THE LIFE SKILLS MENTAL HEALTH CONNECTION IN SPORT

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DEDICATION

I guess when your hockey program gets cut you have to do something. Why not go to grad school. To my family who have provided me endless support and opportunity to succeed. I love you. I would also like to dedicate this work to the twins. Nothing says hurry up like 2 kids on the way and no job.

"The purpose of life, as far as I can tell… is to find a mode of being that's so meaningful that the fact that life is suffering is no longer relevant."

— *Jordan B. Peterson, Maps of Meaning: The Architecture of Belief*

ABSTRACT

Life skills are important outcomes for positive youth development (PYD). Sport participation offers unique opportunities for youth to develop life skills, potentially impacting mental health outcomes. This study examined the relationship between life skills development through sport and mental health functioning, investigating the potential mediating role of life skills transfer. Four research questions guided this study: (a) what are the relationships between life skills and mental health? (b) what are the relationships between life skills and life skills transfer? (c) what are the relationships between life skills transfer and mental health? and (d) does life skills transfer mediate the relationships between life skills and mental health? Given Portugal's strong youth sport culture and recent initiatives to focus on mental health, a sample youth athletes aged 12-18 from Portugal completed measures of life skills, life skills transfer, and mental health functioning. Results indicated associations between life skills, life skills transfer, and mental health as well as which life skills were most associated with mental health and subsets of mental health (i.e., subjective, social, psychological). Mediation analysis revealed which life skills depend on the ability to transfer the skill to other areas of life to impact mental health outcomes in sport. Findings offer actionable guidance for working professionals and extend previous theoretical perspectives. Implications for counselling/sport psychologists and sport clubs are discussed.

CONTRINUTIONS OF AUTHORS

This project was part of a larger research program. This project and the methods within were approved by the Ethics Committee of the Center for Research and Innovation in Education (inED) at P. Porto (Ethics number: PA02/CE/23). I Landon Gross conducted a secondary data analysis on anonymized data and bore the responsibility of reviewing the literature, data analysis, interpreting the results, as well as writing the thesis. Rathwell., S. was the supervisor for this project and provided guidance throughout the process. Rathwell, S. was part of the larger research program and also had a role in the conceptualization of the project. Santos, F., was the principal investigator for the larger research program, was part of the conceptualization of the project and applied for ethics. Santos, F., along with research assistants Ferreira., M. and Dias., L. were responsible for data collection and anonymizing the data. Balderson., D and Gunn., T. were committee members who helped shape the sections included in the literature review and discussion, assessed the quality and rigor of the document, and made recommendations related to analyses and interpretations.

ETHICS STATEMENT

This project was part of a larger research program. This project and the methods within were approved by the Ethics Committee of the Center for Research and Innovation in Education (inED) at P. Porto (Ethics number: PA02/CE/23).

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Finally, to my wife Tayler. Thank you for believing. Not just in me, but a better future. I would not be here without you.

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LIST OF ABBREVIATIONS

APA	American Psychological Association
EWB	Emotional Well-being
FLRM	Full Range Leadership Model
LDI	Life Development Intervention
LSSS-TS	Life Skills Scale for Sport - Transfer Scale
MAC	Mastery Approach to Coaching
MCMC	Markov Chain Monte Carlo
MHC-SF	Mental Health Continuum - Short Form
MLR	Maximum Likelihood Estimator
P-S-MHC-SF	Portuguese – Sport - Mental Health Continuum - Short Form
P-LSSS-TS	Portuguese Life Skills Scale for Sport – Transfer Scale
PWB	Psychological Well-being
PYD	Positive Youth Development
SUPER	Sport United to Promote Education and Responsibility
SWB	Social Well-being
TPSR	Teaching Personal and Social Responsivity
WHO	World Health Organization

Chapter 1: Introduction

Mental health has become an international concern over the past decade. Each year one in five Canadians experience mental illness and by the time they are 40, half of the population will have experienced mental illness (Smetanin et al., 2011). In addition, youth and adolescents aged 15 to 24 are the most likely to be affected by both mental health problems and substance use disorders (Pearson et al., 2013). The rise in concern for our young people and mental health has led to an emphasis on interventions that can mitigate or prevent the negative of effects of mental disorders and lessen the health, economic, and social burden.

