiences, or perhaps when the experience is first noticed, remains a mystery. It remains to be seen if and how adolescent athletes who are still developing their sport-skills, as well as developing in other areas (e.g. cognitive, social) (Ryan et al., 2017), experience flow and/or clutch states. Because one of the alleged outcomes of a clutch

state involves physical exhaustion, a recognized symptom of burnout (Raedeke & Smith, 2001), it seems paramount to discover if and how these experiences occur for early adolescent athletes. Perhaps by engaging adolescent athletes in a flow- and clutch-based research process and allowing them to be the orators and experts of their sport-related experiences (Harrist & Witt, 2015) we can start uncovering their most optimal experiences, if experienced at all, and ultimately the roots of their happiness.

This study utilized a deductive approach detailing adolescent athletes' flow experiences by examining the data and emergent themes from Study 1, as well as newly presented themes that may be facilitative or debilitative to flow and/or clutch experiences. While flow and clutch experiences have similarities (e.g., automatic skill execution and feelings of absorption), there are differences in their processes of occurrence and the contexts in which they occur (Swann et al., 2021). Highlighting how adolescent athletes describe flow and possibly even clutch experiences assists in providing more conceptually relevant and developmentally appropriate language for refinement of current measurements (i.e., FSS-2, DFS-2, FCS) (Clementson, 2019). Thus, the purpose of this study is to examine how adolescent athletes describe their flow and clutch experiences in sport settings, and what factors assist in facilitating or debilitating such experiences.

### **Methodology and Research Design**

This study extends the interpretivist, collaborative approach used in Study 1 by assuming reality is co-constructed, interpreted and ever changing (Glesne, 2016). Further, this study followed similar CBPR methodology of Lile (2014) and Lile and Richards (2018) used in Study 1 to organize and examine semi-structured, virtual peer interviews

and group discussions with adolescent athletes, highlighting their voices. Also, consistent with Study 1 is the consideration of the power dynamics that exist between adolescents and adult researchers, which limits understanding of youth-peer cultures (Campos-Holland et al., 2016; Corsaro, 2014). Like Study 1, limiting interactions between the researcher and participants during the interview and research process was intentional so that participants were able to co-create knowledge without the direct influence of an “outsider” (Williams, 2020) as a “valid means of empowerment” (McGarry, 2016, p. 340). Thus, this study enabled participants to express their ideas with a peer of their choice and in group discussions surrounded by peers, or “insiders”, to make them feel more comfortable with the process and eliminate the need to conform for an outsider (Lile, 2014; Williams, 2020).

### **Participant Criteria and Selection**

Maximum variation and snowball sampling (Glesne, 2016; Patton, 2002), provided a purposive sample of 20 participants for this study, with ages ranging from 11-14 years. Participants were purposively selected for this study from the southeastern and midwestern United States via points of contact including, athletic directors, coaches and parents. Points of contact were emailed the purpose of the research, participant requirements, and asked to forward study information (e.g., Letter of Invitation; Appendix C) to a diverse range of athletes (i.e., age, sex, race, and sport-type) who they believed would be willing to participate. The same 20 participants were included in this study utilizing the criteria provided in Study 1 (See Table 3.1).

## **Procedures**

After securing IRB approval from the researcher's university, invitations to participate, semi-structured peer interview and group discussion protocols were emailed to middle school athletic directors, coaches and parent/guardians of adolescent athletes. Parental consent was collected electronically via email or text, followed by an email with instructions for participants to select a peer, as well as scheduling a date and time to conduct and record virtual peer interviews, with the researcher as a moderator. Before participants began the peer interview, the researcher collected participant assent by reading a verbal script aloud (Appendix D). After the interviews were completed, the researcher saved recordings in a password-protected folder on Microsoft OneDrive, and participants were contacted about availability to join a group discussion. The researcher also moderated the group discussions to ask participants to further expand on their peer interview experiences, as well as describe their flow experiences in sport settings. Like the peer interviews, group discussion recordings were saved in a password-protected folder and transcribed verbatim.

## **Data Analysis**

Deductive, “top down”, thematic analysis was utilized to examine peer interview and group discussion transcriptions collected during Study 1, where themes and patterns identified by participants guided analysis (Glesne, 2016). Protocol coding (i.e. pre-established themes) (Saldaña, 2013) was generated from interview transcripts using the nine dimensions of flow (Csikszentmihalyi, 1990; Jackson & Eklund, 2002; Jackson & Marsh, 1996) and Integrated Model of Flow and Clutch States (Swann et al., 2019; Swann et al., 2021). Following this second cycle of coding, the researcher again



participated in code mapping to categorize and re-categorize codes, and produce themes (Saldaña, 2016). While participants were not formally involved in coding the data, the perspectives of these individuals during group discussions provided as Lile and Richards (2018) found, an “invaluable source of informal youth analysis” (p. 504), and methodologically reflected the inclusion of participants in the fourth phase of research as outlined by Jacquez et al., (2013). To extend this study’s trustworthiness the researcher received feedback from a youth development expert as a “critical friend” (Foulger, 2010), utilizing a combination of peer review and past reflective journal entries (Jonsen & Jehn, 2009; Lather, 2003). For example, the critical friend was provided access to a protected qualitative data analysis folder and examined codes and illustrative quotes for the nine dimensions of flow and the Integrated Model of Flow and Clutch States using the same influential research articles (Jackson & Marsh, 1996; Swann et al., 2019) as the researcher, commenting on minor adjustments to be considered for clarity.

### **Findings and Discussion**

Deductive, flow-focused, analyses revealed adolescent athletes experienced all nine dimensions of flow while playing sports (Table 4.1). Additionally, participants described both flow and clutch contexts, processes of occurrence, characteristics, and outcomes as outlined by the Integrated Model of Flow and Clutch States (Swann et al., 2017; Swann et al., 2021) (Table 4.2).

Table 4.1 - Participant descriptions of the Nine Dimensions of Flow

Dimensions of Flow	Illustrative Quotes
1. Challenge/skill balance	<p>"I feel like, you feel skilled enough to meet the demands of your sport when you've ... worked so hard to perfect either a skill or... something within that sport and you've finally mastered it and can do it consistently. Cause, you feel like you've progressed in the sport." (Clarissa, G3)</p> <p>"So in baseball, which is really like the main sport I play, for baseball I had like one time I remember that... we were down two in the bottom of the sixth, two outs, full count, 3-2, so it was just, the kid threw it and I hit, I hit a game-winning homerun, a walk-off homerun" (Grant, PI10)</p>
2. Action-awareness merging	<p>"Well... sometimes whenever I'm like playing my best and I'm like really on a roll and stuff, I don't really remember a lot of it...because I'm still like locked in... I'm just... trying to do... everything perfect... and... it just works... out" (Willy, G1)</p> <p>"Uh... and you feel like you're... you feel like you're... like... totally inside... like you're totally focused on the thing you're doing and you don't think about anything else." (Evan, PI7)</p> <p>"Like you said, playing your best you get that certain feeling and you just feel happy, and... your minds clear so it's... it's easier for you to focus and it's just fluent almost" (Edward, PI3)</p>
3. Clear goals	<p>"Like if you're losing, you need to- you have to like make that at bat per- not like perfect, but like good, not make the out and all that." (Anna, G1)</p> <p>"Give yourself a goal and then you just gotta... go for it I guess." (Tamera, PI5)</p> <p>Tamera: "... if you put no effort into like throwing, or putting up a stunt they'll" (interrupted)</p> <p>Allison: "You can like... tell"</p> <p>Tamera: "I mean the stunt will like obviously fall"</p> <p>Allison: "Yeah"</p> <p>(PI5)</p>

4. Unambiguous feedback	<p>"Uh, I know I'm doing well whenever my teammates and coaches... be like, "Oh yeah, atta boy, good job" or something like that." (Grant, G3)</p> <p>"It's just different when you play at your very best because it's just like, you dominate anybody that's in like your pathway... it makes it different because like you can feel it when you're like, playing like... I know an aggressive sport, like when you're playing football you can feel it when you're dominating everybody else" (Roger, PI8)</p> <p>"Yeah, I feel like its more of a feeling than like what you think... or like know... you just like, kinda feel it in the moment." (Jax, G2)</p>
5. Concentration on the task at hand	<p>"Yeah... I feel like, the closer the game the more locked in you are. Cause like, you don't have room for a lot of mistakes." (Jax, G2)</p> <p>"Um...I don't really think when I'm playing my best cause I'm just very focused (PAUSE) on (PAUSE) just trying to do good at the moment" (Willy, PI3)</p>
6. Sense of control	<p>"...when I'm doing well, even though I may be tired I have that sense of like I can keep going... and I can like... keep doing how I am" (Kendall, G1)</p> <p>"I know like a feeling that I get, is like, during the routine... if I'm like doing really well or like, everything's going right... I feel kind of, like a sense of control going on, and that you're like doing your job and stuff." (Tamera, G2)</p> <p>"Well... what I think about is like, sometimes I'll be really like hyped like I'm doing really good, let's keep this going" (Daniel, PI10)</p>
7. Loss of self-consciousness	<p>Evan: "Okay and like what do you love the most?" Miller: "Um... probably being in the water and just swimming because it feels good and also it makes me feel like a fish" (PI7)</p> <p>"like you just think you're at the top of the world and like you think you're unbeatable at the point... because your adrenaline is rushing and stuff." (Brooks, G2)</p>

8. Transformation of time	<p>"The time passes much faster when I am having fun on the field" (Chelsea, G3)</p> <p>Brooks: "During like a really close game, like time flies! And you're like, just having fun and the time's just going by like real quick."</p> <p>Landon: "Yeah, and then on games that you're like losing or winning by a lot it's just like boring almost, cause it's just so slow." (G2)</p> <p>"I started just like... like playing songs in my head to like... make it like... time pass and then whenever I'm out I feel like... great so" (Miller, PI7)</p>
9. Autotelic experience	<p>"I'd probably say... when you're in like-like in that certain zone... or just being like calm and collective to yourself... just because I feel like when you're more calm you do it- you work, and you play a lot better than you do... when you're stressed and just like not in your right mind." (Edward, G1)</p> <p>"when you know you put all the energy and effort that you can on the field and you get off and you just have like a feeling that you, like you know you did your best. Score doesn't matter. Nothing matters, it just matters that you showed everybody that you did your best, that you could, and you did do your best." (Chelsea, PI9)</p>

## **Nine dimensions of flow**

An initial analysis was conducted to critically examine how adolescent athletes describe their flow experiences relative to its most well-known conceptualization in the literature: Csikszentmihalyi's nine dimensions of flow (Csikszentmihalyi, 1990; Jackson & Marsh, 1996). Past research has suggested the nine dimensions may not be conceptualized by adolescents due to this population's on-going cognitive development, warranting alternative flow-related vocabulary (Clementson, 2019).