To understand mental health and illness, one can look to Keyes' (2002) dual-continua model. Keyes (2002) proposes that mental illness and mental health are related but distinct phenomena contributing to overall human functioning. Keyes (2002) defined mental health as a "syndrome of symptoms of positive feelings and positive functioning in life" (Keyes, 2002, p. 208). Conversely, mental illness is defined as "persistent and substantial deviation from normal functioning that impairs an individual's ability to execute his/her social roles and generates emotional suffering" (Keyes, 2002, p. 207). This model conceptualizes the presence of mental health as flourishing, and the absence of mental health as languishing (Keyes, 2005; Westerhoff & Keyes, 2010).

One framework that may be fruitful for promoting mental health is the Positive Youth Development (PYD) approach. PYD stems from the positive psychology movement, which promotes the development of human strengths to achieve optimal functioning (Seligman, 2002). Thus, PYD is a strengths-based approach that assumes children and adolescents have the potential for constructive advancement based on building their assets (Lerner et al., 2005a). Proponents of the PYD approach look at both the characteristics of individuals and their social

environments that can be utilized to facilitate growth and change (Lerner & Castellino, 2002). These social and individual characteristics include one's physiology, psychology, family, community, and ecology (Lerner et al., 2005a).

PYD approaches have been applied in a variety of developmental contexts, such as schools, youth programs, and community organizations. However, the aim is always to provide youth with skills, resources, and relationships that will enable them to succeed in life. Within the context of sport, Holt et al. (2016) describes that:

> PYD (Positive Youth Development) through sport is intended to facilitate youth development via experiences and processes that enable participants in adult supervised programs to gain transferable personal and social life skills, along with physical competencies. These skills and competency outcomes will enable participants in youth sport programs to thrive and contribute to their communities, both now and in the future (p. 231).

There are several reasons why sport is a logical area for promoting PYD. First, sport is the most popular leisure activity amongst youth, with at least one third participation in almost every country (Aubert et al., 2018). Second, many youth sport programs hold psychosocial development as a leading objective, it is clear why there is interest to explore how these programs facilitate positive development. For example, the mission statement for KidSport Canada, a national Canadian youth sport organization is "...We believe the power of sports participation promotes the development of children's social, mental, and physical wellbeing" (KidSport, n.d). Third, many studies have shown that participation in youth and adolescent sport programs is linked with positive developmental outcomes including mental health and psychosocial benefits (Graupensperger et al., 2021; Harrison & Narayan, 2003; Holt et al., 2017).

For instance, a longitudinal study by Doré et al. (2019) investigated the associated between recreational versus performance sport and mental health. The authors found that youth who consistently engaged in sport during childhood had improved mental health and decreased mental illness regardless of the sport profile.

Although there is a multitude of positive development outcomes found in sport, life skills development has received significant attention within the literature. Life skills have been conceptualized differently across researchers and disciplines. For example, Hodge et al. (2012) defined life skills as behavioural, cognitive, and interpersonal skills that allow an individual to effectively navigate and succeed in various aspects of their personal and professional life. In addition, the World Health Organization (WHO, 1999) describe the term as referring to psychosocial skills that pertain to personal, social, cognitive, and affective domains. They also suggested five different skills that are appropriate across cultures: (a) decision making and problem solving; (b) creative and critical thinking; (c) communication and interpersonal skills; (d) self-awareness and empathy; and (e) coping with emotions and stress (WHO, 1999).

> Within the field of PYD through sport, Pierce et al. (2017) defined life skills as: Encompassing a range of personal assets, including psychosocial skills, knowledge, dispositions, and identity constructions or transformations (p. 195).

Inherent to the life skills definition is the assumption that skills must be transferable to be categorized as a life skill (Danish et al., 1993; Holt et al., 2016; Pierce et al., 2017). These skills can be learned in a variety of environments including sport and are serviceable to different domains of an athlete's life (Mayocchi & Hanrahan, 2000). The development and transfer of such life skills are essential for adolescents to navigate difficult personal and professional transitions that naturally occur at this stage of life (Steptoe & Wardle, 2017). According to Pierce

et al. (2017) the development and transfer process of life skills is complex and not sufficiently understood. Pierce et al. (2017) described the process as:

> The ongoing process by which an individual further develops or learns and internalises a personal asset (i.e., psychosocial skill, knowledge, disposition, identity, construction, or transformation) in sport and then experiences personal change through the application of the asset in one or more life domains beyond the context where it was originally learned (p. 194).

Although the transfer process is complex, many studies have provided evidence for the process occurring (Allen et al., 2015; Chinkov & Holt, 2016; Jacobs & Wright, 2017; Kendellen & Camiré, 2021). Chinkov and Holt (2016) studied the life skills transfer of 16 Brazilian jiu-jitsu athletes aged 19 to 54. They found that all participants perceived their involvement to positively impact their lives through the procurement of four new life skills that reflected the values and characteristics of the sport: respect, perseverance, self-confidence, and healthy habits. Kendellen and Camiré (2021) followed an athlete's journey over 10-months and found evidence for the athlete's application of leadership learned through sport in his work life. For example, the athlete used the leadership he learned through sport to show initiative by taking the lead on a new work project, voicing his opinion during a meeting, and talking to a senior colleague about the potential for advancement to a Team Lead position (Kendellen & Camiré, 2021)

More recently research has interrogated the relationship between life skills development in sport and mental health (Eime et al., 2013; Fuller et al., 2013). For instance, Eime et al. (2013) completed a review of the psychological and social benefits in sport. The authors reviewed 30 publications and found many mental health benefits such as increased well-being, greater resilience, and heightened self-esteem (Eime et al., 2013). Despite recent advances, there is still

limited knowledge on the link between skills learned in sport and mental health development, as well as the mechanisms behind why life skills may help promote mental health.

The link between life skills and mental health has also been studied in university student populations (Savoji & Ganji, 2013; Smith et al., 2004; Sobhi-Gharamaleki & Rajabi, 2010). For instance, Sohbi-Gharamaleki and Rajabi (2010) found that life skills training decreased symptoms of anxiety, depression and stress for university students. Similarly, a study by Savoji and Ganji (2013) investigated the effectiveness of a life skills training program on the mental health of university students. They found that 12 sessions at 2 and half hours each appeared to be significantly effective at increasing the mental health of students (Savoji & Ganji, 2013). Although the aforementioned studies show a link between life skill development and mental health within the general university student population, the same evidence is lacking when investigating the benefits of life skills on mental health when evaluating life skills learned in sport. Moreover, there is a dearth of studies that examine the mechanisms that may impact the relationship between life skill development and mental health functioning (i.e., life skills transfer).

Purpose

The purpose of this study was to test the relationship between life skills, life skills transfer, and mental health. Four research questions guided this study:

(a) what are the relationships between life skills and mental health?

(b) what are the relationships between life skills and life skills transfer?

(c) what are the relationships between life skills transfer and mental health?

(d) does life skills transfer mediate the relationships between life skills and mental health?

Chapter 2: Literature Review

The purpose of chapter two was to review the literature pertaining to mental health, life skills and life skills transfer.

Mental Health

Mental health has increasingly become a global consideration. In 2019, 970 million people across the globe were living with a mental health condition (Institute of Health Metrics and Evaluation, 2019). Furthermore, approximately 4000 Canadians commit suicide every year (Statistics Canada, 2023) with more than 75% of the victims being men (Navaneelan, 2012). In addition, according to Youth Mental Health Canada (YMHC, 2019) around 1.2 million children and young people are affected by mental illness in Canada. These alarming numbers have increased attention paid to preventing mental illness and promoting mental health.