### ***Challenge-skill balance***

For a flow experience to occur, an individual perceives they have the skills to meet the highest demands of a situation (Jackson & Eklund, 2002; Jackson & Marsh, 1996). Participants described this dimension as feeling accomplished in their respective sport settings because when trying their best, it's almost like they "can do anything" (Kendall, G1), and they are able to make an impact on the game. Clarissa described this dimension as follows:

"I feel like, you feel skilled enough to meet the demands of your sport when you've ... worked so hard to perfect either a skill or... something within that sport and you've finally mastered it and can do it consistently. Cause, you feel like you've progressed in the sport."

Clarissa perceives a sense of skill mastery, where through hard work you can progress in your sport to become more successful on a consistent basis.

### ***Action-awareness merging***

Being completely immersed in a flow experience means things seem to happen spontaneously and automatically (Jackson & Marsh, 1996). Across group discussions and

peer interviews, most participants recalled moments where their actions seemed to happen “naturally” (Tamera, G2) or effortlessly. Some participants even described this stage as being devoid of thoughts altogether, where your body feels like it is on auto-pilot and “you just go with the flow” (Jax, G2). However, when asked specifically about the moments when performing spontaneously and automatically, Chelsea may be an outlier or may have misinterpreted the question. Chelsea described that things seem to happen spontaneously and automatically “when you have time to stop and think about what the best thing to do is” (G3), which seems contradictory to an automatic process.

### ***Clear goals***

During a flow experience, goals are very clear and the individual has a strong sense of what they need to do (Jackson & Marsh, 1996). Participants describe their awareness of this dimension as being dependent upon the situational nature of performance. For example, almost all participants’ responses related to this dimension involved knowing what they need to do if they are losing in a competitive setting. Kendall even explained that goals can change depending not only on the situational context (e.g. winning or losing), but who the competition might be:

“For me I think those goals probably change a lot depending on like- even the game, who we’re playing like I know... like.. I’ve played teams many times, so I know how they play...and I know what I need to do to be able to beat them and to be better than the person I’m against and so it’s really ... knowing like my limits and other people’s so I can do what I need to do and get it done properly” (G1).

Being familiar with a competitor for Kendall means you have a better sense of what you need to do to be successful. Overall, it appears that participants understand goals during performance to be dynamic and fluid, yet still clear.

### ***Unambiguous feedback***

An individual in a flow experience receives immediate feedback regarding the success, or lack thereof, of their performance (Jackson & Marsh, 1996). Regarding this dimension, participants described receiving feedback from external sources (e.g. coaches, peers), as well as internal sources (e.g. feelings within). For example, participants detailed knowing how well they are doing based on verbal praise from teammates and/or coaches, who also, alternatively, offer constructive criticism and provide support to get you back on track when you make mistakes. Maddie said:

“Um, when I’m doing well I’m like getting support from my teammates and like-like my coaches and they’re like.. if I don’t do it perfectly they’re like helping me, they’re telling me my mistakes so I know I can make it better” (G1)

More internally, feelings that arise when performing act as feedback in telling you how well you are doing, including using the “right form” (Clarissa, G3), “dominating everybody else” (Roger, PI8) or having a “feeling” (Jax, G2) rather than thinking about your performance.

### ***Concentration on the task at hand***

When experiencing flow, an individual is totally focused on the current activity (Jackson & Marsh, 1996). Participants described this dimension as being “locked in” (Willy, G1) or “laser focused” (Landon, G2) on their current situation and not being able to un-lock or think about anything else. Situationally, participants described this level of

total concentration as being enhanced when the game is “on the line” (Anna, G1) or when important spectators are in attendance. Some participants even described being so focused and in the moment that they have no thoughts at all or experience lapses in memory because they were so intensely involved. For example, Willy stated:

“Well sometimes whenever I’m like playing my best and I’m like really on a roll and stuff, I don’t really remember a lot of it because I’m still like locked in... I’m just trying to do... everything perfect and... it just works out” (G1).

### ***Sense of control***

Without over-exerting themselves, an individual feels completely in control during a flow experience (Jackson & Marsh, 1996). Participants described this dimension as having control when they are performing really well, where everything goes right and they have the ability to keep going. For example, Tamera said:

“I know like a feeling that I get, is like, during the routine... if I’m like doing really well or like, everything’s going right... I feel kind of, like a sense of control going on, and that you’re like doing your job and stuff” (G2).

Some participants even describe feeling free from nervousness and instead feel “relaxed” (Evan, PI7), “calm” (Kendall, PI4), and “comfortable” (Jax, G2) as a result of situations where they perceive to be in control.

### ***Loss of self-consciousness***

An individual experiencing flow no longer has a concept of the self and is not concerned with information normally used to represent the self (Csikszentmihalyi, 1990; Jackson & Marsh, 1996). As a dimension with more limited representation, some participants described having near superhuman experiences that seem otherworldly where



they felt unstoppable or “unbeatable” (Brooks, G2). Miller even compared his experiences to that of a fish when swimming competitively:

“Um... being in the water and just swimming because it feels good and also it makes me feel like a fish” (PI7).

### ***Transformation of time***

The way an individual experiences time can be altered during a flow experience, with time usually speeding up or sometimes slowing down (Jackson & Marsh, 1996). When asked about this dimension during group discussions, participants similarly described how time flies when you are having fun or when you are performing at your very best. Alternatively, participants also described how time seems to creep by when the situational contexts are boring or unenjoyable (e.g. “losing or winning by a lot”). Miller went so far as to explain the incorporation of mental skills to help time pass during performance, such as playing songs in the mind:

“I kind of thought it was a little bit boring because all you’re really doing is swimming in a lap pool ... you kind of just get used to swimming back and forth and ... I started just ... playing songs in my head to ... make... time pass and then whenever I’m out I feel like great” (PI7).

### ***Autotelic experience***

An autotelic experience is intrinsically rewarding and happens as a result of flow experiences, where the activity was rewarding in and of itself (Csikszentmihalyi, 1990; Jackson & Marsh, 1996). Participants described intense feelings of enjoyment from playing their best or being “in the zone”, where external rewards (e.g. score, winning)

don't really matter; what matters is that you did your absolute best and gave maximum effort. Chelsea said:

“when you know you put all the energy and effort that you can on the field and you get off and you just have like a feeling that you, like you know you did your best. Score doesn't matter. Nothing matters, it just matters that you showed everybody that you did your best, that you could, and you did do your best” (PI9).

Willy further detailed how playing your best makes you feel like you are “on cloud nine” (PI6) because it's rewarding just knowing that you are doing your best.

While the nine flow dimensions have received criticism related to conceptualization and measurement clarity, particularly for adolescent populations (Clementson, 2019), participants appeared to experience all nine dimensions relative to sport experiences. While some similarities and overlaps emerged among the dimensions (action-awareness merging, concentration on the task at hand: Swann et al., 2018), all dimensions appeared to be equally represented, with the exception of loss of self-consciousness. Unsurprisingly, this was anticipated because of Clementson's (2019) assumption that it might be difficult for adolescents to experience a loss of self-consciousness, as individuals in middle school may feel overly self-conscious due to their current developmental stage. However, some participants were able to articulate such an experience, warranting further investigation into developmental differences within adolescence.

### **Integrated Model of Flow and Clutch States**

A secondary analysis was conducted to further examine how adolescent athletes describe flow experiences as well as clutch experiences by using one of the most recent

re-conceptualizations of flow: The Integrated Model of Flow and Clutch States (Swann et al., 2021; Swann et al., 2019). This new model was developed to circumvent traditional flow conceptualization and critiques (Swann et al., 2018) but has yet to be tested developmentally, necessitating the current examination of adolescent athletes' perceptions (Table 4.2).