To better understand mental health, we can look to recent definitions. The World Health Organization (2022) defines mental health as:

> Mental health is a state of well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community. It has intrinsic and instrumental value and is integral to our well-being that underpins our individual and collective abilities to make decisions, build relationships and shape the world we live in.

Alternatively, Keyes (2002) defined mental health as a "syndrome of symptoms of positive feelings and positive functioning in life" (Keyes, 2002, p. 208). Furthermore, the WHO (2022) states that each person experiences mental health differently because it exists on a continuum and is not characterized by the absence of mental illness. This view follows Keyes' (2002) dual-continua model where he proposed mental health and mental illness are related but

separate constructs. According to this perspective, individuals can be free of psychopathology or mental illness but still not be able function properly or feel well and vice versa (Keyes, 2005). This view contradicts, historical ideas that assume increased psychological distress will inevitably lead to decreased well-being, such as those held in the medical model of mental health. In Keyes' view each construct contributes uniquely to the overall positive functioning of individuals.

Several studies have supported the idea that well-being and psychological distress are related but distinguishable elements of mental health (Durand-Bush et al., 2015; Peter et al., 2011). The study conducted by Durand-Bush et al. (2015) found that while Canadian undergraduate students reported high levels of psychological distress, they also reported moderate to high levels of well-being. In another sample of Canadian university students Peter et al. (2011) found that of those who exhibited above-threshold depressive symptoms, 73.4% were either moderately healthy or flourishing. Despite showing high levels of distress, some individuals still attain moderate to high mental health, showing support for Keyes' (2002) dual continua model of mental health.

According to the model, mental health requires three components of well-being: emotional well-being (EWB), psychological well-being (PWB), and social well-being (SWB). EWB can be defined as one's subjective evaluation of life satisfaction and includes a positive balance of pleasant to unpleasant affect (Keyes, 2003; Westerhof & Keyes, 2010). Keyes (2007) proposed that hedonic well-being (EWB) was composed of feelings of happiness, satisfaction, and interest in life.

PWB is the subjective evaluation of optimal individual functioning. According to Keyes and colleagues (Ryff, 1989; Ryff & Keyes, 1995), PWB requires six components (a) self-

acceptance, including a healthy outlook on oneself in past and present; (b) purpose in life, one has aspirations and beliefs that give trajectory and meaning to life; (c) autonomy, an internal compass based one an individuals social standards; (d) positive relations with others, where one engages in close and compassionate relationships; (e) environmental mastery, which describes one's ability to contend on their own accord to the complex environment around them; (f) personal growth, where one is aware of their potential to transcend themselves.

SWB indicates the subjective evaluation of social value and optimal functioning for community. According to Keyes (1998), this requires (a) social coherence, being able to understand societal events; (b) social acceptance, being optimistic about others while being aware of their hardships; (c) social actualization, holding credence in one's community adapt and evolve; (d) social contribution, the feeling that one's actions matter to their society; (e) social integration, having a sense of belonging to one's community.

When the three components of positive mental health (i.e., EWB, PWB, and SWB) are met, individuals are said to experience two different perspectives on human happiness: hedonic well-being and eudemonic well-being (Keyes et al., 2002; Ryan & Deci, 2001). The idea of hedonic happiness dates to Greek Philosopher, Aristippus, who believed that the purpose of life was to maximize pleasure, whereas eudaemonic happiness can be traced back to Aristotle's concept of eudaemonia, where individuals strive for optimal functioning (Ryan & Deci, 2001). The hedonic stream conceptualizes mental health with the experience of positive emotions, balancing positive and negative affect and is reflected in research on EWB (Keyes, 2007). The eudaemonic stream conceptualizes mental health with human potential, achievement reflected in terms of psychological well-being (PWB) (Ryff, 1989) and social well-being (SWB) (Keyes, 1998). In tandem with hedonic well-being (EWB) the social elements of eudaemonic well-being

(PWB, SWB) are seen to construct what can be defined as positive mental health (Keyes, 2005, 2007; Westerhoff & Keyes, 2010).