### ***Contexts and processes of occurrence***

According to the Integrated Model of Flow and Clutch States (Swann et al., 2021) flow and clutch experiences occur in distinct contexts through unique processes of occurrence. Flow experiences are believed to occur in novel, uncertain or exploratory contexts through which a process of positive events, feedback, and confidence leads to a challenge appraisal and open-goal setting (Swann et al., 2021). Because adolescence is marked by dynamic changes (e.g. physical, social, cognitive) (Ryan et al., 2017), novel and exploratory contexts as described above are developmentally inherent in sport settings for these individuals (Weiss, 2000). Throughout this study's data, participants discussed differences between their initial and current physical competencies related to sport, such as not having "any skills" (Rebecca, PI1) and just "trying it out" (Jax, PI2), to now being able to play "in that certain zone" (Edward, G1) by having a clear mind, feeling in control and having confidence in their abilities: "I can do anything... and it's just a lot easier to be able to play" (Kendall, G1). Descriptions such as those above lend themselves directly towards the context and processes of occurrence of flow as detailed by the Integrated Model of Flow and Clutch States (Swann et al., 2021); as such the researcher argues that adolescent athletes have the capability to experience flow.

Table 4.2 - Participant descriptions of Flow and Clutch States

Integrated Model of Flow and Clutch States		
Flow Context (FC)		Clutch Context (CC)
<p>FC - <i>Novelty, Exploration, Uncertainty</i></p> <p>“For me, it’s not necessarily always the score, but just... the fact that I tried, um... like to hit the right shot or I tried the new skill that I’ve been trying to work on. Not necessarily whether it goes over, but if I had the right form” (Clarissa, G3)</p> <p>“Uhh... when I first started I had no idea what I was doing, I would just show up to practice and run.” (Willy, PI2)</p>		<p>CC - <i>Achievement, Importance, Pressure</i></p> <p>“Um... I think like, when... when I do better, or like especially when like the game is on the line or whatever, I’m a lot more focused because I want to win.” (Anna, G1)</p> <p>“Yeah, like almost when someone’s like (PAUSE) someone important’s watching you... you just like... focus in more than ever, and you just like... try to do the best you can.” (Brandon, G2)</p>
Flow Process of Occurrence (FPOO)		Clutch Process of Occurrence (CPOO)
<p>"Um to-to play at my best...it's-it's like you feel relaxed, like you're not too stressed out... like if you make a mistake kinda like just blow it off like who cares... like you just feel like you're (PAUSE) you just feel like you're more relaxed and it doesn't matter what happens you just... you just feel (PAUSE) you just feel like you're the best." (Evan, PI7)</p> <p>“I know for cheer, kind of like... like the practice before our competition, or the week before competition is like really big, and really important. You need to... kind of do your best and just, be ready so that way whenever the time comes, you'll feel good about yourself.” (Tamera, G2)</p>		<p>“Like if you’re losing, you need to- you have to like make that at bat per- not like perfect, but like good, not make the out and all that.” (Anna, G1)</p> <p>"I think I'm completely focused whenever there's really no distractions and I feel like there's a little bit of a momentum, like if I do something good and then there's a sorta momentum to do even better" (Clarissa, G3)</p>
Flow Experience (FE)	Flow-Clutch Experience (FCE)	Clutch Experience (CE)
<p>FE - <i>Effortless attention</i></p> <p>"Um I don't have to like... I'm focusing obviously but I don't have to like... I'm not like trying to be perfect... and I don't have to like... work super</p>	<p>FCE - <i>Automatic skill execution</i></p> <p>Grant: "Mmkay. What does it mean to play your sport at your very best?"</p> <p>Daniel: "Uh... it's really fun. It's like you're in a groove and</p>	<p>CE - <i>Effortful concentration</i></p> <p>"Yeah, when you're completely focused, you're just focusing on that win and the straight line ahead"(*Grant points hand forward*) (Grant, G3)</p>

<p>hard to make it like that... and just like... have to be so concentrated in what I'm doing it just feels more free and I can just... like... be in a different mind set and just do it." (Kendall, G1)</p>	<p>you just keep it going." (PI10)</p> <p>"Like, you don't think when you're going good... you just like go with the flow, you keep going" (Jax, G2)</p>	
<p>FE - <i>Ease/reduced effort</i> "when I'm playing my best, even if it's not very good, as long as I'm just doing my best.. I feel like.. I can do anything... and it's just a lot easier to be able to play" (Kendall, G1)</p>	<p>FCE - <i>Altered perceptions</i> "I feel like when you're having fun, time passes so much quicker... like if you're- like say if you're playing football and you're driving down the field... and like... you're not getting stopped, but you're going like going at a fast pace, it almost feels like the time in the quarter.. just like flies by like with the timer going down, but like... it feels like... it could be an 8 minute quarter and it took 8 minutes to drive down, but it feels like it took 45 seconds to get down there." (Edward, G1)</p> <p>"it feels good and also it makes me feel like a fish" (Miller, PI7)</p>	<p>CE - <i>Intense effort</i> "And you accomplish more whenever you give it more effort... and I mean you get out... you get out things that, how much you put in, you'll get out something that's better, so if you put no effort in, then you're not gonna get a good outcome. But if you put all your effort in, you're gonna get what you want... most likely." (Tamera, G2)</p> <p>"When your adrenaline is like rushing and you're just like... you know like everything's about to happen, and you just like, give it your all, then you do good." (Brooks, G2)</p>
<p>FE - <i>Absence of negative thought</i> "Well...when I'm playing at my best it just makes me feel good... it-it like (PAUSE) I want the ball more and I KNOW I'm gonna do good" (Willy, PI3)</p>	<p>FCE - <i>Absorption</i> "You feel like you're... you feel like you're... like.. totally inside... like you're totally focused on the thing you're doing and you don't think about anything else." (Evan, PI7)</p> <p>"Yeah... I feel like, the closer the game the more locked in you are. Cause like, you don't have room for a lot of mistakes." (Jax, G2)</p>	<p>CE - <i>Analytical thought</i> Researcher: "So, when are the moments you do things spontaneously and automatically while you're playing or competing?" Chelsea: "When you have time to stop and think about what the best thing to do is" (G3)</p>
<p>FE - <i>Enjoyment</i> "I feel like when I'm playing sports... it's like my happy place or like my kind of like getaway" (Maddie, G1)</p> <p>"I just like, dominate and it's just fun like... when... when I play aggressive I just, uh, I'm more, I'm more in engaged to what I'm doing" (Wyatt, PI8)</p>	<p>FCE - <i>Confidence</i> "like you just think you're at the top of the world and like you think you're unbeatable at the point..." (Brooks, G2)</p>	<p>CE - <i>Heightened awareness</i> "I feel like playing at my very best is, when the team starts playing faster and quicker it, it helps me to know that I'm playing my best because it makes my teammates work off of you, same thing with any of the other teammates, and I think it's different from playing at other times because, when you KNOW you're playing at your</p>

		best, you're doing new things that you didn't know you can do." (Chelsea, PI9)
<p>FE - <i>Feeling in control</i>  Researcher: "What does it mean to be in control? What does that feel like?"  Jax: "Like if you feel comfortable what, with what's going on... and you're just like... you're not like um nervous, you're just like laid back... like, you feel comfortable in a way." (G2)</p>		<p>CE - <i>Exerting control</i>  "playing (PAUSE) at my best... like compared to like I don't know just warming-up or practicing is a huge difference because... like... you're... whenever you're swimming as fast as you can you're using all your oxygen and all your strength" (Miller, PI7)</p>
<p>FE - <i>Positive feedback about progress</i>  "For me, it's not necessarily always the score, but just... the fact that I tried, um... like to hit the right shot or I tried the new skill that I've been trying to work on. Not necessarily whether it goes over, but if I had the right form" (Clarissa, G3)</p>		<p>CE - <i>Feedback towards goals</i>  "Like if you're losing, you need to- you have to like make that at bat per- not like perfect, but like good, not make the out and all that." (Clarissa, G3)</p>
<p>FE - <i>Motivation for more</i>  "Well... what I think about is like, sometimes I'll be really like hyped like I'm doing really good, let's keep this going" (Daniel, PI10)</p>		<p>CE - <i>Motivation to accomplish</i>  "I think I work a lot harder to get it done... more perfectly, or in like... a better way - cause like when I need to do it or like know when I want to do it... I try to get it done how I want to do it and how it needs to be done." (Kendall, G1)</p>
<p>FE - <i>Optimal arousal</i>  "you just feel like you're more relaxed and it doesn't matter what happens you just... you just feel (PAUSE) you just feel like you're the best." (Evan, PI7)</p> <p>"Yeah... I just like feel more like... I'm working hard and it definitely feels more like carefree like I can just like... I'm trying but it's a lot funner and I can just like... calm down more when I'm doing it." (Kendall, PI4)</p>		<p>CE - <i>Heightened arousal</i>  "When your adrenaline is like rushing and you're just like... you know like everything's about to happen, and you just like, give it your all, then you do good." (Brooks, G2)</p>

<b>Flow Outcome (FO)</b>	<b>Flow-Clutch Outcome (FCO)</b>	<b>Clutch Outcome (CO)</b>
<p>FO - <i>Energizing effect</i>  "Mmmhmm, yeah like... so, whenever you're doing like good in a game or something... you just, it just keeps coming cause like you know... you can do it." (Landon, G2)</p> <p>"I do something good and then there's a sorta momentum to do even better then I just did, kind of in the (inaudible) so I just do better." (Clarissa, PI9)</p>	<p>FCO - <i>Intrinsic rewards</i>  "Like you said, playing your best you get that certain feeling and you just feel happy" (Edward, PI3)</p> <p>"I feel like I've done pretty well and it doesn't really matter what other people say, I feel completely satisfied with how I played... or how I'm doing" (Clarissa, G3)</p>	<p>CO - <i>Exhaustion</i>  "And some of the things you feel when physically, you're tired, you're sweating, your heart's racing, you've got adrenaline running like everything adds up to... physically exhaust you almost." (Chelsea, PI9)</p> <p>"whenever you're swimming as fast as you can you're using all your oxygen and all your strength and so like whenever you get out of the pool you.. if you don't feel like you can't walk then you didn't do it right, so that's basically using your all..." (Miller, PI7)</p>
	<p>FCO - <i>Perceived excellent performance</i>  "like when you know you put all the energy and effort that you can on the field and you get off and you just have like a feeling that you, like you know you did your best." (Chelsea, PI9)</p>	

Additionally, clutch experiences include pressure situations where achievement of an outcome is of the utmost importance, followed by a process of receiving situational feedback leading to a challenge appraisal, the setting of specific goals and finally, a decision to increase intensity and effort (Swann et al., 2021). Participants were able to describe contexts and processes of occurrence for clutch states, where pressure situations and setting specific goals, for example, Anna wanting to get a hit led to a decisions to intensify effort:

“Like if you’re losing, you need to- you have to like make that at bat per- not like perfect, but like good, not make the out and all that” (Anna, G1)

“Uh... like whenever the game’s like really close... whether you’re winning or losing and you know you have a chance to win. Basically, you’re just like... you’re (\*points fingers\*) laser focused.” (Landon, G2)

While not yet studied directly, the clutch-specific context of increased intensity is echoed by research on positive youth development in sport. Research suggests that youth who are more intensely involved in sports will most likely benefit more than youth who participate less intensely (Zarrett et al., 2007).