Positive Youth Development and Sport

A useful framework for advancing mental health is Positive Youth Development (PYD). PYD is a positive oriented approach that focuses on an individual's capabilities and assets to promote the development of young people (Holt et al., 2017). Supporters of this view (Benson, 2003; Damon, 2004) appreciate the plasticity of a young brain for positive development and seek to identify the traits of individuals as well as the social contexts that can be leveraged to foster development and transformation (Lerner & Castellino, 2002). For instance, Lerner et al. (2005a) state that an individual can experience adaptive developmental changes due to interactions between an individual and their social contexts. Similarly, Bronfenbrenner and Morris (1998) view youth development as product of exchanges made amongst an individual and the attributes of their social environment. Thus, it is important to consider the interdependence between nested systems related to development and the dynamics of developmental contexts in which youth find themselves (Bronfenbrenner, 1979).

Developmental contexts such as community programs have been identified to promote positive development among youth (Roth & Brooks-Gunn, 2003). These include programs such as Boys & Girls Clubs, Big Brothers/Big Sisters, Boy scouts, Girl Scouts, YMCA, and 4H (Zaff et al., 2011). According to Roth and Brooks-Gunn (2003) when these programs emphasize the strengths of youth, they may experience positive development through the Five C's of PYD: competence, confidence, character, connection, and caring. During an evaluation of the 4H program in the United States Lerner et al. (2005b) used the Five C's as a framework to measure PYD. According to Lerner et al. (2005b) the development of the C's is more likely when positive

adult-youth relationships, youth skill-building activities, and opportunities for leadership and participation are all involved.

Another framework that has been used to measure PYD is Larson's domains of learning experiences (Dworkin et al., 2003; Larson et al., 2006). This approach was used to compare developmental experiences across a variety of contexts, including religious, academic, leadership, performance, fine arts, community, and organized sport (Larson et al., 2006). Sport was found to be particularly effective in fostering PYD outcomes due to its unique environment (Larson et al., 2006). In light of the potential that sport has for fostering PYD, there has been a recent focus on sport-specific models (Camiré, 2014; Holt et al., 2016; Holt & Neely, 2011).

PYD through sport is an approach that investigates how sport can be used to cultivate positive development in young people (Mossman et al., 2021). Holt et al. (2016) describes PYD through sport as:

> Intended to facilitate youth development via experiences and processes that enable participants in adult-supervised programs to gain transferable personal and social life skills, along with physical competencies. These skills and competency outcomes enable participants in youth sport programs to thrive and contribute to their communities, both now and in the future." (p. 231).

Since sport is seen to have positive impacts on the development of an individual's identity and feelings of competence (Danish, 1983), PYD is concerned with how sport can be utilized to promote positive outcomes in young people (Holt et al., 2016).

Life Skills and Mental Health

Of the plethora of PYD outcomes, there is reason to believe that life skills may be particularly important for promoting positive outcomes such as mental health. In fact, the

relationship between mental health and life skills has been recognized in many fields of study such as psychology, education, and sport-psychology (Danish et al., 1992; Hodge et al., 2012; Mahanta et al., 2021). It has been thought that life skills are important for supporting and preserving mental health and well-being (Segrin & Taylor, 2007). One reason may be that life skills impact an individual's ability to develop and maintain healthy relationships (Ryff & Keyes, 1995). For example, a study by Segrin and Taylor (2007) found that increased social skills were positively associated with indicators of psychological well-being.