### ***Comparison of flow and clutch characteristics***

While all nine flow dimensions were represented throughout the data, there appear to be overlaps within some of the dimensions (Swann et al., 2018), as well as overlaps with characteristics represented in the Integrated Model of Flow and Clutch States (Swann et al., 2021). For example, the experiences described by the participants as *action-awareness merging* and *concentration on the task at hand* are very similar:



“You feel like you’re... you feel like you’re... like... totally inside... like you’re totally focused on the thing you’re doing and you don’t think about anything else.” (Evan, PI7)

“Yeah... I feel like, the closer the game the more locked in you are. Cause like, you don’t have room for a lot of mistakes.” (Jax, G2)

Descriptions such as these equate with the feeling of being “at one” with an activity (Jackson & Csikszentmihalyi, 1999), and supports previous critique regarding the overlap and ambiguousness of the flow dimensions (Swann et al., 2018). The newly Integrated Model of Flow and Clutch States would characterize Evan and Jax’s descriptions above as absorption, which is a shared characteristic of flow and clutch experiences (Swann et al., 2021). However, the contexts for arriving at a feeling of total absorption for either flow or clutch are noticeably different. The nature of Jax’s description above refers to the pressures one might feel in a situation where “the closer the game”, you recognized effort must be maximized and you’re motivated to accomplish a goal (e.g. don’t make mistakes), suggesting this could be a description of a clutch context (Swann et al., 2021). On the other hand, above Evan describes feelings of being fully submerged or “totally inside” an activity and not “thinking about anything else” outside of doing the activity, lending itself to the contexts of a flow experience.

Nearly every group discussion participant described time passing differently when playing at their best, also known as time transformation; specifically, that time seemed to go by faster when having a positive performance. Interestingly, the results of Swann and colleagues’ (2021) CFA testing the Flow-Clutch Scale factor structure led to the elimination of a factor called *altered perceptions* that housed items related to time

transformation and altered kinaesthetic perceptions. According to the model, this factor is shared between flow and clutch states, yet their results revealed the factor to be more strongly related to flow, while strangely exhibiting weak correlations with the FSS-2 (Swann et al., 2021). Ultimately, Swann and others (2021) determined the factor to have low construct validity and excluded it from further examination. The responses of participants from this study relevant to how time passes during some of their best sport experiences suggests the previously disregarded factor/items should be re-examined and potentially considered as either a shared characteristic or a flow-only characteristic in future FCS (Swann et al., 2021) research with adolescents.

There were also cases where participants expressed time moving slower when things aren't "going your way":

"I feel like when stuffs not going your way, and when you want it to change (time is) definitely slower... because you're probably... frustrated and kind of upset that it's not going how you want and so... you're concentrated on what's going on... and you're thinking about it more so its... taking longer to really get in that like zone- back in that zone you know like... doing good." (Kendall, G1).

This description suggests that the clutch characteristic of effortful concentration ("thinking about it more") can not only take you out of a potential flow state, but also lead to extended time outside of "that zone". However, effortful concentration was described by some participants as a benefit to their performance:

"When playing at my best (PAUSE) um I have to say... I definitely think about I- I'm doing better, I still have to think a little bit on like what play... so I don't... get yelled at but ... other than that it's more of an excitement and that feeling you get

is kinda like an adrenaline rush and it just pushes you more forward” (Edward, PI3).

Edward’s description touches on multiple clutch characteristics from the Integrated Model of Flow and Clutch States, such as effortful concentration, motivation to accomplish and heightened arousal (e.g. adrenaline) (Swann et al., 2019; Swann et al., 2021). Participants further described a connection between the clutch characteristic known as heightened arousal with automatic skill execution. Landon stated, “when you’re like, when it’s a bunch of adrenaline you really just like don’t think, you just do” (G2). Brooks and Tamera both agreed with Landon’s statement, Brooks added that you feel “on top of the world” and “unbeatable”, which interestingly represents a loss of self-consciousness, one of the nine flow dimensions. Csikszentmihalyi (1990) would agree with this assertion and might suggest Brooks becomes “part of a system of action greater than what the individual self had been before” (p. 65). Ultimately, having a flow and/or clutch experience where one loses their concept of self is extremely enjoyable and aids in the self becoming more complex than what it was before the experience (Csikszentmihalyi, 1990; Tse et al., 2020), which appears to be beneficial for human development. Specifically, the loss of self-consciousness during these experiences could arguably push one to consider how they are part of something larger than themselves and lead one to contemplate the influence of the environment on the self, and vice versa (Bronfenbrenner & Morris, 2006; Csikszentmihalyi, 1990).

### ***Flow and clutch outcomes***

Flow and clutch experiences share outcomes such as intrinsic rewards and perceived excellent performance, however, flow states are believed to leave an individual

energized, whereas clutch states leave an individual exhausted (Swann et al., 2021).

Interestingly, participants evenly detailed experiencing outcomes that fit with both flow and clutch states, as well as outcomes shared by both states.

Participants most commonly discussed the shared outcomes of perceived excellent performance and intrinsic reward, which is surprising given Csikszentmihalyi's (1990) original assertion that children may benefit more from external rewards when engaged in an activity requiring attentional restructuring. However, multiple participants expressed not caring about the score or what other people say after a performance, but instead felt happy, and proud of the effort they put forth. Participant descriptions such as this would support adolescent athletes' abilities to not only restructure their attention but reframe a situation from a more positive mindset, which Scotto di Luzio and others (2019) would describe as athlete engagement. Defined as a positive and fulfilling state of mind that reflects positive affect and cognitions about sport (Lonsdale et al., 2007; Scotto di Luzio et al., 2019), athlete engagement has been positively associated with sport performance and well-being. Based on participant descriptions of outcomes in this study, it would be wise for future research to explore relationships between adolescent athlete engagement and flow, as past research found athlete engagement to partially predict dispositional flow in a sample of elite athletes (Hodge et al., 2009).

Some participants described feeling good and as if they could just "keep going" (Kendall, G2), whereas others mentioned needing to stretch and ice after a performance or not even being able to walk after a hard-fought competition. Because physical exhaustion is a recognized symptom of burnout (Raedeke & Smith, 2001), and adolescents are particularly vulnerable to burnout at their developmental stage (Bell et al.,

2019; Scotto di Luzio et al., 2019), future research should examine the relationship between clutch states and burnout in this population. It is worth mentioning, however, that some participants in this study did not appear to view physical exhaustion negatively, but instead as a benefit and a way to gauge how well you performed. For example, Miller said, “if you don’t feel like you can’t walk then you didn’t do it right” (PI7). By this thinking, physical exhaustion appears to not only be a positive outcome, but necessary when playing at your very best. Future research should examine this idea of physical exhaustion as rewarding for some adolescent athletes, and factors influencing negative perceptions of the same experience for others, which may lead to burnout, acting as a deterrent to continued participation. In doing so, we would be better equipped to understand the factors that distinguish *how* and *why* flow and clutch states occur for adolescents in sport (Jackman et al., 2020).

### **Debilitators and facilitators**

Participants provided insight into factors that may inhibit or encourage their optimal experiences. For adolescent athletes, a major inhibitor to flow and clutch states are distractions: people on the sideline, parents, and even within your own mind. For example, distractions such as being overly concerned with how others are evaluating you during play disturbs performance:

“On the flip side when I am concerned (with others’ evaluation) I feel like I have to be perfect and that makes me more focused in what I’m doing, but at the same time it... makes- it makes me play worse because, I’m like (PAUSE) trying to do perfect when in reality... it’s not making me play how I usually do” (Kendall, G1)

Grant contrasted how he feels when in control, or “in the zone”, versus when he is not in control:

“I have a strong sense of control whenever I’m just in the zone... and... whenever I... whenever I don’t feel completely um, in control, I... is when my coaches get mad or yell at me.” (Grant, G3)

Grant and Kendall’s descriptions of pressure situations, where engaging in a more intense focus makes you “play worse” because you are trying to be perfect, is one example of how the presence of others can be a physical and mental distraction, and perhaps disengage an adolescent athlete who is on the verge of entering a flow or clutch state. The idea of perfectionism in youth sport appears to exist on a continuum that includes an energizing effect at one end, and burnout on the other (Jowett et al., 2016). Perfectionistic striving, the more positive end of the spectrum, includes the pursuit of self-proposed goals and harsh self-criticism, whereas perfectionistic concern involves pursuing goals imposed by others, perceived negative evaluation by others and inconsistencies among expectations and performance (Dunkley et al., 2000). Past research found perfectionistic concern to be positively correlated with youth athlete burnout as moderated by need satisfaction (Jowett et al., 2016), suggesting future research examine temporal precedence of the relationships between perfectionism and diverse physiological measures longitudinally with adolescent athletes. Examining flow and clutch states alongside the previous suggestions would offer perspective into the dynamic nature of athlete experiences (i.e., psychophysiology), and expand understanding of how flow and clutch states relate to personality dispositions (Jowett et al., 2016; Tse et al., 2020).

While distractions seem debilitating to flow experiences, the absence of distractions, or being able to tune out the noise, whether externally or internally, can lead to improved performance:

“I think I’m completely focused whenever there’s really no distractions and I feel like there’s a little bit of a momentum, like if I do something good and then there’s a sorta momentum to do even better” (Clarissa, G3)

Clarissa’s description of this experience, particularly the “momentum to do even better” nicely echo’s the final process of occurrence for clutch states, where a desire emerges to step up, and increase effort and intensity. Barthelmäs and Keller (2021) would consider Clarissa’s explanation of doing “something good” and having “momentum to do even better” as supportive towards their suggestion of simplifying antecedents of flow, and perhaps even clutch, to include a unified sense of perceived skill-demand capabilities. Ultimately, an individual would need to have clear understanding of a task and be able to diagnose their level of success in executing that task (Barthelmäs & Keller, 2021). These two underpinnings of the recommended flow antecedents mirror flow dimensions of clear goals and unambiguous feedback (Jackson & Marsh, 1996; Nakamura & Csikszentmihalyi, 2002), and are supported by participant descriptions of both flow and clutch states, suggesting further examination comparing how adolescent athletes enter into both states.

Another way to potentially drown out the noise and remain focused is by adopting psychological skills:

“you kind of just get used to swimming back and forth and you... like... for like me, I started just like... like playing songs in my head to like... make it like... time pass and then whenever I’m out I feel like... great so.” (Miller, PI7)

Miller’s description of playing songs in his head is an example of psychological skills such as attentional control or imagery, both of which are believed to help increase motivation (Munroe-Chandler et al., 2007), improve performance (Cumming & Williams, 2012), and allow athletes a better chance to experience flow (Jackson et al., 2001). A qualitative investigation of imagery by Munroe-Chandler et al., (2007) from a developmental perspective found youth athletes, regardless of age or gender, reported using imagery in both practice and competitive settings. However, gender differences were found when examining specific types of imagery where only female athletes used motivational-general mastery imagery to improve self-confidence (Munroe-Chandler et al., 2007). Future research suggests continuing to examine the developmental nature of imagery use across gender and perhaps including sociocultural factors (i.e., toughness) to better explain these differences, because research on adult imagery-use has not yielded significant gender differences (Munroe-Chandler et al., 2007).

While associations between psychological skills and clutch experiences are not yet understood, the similarities between flow and clutch states (e.g., absorption) suggest the development of psychological skills would prove beneficial for athletes in clutch states, particularly given the clutch-specific contexts and outcomes (Swann et al., 2021). Additionally, if psychological skill use is associated with athletes being more likely to experience flow (Jackson et al., 2001), researchers and practitioners should continue exploring adolescent athletes understanding of such skills and provide them



developmentally appropriate tools that afford better opportunities to have optimal experiences (McCarthy et al., 2010; Ryan et al., 2017).

### **Limitations and Future Research**

While important information, such as adolescent athletes self-reporting to experience flow and clutch experiences, has emerged from this study, it is not without its limitations. The purposive, heterogeneous sample limits full understanding of the findings; therefore, it is recommended that future research pursue more homogenous samples (e.g. teammates from individual or team sports) in order to examine differences among flow and clutch states. The interview protocols, or interview guides, created by the lead researcher with guidance from a qualitative expert focused on getting athletes to discuss their most optimal sport experiences, and as such utilized previous flow research strategies for question creation, specifically the nine dimensions of flow (Jackson, 1995; Jackson & Eklund, 2002). Future research should consider expanding research protocols to include event-focused questions related to flow and clutch states, alongside career-focused questions for adolescent athletes, as this is believed to provide more recent, accurate descriptions of experiences and mirrors the methodology used in the development of the Integrated Model of Flow and Clutch States (Swann et al., 2019; Swann et al., 2021). Similar to past critiques (Hassmen et al., 2016; Swann et al., 2018), it is still unclear how many dimensions and characteristics of flow and clutch are needed for a flow- and/or clutch-state to be considered to have occurred. It is, therefore, recommended that future research utilize numerous event-focused perspectives across time to better gauge if levels of intensity can distinguish certain flow- and clutch- states from others (Swann et al., 2018).

Time was also a limiting factor for this study, as scheduling interviews and group discussions with adolescent participants proved challenging during the COVID-19 pandemic. However, ways to improve this issue include contacting athletic directors and coaches in advance of a season to set up an introduction with participants' parents/guardians and creating a pre-selected schedule for the peer interviews and group discussions after athletic performances. Finally, future research should focus on the potential relationship between clutch states and burnout, particularly the symptom of emotional and physical exhaustion, as participants described feelings of being physically exhausted.

Based on the findings from Study 2, a follow-up study will be conducted to re-examine the FSS-2, DFS-2 and FCS compared to adolescent athlete flow- and clutch-state descriptions (Appendix I). The purpose of this subsequent study will be examining scale items that match (e.g. transformation of time) and do not match descriptions provided by adolescent athletes to create more developmentally accurate measurements (Clementson, 2019), that will be disseminated to additional adolescent athlete samples. Undeniably, using the currently existing FSC with this population would miss an important dimension of their flow experiences, transformation of time, which has received lower support with adult populations (Swann et al., 2018). Using item-writing guidelines by Johnson and Morgan (2016), the follow-up study could involve an iterative process of comparing adolescent participants' descriptions of their own sport experiences with the items of the FSS-2, DFS-2 and FCS (Jackson & Eklund, 2002; Swann et al., 2021).

## CHAPTER FIVE

### CONCLUSION

The purposes of these research studies were to 1) explore the sport-related lived experiences of adolescent athletes and 2) examine adolescent athlete descriptions of flow and clutch states; all in the age of COVID-19. The lives of these individuals are dynamic and complex, as supported by the Bioecological Model of Human Development (Bronfenbrenner & Morris, 2006), and their descriptions of optimal performance are equally complex. Based on findings from innovative peer-led virtual interviews and group discussions, researchers, practitioners, and other sport stakeholders (e.g. peers, parents, coaches) should seek to uplift and motivate adolescent athletes without adding unnecessary stressors or distractions, such as yelling at adolescent athletes, and providing developmentally appropriate tools so they have better chances to achieve optimal experiences in sport. Adolescent athletes appear capable of achieving flow and clutch states, after examining participant descriptions of their best sport experiences relative to the well-known nine dimensions of flow (Jackson & Eklund, 2002; Jackson & Marsh, 1996) and the newly Integrated Model of Flow and Clutch States (Swann et al., 2021; Swann et al., 2019). While these studies represent a mere snapshot into the dynamic existences of a unique population, they appear to be the first to highlight the voices and perspectives of adolescent athletes to uncover the nature of their flow and clutch experiences. Future research is needed to expand these findings, particularly for creating more developmentally relevant flow and clutch measurements.

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## APPENDIX A

### INTERVIEW GUIDE FOR PEER INTERVIEWS

1. When you think about playing your sport, what stands out to you the most?
  - a) What do you love the most?
  - b) What's most fun?
2. Tell me about when you chose your sport. Why did you choose it?
3. What does it mean to play at your best?
4. Describe what it's like when you are playing your sport at your very best? What makes playing at your best different from playing at other times?
5. What are some things you think about when you are playing at your best? What are some things you feel?
6. How was playing when you first started? What did you think about then?
  - a) If there was change in thoughts or feelings, invite them to explain the change:  
When did it start to change? What was that change like?
7. Why do you choose to continue playing sports?
8. What are some reasons why you might stop playing?
9. Tell me specifically about one of your best memories as an athlete.
10. What final comments do you have? What questions should I have asked, but didn't?

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#### Generic Probes:

- Tell me more.
- Can you share a story that illustrates that idea?
- I'm not sure I understand, can you tell me another way?
- How would you explain your idea to someone who is not involved in sports?

## APPENDIX B

### UPDATED INTERVIEW GUIDE FOR PEER INTERVIEWS

Instructions: Please read through each question carefully and allow your peer to answer the question fully. (You may use the list of “generic probes” provided at the end of the document if you wish for them to expand their response). To maintain a conversational style, after your peer answers one of the questions, you will then answer the same question. You will both be the “interviewer” and the “interviewee”.

1. When you think about playing your sport, what stands out to you the most? What do you love? What’s most fun?
2. Tell me about when you chose your sport. Why did you choose it?
3. What does it mean to play your sport at your very best?
4. Describe what it’s like when you are playing at your very best? What makes playing at your best different from playing at other times?
5. What are some things you think about when you are playing at your best? What are some things you feel physically?
6. How was playing when you first started? What did you think about then?
  - a) Note: If you notice a difference in thoughts or feelings between #5 and #6, invite them to explain the difference. When did things start to change and why?
7. Why do you choose to continue playing sports? What motivates you the most?
8. What are some reasons why you might stop playing?
9. Tell me specifically about one of your best memories as an athlete.
10. What final comments do you have? What questions should I have asked, but didn’t?

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#### Generic Probes:

- Tell me more.
- Can you share a story that illustrates that idea?

- I'm not sure I understand, can you tell me another way?
- How would you explain your idea to someone who does not play sports?

## APPENDIX C

### PARENTAL CONSENT, LETTER OF INVITATION

Hey there, my name is Hayes and I am a doctoral graduate assistant at the University of South Carolina. I am working on a study about adolescent athlete experiences in sport as part of the requirements of my degree in Physical Education and I would like your child's help. I'm interested in learning more about their experiences as an athlete, and I would like to offer them the opportunity to be a researcher!

If you wish for your child to participate, they will be asked to do the following:

- Select a peer athlete of their choice to participate in an interview, where they both will discuss their sport experiences together
- Participate in a group discussion about their interview experience, and expand on previously discussed sport experiences
- Assist in informal data analysis in the group discussion and member checking, or communication via email after preliminary analysis.

In particular, they will ask about their peer's best experiences in sport, and will be asked the same in return. This virtual interview will take approximately 10 minutes where they will discuss their sport experiences using a pre-existing interview guide (attachment). Questions in the interview guide will ask things like "Tell me specifically about one of your best memories as an athlete," "Why do you choose to continue playing your sport," and "Describe what it's like when you are playing your sport at your best?" Your child does not have to answer any questions they do not wish to answer. As the lead researcher I will mediate the interview in order to assist the process and answer any questions that arise, as well as record the interview either using Zoom (Zoom.us) or another platform they are comfortable with. The interview will be recorded so that I can accurately transcribe what is discussed, and will only be reviewed by members of the research team.

After the peer interview, your child will also schedule a time to participate in a virtual group discussion, which is expected to last approximately 15-20 minutes. The group discussion will focus on your child elaborating on the peer interview experience and expanding on their unique sport experiences in more detail. Groups will have no more than 10 participants at a time. I will also moderate this group discussion as the lead researcher, and record so that I can accurately transcribe what is discussed. This step in the research process is where your child will assist in informal data analysis, and may even be contacted in the future to provide feedback on my interpretations.

Others in the group discussion will hear what your child says, and it is possible that they could tell someone else. Because we will be talking in a group, we cannot promise what your child says will remain completely private, but we will ask that all group members respect the privacy of everyone in the group.

Participation in this study is confidential. All data associated with participants will be de-identified and only the research team (Hayes Bennett and Eva Monsma) will have access to the data. Data including recordings and transcripts will be uploaded to a password protected folder in OneDrive, and will only be accessible to research personnel (Hayes Bennett and Eva Monsma). Results of this research study may be published or presented at national or international levels, however, the report(s) or presentation(s) will not include any identifiable information.

Whether they decide to participate in this study is completely their choice. Helping with this study is not mandatory, and being in the study will not help or hurt your child's grades. Your or they may refuse to participate or change your minds at any time. If at any point you or your child wishes to stop, that is fine; you may do so for any reason. At which time please call, text or email me (Hayes Bennett) to let me know your decision. If you have questions about your child's rights as a research subject you can contact the Office of Research Compliance (803) 777-4456, or visit their website at [https://sc.edu/about/offices\\_and\\_divisions/research\\_compliance/](https://sc.edu/about/offices_and_divisions/research_compliance/).

Thank you for your consideration! I will be happy to answer any questions you have about the study, so please feel free to contact me (Hayes Bennett) at (803) 873-8867 or [hayesmb@email.sc.edu](mailto:hayesmb@email.sc.edu). If you would like your child to participate, please email me ([hayesmb@email.sc.edu](mailto:hayesmb@email.sc.edu)) to confirm your interest by using the subject line "Interview Research Project" and stating the following: "I understand and agree with the terms this study invitation and would like for my child to participate". Once you have done so, I will contact you and your child with a follow-up email including next steps.

Respectfully,

Hayes M. Bennett  
(803) 873-8867  
[hayesmb@email.sc.edu](mailto:hayesmb@email.sc.edu)



## APPENDIX D

### PARTICIPANT ASSENT SCRIPT

Hi, my name is Hayes I'm a graduate student from the University of South Carolina. I am working on a study about adolescent athlete experiences in sport as part of the requirements for my degree in Physical Education and I would like your help. I'm interested in learning more about your experiences as an athlete, and I would like to offer you the opportunity to be a researcher! Your parent/guardian has already said it is okay for you to be in the study, but it is up to you if you want to participate.

If you want to be in the study, you will be asked to do the following:

- Interview a peer about their sport experiences, and answer the same questions in return
- Participate in a group discussion about your interview experience, and expand on your previously discussed sport experiences
- Assist in informal data analysis in the group discussion and by future contact

Any information you share during this process will be private. No one except me, your peer and group discussion members will know how you answered the questions. The interviews will be recorded so that I can accurately transcribe what is discussed and will only be reviewed by members of the study staff.

You do not have to help with this study. Being in the study is not related to your regular class work and will not help or hurt your grades. You can also drop out of the study at any time, for any reason, and you will not be in any trouble. If at any point either of you wish to stop, that is fine, please let me know and we will stop the interview.

At this time please ask any questions you would like to about the study.

If you agree to participate, please repeat the following:

My participation has been explained to me, and all my questions have been answered. I am willing to participate.

## APPENDIX E

### GROUP DISCUSSION INTERVIEW GUIDE

1. *Challenge-Skill Balance*: “I feel I am competent enough to meet the high demands of the situation” (Jackson et al., 2008)
  - What does competency feel like on the (field, pitch, court, etc)?
  - When are the moments you feel competent enough to meet the demands of your sport? (When do you not feel competent?)
  - When you think about playing your sport, overall do you feel competent enough to meet the high demands of your sport while you’re playing?
2. *Action-Awareness Merging*: “I do things spontaneously and automatically without having to think” (Jackson et al., 2008)
  - When are the moments you do things spontaneously and automatically while you’re playing/competing?
  - When are those moments when you are actively aware or your actions are deliberate while playing/competing?
3. *Clear Goals*: “I have a strong sense of what I want to do” (Jackson et al., 2008)
  - When are the moments you have a strong sense for what you need to do when you’re playing/competing?
  - How would you describe this sense for knowing what you want to do? (Ex: What do you recognize about your ability to accomplish goals when playing at your best?)
4. *Unambiguous Feedback*: “I have a good idea while I am performing about how well I am doing” (Jackson et al., 2008)
  - When you think about playing, how do you know how well you are doing?
  - Describe times when you are unsure about how well you are doing (Ex: when is it is hard to tell how you’re doing?)

- *Probes*: How does your body feel in these moments? What is going through your mind? What other factors contribute to your idea of how well you're performing?
5. *Concentration on Task at Hand*: "I am completely focused on the task at hand" (Jackson et al., 2008)
    - Describe times when you are completely focused on the task at hand when you're playing/competing.
    - How do you feel when you are completely focused? How do you feel when you are not focused?
  6. *Sense of Control*: "I have a feeling of total control over what I am doing" (Jackson et al., 2008)
    - When do you have a strong sense of control over what you're doing when playing/competing? (When do you not?)
    - How would you describe the feeling of having control over what you're doing in your sport?
  7. *Loss of self-consciousness*: "I am not concerned with how others may be evaluating me" (Jackson & Eklund, 2002)
    - When are there moments during sports play/competition that you are *not* concerned with how others evaluate you? (When are you concerned?)
    - How would you describe the feeling of not being concerned with the way others evaluate you?
  8. *Transformation of Time*: "The way time passes seems to be different from normal" (Jackson et al., 2008)
    - When are the moments where time seems to pass different from normal when playing/competing?
    - How does time seem different from normal?
    - Probe: If it does seem different - How would you describe the difference while you are playing at your best versus other times?
  9. *Autotelic Experience*: "The experience is extremely rewarding" (Jackson et al., 2008)
    - How would you describe an experience in your sport that is extremely rewarding?
    - How would you describe your overall experience when you're playing/competing?

- Probe: Tell me a story about a time when...
-

## APPENDIX F

### UPDATED GROUP DISCUSSION INTERVIEW GUIDE

1. *Challenge-Skill Balance*: “I feel I am competent enough to meet the high demands of the situation” (Jackson et al., 2008)
  - What does it feel like to be skilled on the (field, pitch, court, etc)?
  - When are the moments you feel skilled enough to meet the demands of your sport? (When do you not feel skilled?)
  - When you think about playing your sport, overall do you feel skilled enough to meet the high demands of your sport while you’re playing?
2. *Action-Awareness Merging*: “I do things spontaneously and automatically without having to think” (Jackson et al., 2008)
  - When are the moments you do things spontaneously and automatically while you’re playing/competing?
  - When are those moments when you are actively aware or your actions are deliberate while playing/competing?
3. *Clear Goals*: “I have a strong sense of what I want to do” (Jackson et al., 2008)
  - When are the moments you have a clear sense for what you need to do when you’re playing/competing?
  - How would you describe this sense for knowing what you want to do? (Ex: **What do you recognize about your ability to accomplish goals when playing at your best?**)
4. *Unambiguous Feedback*: “I have a good idea while I am performing about how well I am doing” (Jackson et al., 2008)
  - When you think about playing, how do you know how well you are doing?
  - Describe times when you are unsure about how well you are doing (Ex: when is it is hard to tell how you’re doing?)

- *Probes*: How does your body feel in these moments? What is going through your mind? What other factors contribute to your idea of how well you're performing?
5. *Concentration on Task at Hand*: "I am completely focused on the task at hand" (Jackson et al., 2008)
    - Describe times when you are completely focused on the task at hand when you're playing/competing.
    - How do you feel when you are completely focused? How do you feel when you are not focused?
  6. *Sense of Control*: "I have a feeling of total control over what I am doing" (Jackson et al., 2008)
    - When do you have a strong sense of control over what you're doing when playing/competing? (When do you not?)
    - How would you describe the feeling of having control over what you're doing in your sport?
  7. *Loss of self-consciousness*: "I am not concerned with how others may be evaluating me" (Jackson & Eklund, 2002)
    - When are there moments during play/competition that you are *not* concerned with how others evaluate you? (When are you concerned?)
    - How would you describe the feeling of not being concerned with the way others evaluate you?
  8. *Transformation of Time*: "The way time passes seems to be different from normal" (Jackson et al., 2008)
    - When are the moments where time seems to pass different from normal when playing/competing?
    - How does time seem different from normal?
    - Probe: If it does seem different - How would you describe the difference while you are playing at your best versus other times?
  9. *Autotelic Experience*: "The experience is extremely rewarding" (Jackson et al., 2008)
    - How would you describe an experience in your sport that is extremely rewarding?
    - How would you describe your overall experience when you're playing/competing?

- Probe: Tell me a story about a time when...

## APPENDIX G

### MEMBER CHECKING CONTENT

Note: The following images were emailed in a PowerPoint format to the participants, parents and points of contact asking for feedback:



# THEMES & SALIENT POINTS

Study 1 – Inductive  
Thematic Analysis



Figure G.1 - Slide 1

## THEMES, SUB-THEMES & CATEGORIES

Sports "keep you healthy altogether"			Influence of others				Reap the rewards		
Physical demands & benefits	Social benefits	Mental & Emotional health	"Being with my friends"	Building a "brotherhood /sisterhood"	Family connection to sports	The negative side	"Earn the trophy"	Good vibes	Be in the moment
<ul style="list-style-type: none"> <li>• Sport-specific tasks</li> <li>• Exercise/stay in shape/getting stronger</li> <li>• Releasing energy &amp; aggression</li> </ul>	<ul style="list-style-type: none"> <li>• Making friends</li> <li>• Working with others (teammates, coaches)</li> <li>• Support system</li> </ul>	<ul style="list-style-type: none"> <li>• Having fun</li> <li>• Stress relief</li> <li>• Building confidence</li> <li>• Perseverance &amp; Resilience</li> </ul>	<ul style="list-style-type: none"> <li>• Stands out the most</li> <li>• Sport entry</li> <li>• Continued participation</li> </ul>	<ul style="list-style-type: none"> <li>• Bonding</li> <li>• Team activities outside of sport</li> </ul>	<ul style="list-style-type: none"> <li>• Parents</li> <li>• Siblings</li> </ul>	<ul style="list-style-type: none"> <li>• Fear of criticism (Coaches, parents)</li> <li>• Sport exit (Poor coaching, friends leaving)</li> </ul>	<ul style="list-style-type: none"> <li>• Being competitive</li> <li>• Improving performance</li> <li>• Scoring points</li> <li>• Helping the team succeed/Play your role</li> <li>• Winning</li> </ul>	<ul style="list-style-type: none"> <li>• Team celebrations</li> <li>• Receiving praise</li> <li>• Making others proud</li> <li>• Surprising yourself</li> </ul>	<ul style="list-style-type: none"> <li>• Giving 110% (maximum effort, Play 'til exhaustion)</li> <li>• In the zone ("I don't really think", "it's just fluent")</li> <li>• "Adrenaline rush"</li> <li>• Making smart decisions</li> </ul>

Figure G.2 - Slide 2

## SALIENT POINTS



From athletes to  
others: Just "try it"



Incompetent to  
Confident



Having a choice vs.  
Not having a choice  
Stopping participation  
Which sport to play



Cycle of mistakes



Athletic Identity

Figure G.3 - Slide 3

## APPENDIX H

### UPDATED MEMBER CHECKING CONTENT

Note: The following images were also emailed in a PowerPoint format to the participants, parents and points of contact asking for feedback:

# THEMES & SALIENT POINTS

Study 1 – Inductive  
Thematic Analysis



Figure H.1 - Slide 1

## THEMES, SUB-THEMES & CATEGORIES (FIRST ITERATION)

Sports "keep you healthy altogether"			Influence of others				Reap the rewards		
Physical demands & benefits	Social benefits	Mental & Emotional health	"Being with my friends"	Building a "brotherhood /sisterhood"	Family connection to sports	The negative side	"Earn the trophy"	Good vibes	Be in the moment
<ul style="list-style-type: none"> <li>• Sport-specific skills</li> <li>• Exercise/stay in shape/getting stronger</li> <li>• Releasing energy &amp; aggression</li> </ul>	<ul style="list-style-type: none"> <li>• Making friends</li> <li>• Working with others (teammates, coaches)</li> <li>• Support system</li> </ul>	<ul style="list-style-type: none"> <li>• Having fun</li> <li>• Stress relief</li> <li>• Building confidence</li> <li>• Perseverance &amp; Resilience</li> </ul>	<ul style="list-style-type: none"> <li>• Stands out the most</li> <li>• Sport entry</li> <li>• Continued participation</li> </ul>	<ul style="list-style-type: none"> <li>• Bonding</li> <li>• Team activities outside of sport</li> </ul>	<ul style="list-style-type: none"> <li>• Parents</li> <li>• Siblings</li> </ul>	<ul style="list-style-type: none"> <li>• Fear of criticism (Coaches, parents)</li> <li>• Sport exit (Poor coaching, friends leaving)</li> </ul>	<ul style="list-style-type: none"> <li>• Being competitive</li> <li>• Improving performance</li> <li>• Scoring points</li> <li>• Helping the team succeed/Play your role</li> <li>• Winning</li> </ul>	<ul style="list-style-type: none"> <li>• Team celebrations</li> <li>• Receiving praise</li> <li>• Making others proud</li> <li>• Surprising yourself</li> </ul>	<ul style="list-style-type: none"> <li>• Giving 110% (maximum effort, Play 'til exhaustion)</li> <li>• In the zone ("I don't really think", "it's just fluent")</li> <li>• "Adrenaline rush"</li> <li>• Making smart decisions</li> </ul>

Figure H.2 - Slide 2

## THEME 1: SPORTS "KEEP YOU HEALTHY ALTOGETHER"

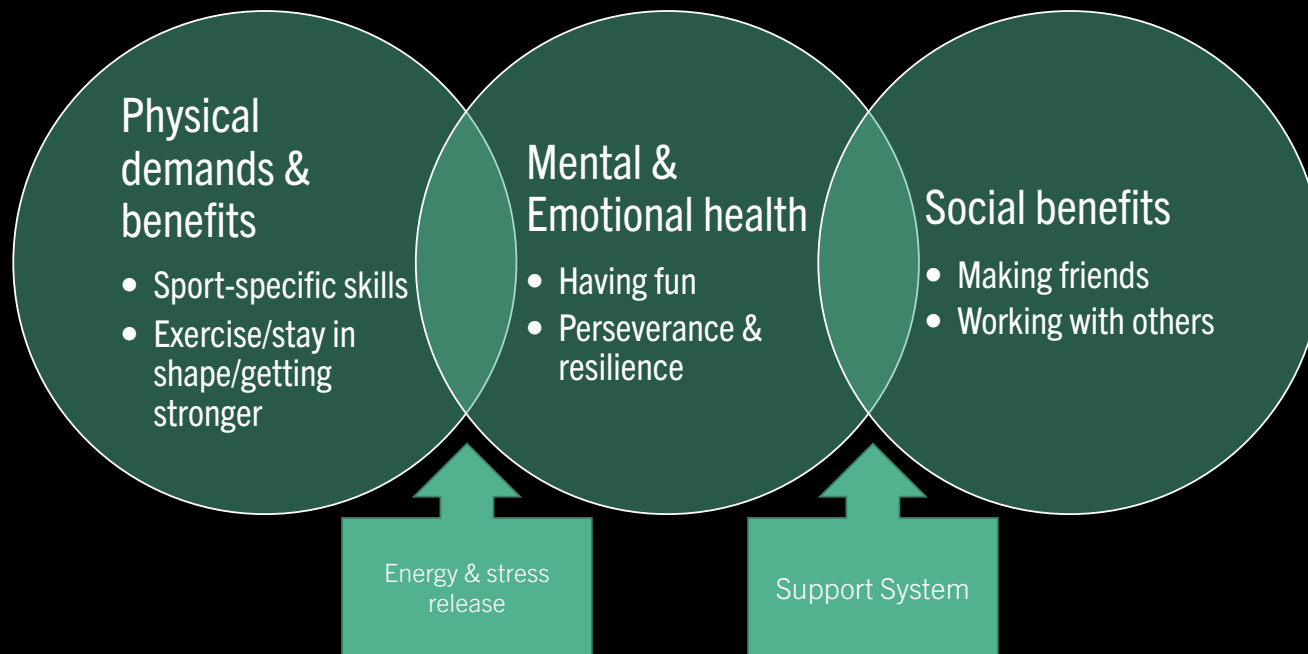


Figure H.3 - Slide 3

## BUILDING CONFIDENCE (SALIENT POINT FROM THEME 1)

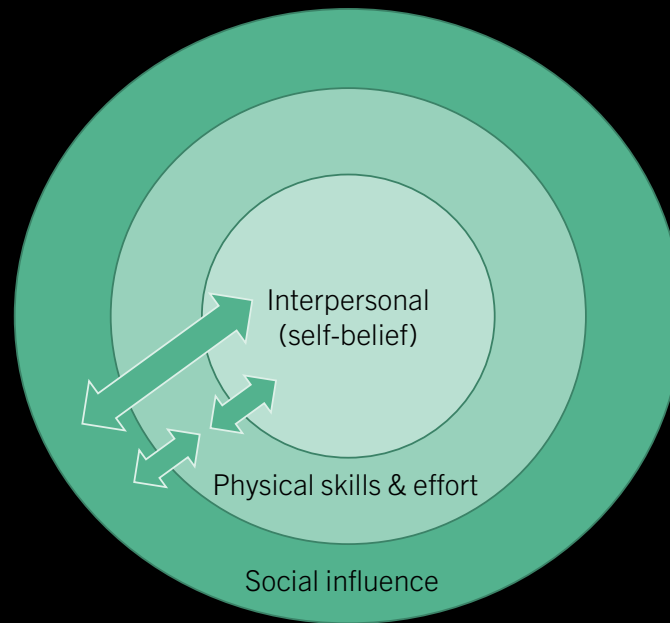


Figure H.4 - Slide 4



## THEME 2: WHAT KEEPS ME GOING

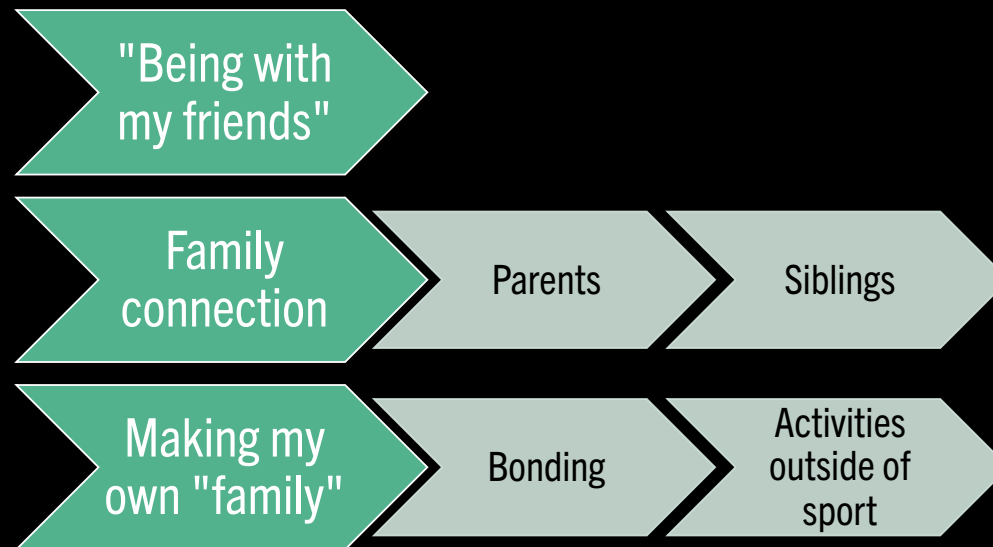


Figure H.5 - Slide 5

## THEME 3: WHAT COULD PUSH ME OUT

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Injury

---

Poor coaching

---

Friends leaving

---

Unwanted stress

---

Desire to spend time elsewhere

Figure H.6 - Slide 6

## THEME 4: REAP THE REWARDS



Figure H.7 - Slide 7

## SALIENT POINTS

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From athletes to  
others: Just "try it"



Incompetent to  
Confident



Having a choice  
vs. Not having a  
choice  
Stopping participation  
Which sport to play



Fear of criticism  
as motivation



Cycle of mistakes



Athletic Identity

Figure H.8 - Slide 8

APPENDIX I

STUDY 3 ORIGINAL PROPOSAL: EXAMINING THE  
RELATIONSHIPS AMONG FLOW AND BURNOUT BY SEX AND  
SPORT TYPE

**Purpose**

The purpose of this study is to test the concurrent, convergent and divergent validity of the adapted versions of the flow scales (DFS-2, FSS-2) from the previous study with adolescent athletes in order to examine the relationships among flow experiences and burnout. The research questions for this study are as follows:

RQ<sub>3</sub>: What is the factor structure of the FSS-2 and DFS-2?

RQ<sub>4</sub>: What is the internal consistency reliability of the updated FSS-2 and DFS-2?

H<sub>4</sub>: There will be acceptable internal consistency reliability for the updated FSS-2 and DFS-2.

RQ<sub>5</sub>: How do flow experiences vary by sex and sport-type?

H<sub>5</sub>: There will be significant differences between flow experiences based on sex and sport type.

RQ<sub>6</sub>: What are the relationships among adolescent flow experiences and burnout?

H<sub>6</sub>: Flow experiences will have a significant, negative relationship with burnout.

## **Participants**

Participants ( $N = 200$ ;  $\approx 50\%$  female participants) will be a convenience sample of purposefully selected adolescent athletes, aged 11-14. The participants will represent middle school athletes from a diverse set of sports in the southeastern United States. It is expected to see a similar level of skill and experience amongst the participants because of their age and possible years of experience.

## **Instrumentation**

### ***Dispositional Flow Scale – 2 (DFS-2)***

The original 36-item questionnaire measures athletes' disposition to flow experiences in sport (Jackson & Eklund, 2002, 2004; Jackson et al., 2008). Items are scored on a 5-point Likert-type scale, ranging from 1 (never) to 5 (always), and represent the nine dimensions of flow as theorized by Csikszentmihalyi (1990). Identical to the FSS-2 mentioned above, the nine factors are represented by four items each with questions such as "I am challenged, but I believe my skills will allow me to meet the challenge," "Things just seem to happen automatically," "My attention is focused entirely on what I am doing," and "I have a sense of control over what I am doing." Reliability estimates for the DFS-2 ranged from .78 to .90 (Jackson & Eklund, 2002; Jackson et al., 2008).

### ***Flow State Scale - 2 (FSS-2)***

The Flow State Scale – 2 (FSS-2) measures an individuals' flow experience situationally (Jackson & Eklund, 2002, 2004; Jackson & Marsh, 1996). This original 36-item questionnaire is grounded by the nine-dimensions of Flow theory: challenge-skill balance, action-awareness merging, clear goals, unambiguous feedback, concentration on

the task, sense of control, loss of self-consciousness, transformation of time, and autotelic experience (Csikszentmihalyi, 1990; Jackson, Martin & Eklund, 2008). An example for a challenge-skill balance question is, “I feel I am competent to meet the high demands of the situation” (Jackson, et al., 2008). The instrument uses four items to measure each of the nine dimensions on a 5-point Likert-type scale ranging from 1 (strongly agree) to 5 (strongly disagree). Reliability estimates for the FSS-2 range from .76 to .92 (Jackson & Eklund, 2002; Jackson et al., 2008).

### ***Athlete Burnout Questionnaire (ABQ)***

The ABQ includes 15 items separated into three subscales to represent the symptoms of burnout: reduced sense of accomplishment, physical and emotional exhaustion, and sport devaluation (Madigan et al., 2020; Raedeke & Smith, 2001). Each subscale contains 5 items where participants are asked how often they experience each item on a 5-point Likert-type scale ranging from “almost never” to “almost always.” The ABQ has been shown to be valid and reliable in a number of studies with athletes (Cresswell & Eklund, 2005; Raedeke & Smith, 2009), with alpha coefficients between .71 and .87.

### **Procedures**

After Institutional Review Board (IRB) approval has been received, approval will be obtained via email from multiple middle schools in the southeastern United States. Parents of participants will be sent consent forms before data collection, and participants will be asked to sign assent forms and told they can discontinue the study at any time. Any participant involved in the study will be given a randomized identification number to protect their identity. Participants will electronically complete a series of questionnaires

including demographics that will include questions related to age, date of birth, sex, sport-type, years of sport experience, and date of their last competition. Participants will be instructed to complete all four previously mentioned scales promptly after a competition in order to collect data as recent as possible to the event.

### **Data Analysis**

Descriptive statistics will be calculated first using SPSS Statistics, 27. Next, an exploratory factor analysis (EFA) will be conducted for both updated measurements of FSS-2 and DFS-2 in order to examine potential factor structure. Exploratory factor analysis will include principle axis factor (PAF) extraction to explain maximum covariance, and parallel analysis to determine the number of factors to retain by comparing scree plot eigenvalues to eigenvalues from a randomly generated data set (Bandalos, 2018). Oblique promax rotation (Hendrickson & White, 1964) will be utilized to maintain high factor loadings and force moderate to low factor loadings even lower, while operating under the assumption that factors will be correlated as they represent the domains of flow. Optimal solutions will be interpreted based on the simple structure, or absence of cross-loadings, loading values at or above a .3 (Bandalos, 2018; Schrieber, in press), and residuals.

Cronbach's alpha will then be used to check for internal consistency reliability of the updated FSS-2 and DFS-2, as well as the ABQ. It is hypothesized that all scales will yield acceptable internal consistency reliability (Nunnally, 1978). A two-way multivariate analysis of variance (MANOVA) will also be run in order to examine mean differences in flow scores by demographic variables of interest (e.g. sex and sport-type), and it is anticipated there will be significant differences. Pearson's correlations will be



conducted between the constructs of flow and burnout to answer the research questions of what relationships exist among these variables. It is anticipated that flow scores will have significantly, negative relationships with burnout.