The link between mental health and life skills has also been researched from a didactic perspective (Griffin et al., 2023; Mahanta, 2021), where life skills acquisition is part of an intervention. For instance, a systematic review investigating life skills education programs for adolescent's showed that teaching life skills early assists with developing psychosocial competence and skills that improve adjustment and self-esteem (Mahanta et al., 2021). Life skills training has also been used as a school-based substance use prevention. Botvin and Griffin (2004) describe the Life Skills Training programs that emphasizes educating students with self-management skills, social skills, with drug information skills in order to increase social resistance and competence. These training programs have been shown to prevent and reduce drug use in many studies (Botvin et al., 2015; Griffin et al., 2023)

As a result, life skills have been recognized in mental health literature as an appropriate counselling intervention. This approach can be effective in many settings and applicable to a broad scope of presenting client concerns (Ginter 1996, 1999). The life skills-based approach to counselling is derived from the life skills taxonomy (Brooks, 1984) based on human development. According to Brooks (1984) life skills are "learned behaviours that are necessary for effective living, including requisite knowledge or conditions for the development or

acquisition of such behaviour" (p. 6). This approach to counselling is similar to PYD in that it is developmentally based. Specifically, it emphasizes looking for client strengths rather than spending time on pathologizing or focusing on weaknesses. Based on his review of developmental theories and help from other professionals Brooks (1984) proposed four developmental life-skills areas:

- Interpersonal communication/human relations skills
- Problem-solving/decision-making skills
- Physical fitness/health maintenance skills
- Identity development/purpose-in-life-skills.

These generic categories were meant to be consistent across the lifespan and serve as the basis for helping individuals reach optimal functioning throughout development (Brooks, 1984).

Building off of this work, Darden et al. (1996) came up with ten assumptions about life skills and counselling: (a) there are clear areas of human development; (b) coping strategies can be identified from these areas; (c) each area consists of stages that require mastery for advancement; (d) accomplishment of developmental tasks depends on life skill mastery; (e) certain skills are learned better at certain ages; (f) mastery of fundamental life skills lead to optimal functioning; (g) failure to develop life skills can result in neuroses and psychoses; (h) life skills training is a prevention tool when used at the right developmental time; (i) life skills training can serve the role of remediation for mental and emotional disturbances; (j) the more severe the disturbance, the more likely the individual is suffering from multiple life skill deficits. These assumptions about the essential nature of life skills provide a therapeutic framework for mental health counselling (Darden et al., 1996).

Life Development Intervention (LDI) has also been presented as a sport psychology framework that can be applied to both athletes and non-athletes (Danish et al., 1992). The LDI model is a psychoeducational-developmental intervention approach that has both athlete and non-athlete applications (Danish et al., 1993). Key aspects of the LDI include assessment, skill development, application, and support. The model focuses on how individuals can adapt to significant life events through goal setting, coping strategies, enhancing anticipation strategies, teaching life skills, and facilitating skill transfer across domains. (Danish et al., 1992).

Life Skills and Life Skill Transfer

The relationship between life skills and life skills transfer has been established throughout the PYD literature. There have been many studies showing evidence of life skill acquisition and transfer (Bean et al., 2022; Chinkov & Holt, 2016; Kendellen & Camiré, 2021). Overwhelmingly, the evidence shows structured programs, supportive relationships, and meaningful opportunities for youth engagement facilitate the transfer process.

Structured programs have been utilized for the purposed of teaching and transferring life skills for some time (Lerner, 2004). Many of these educational programs have taken place in schools, community organizations, and youth programs. These programs include but are not limited to 4H, Big Brothers/Big Sisters, and the YMCA (Zaff et al., 2011). Common themes amongst community programs include positive adult-youth relationships, life skill-building activities, opportunities for youth to engage in skill-building activities, and guidance in community endeavors (Lerner, 2004).

In addition to these programs, sport-specific programs exist (Holt et al., 2017). These include Sports United to Promote Education and Responsibility (SUPER; Danish, 2002), Teaching Personal and Social Responsibility (TPSR; Hellison & Wright 2003), sport-specific life

skills programs (Petitpas et al., 2005), and TRY-sport (Holt et al., 2013). These programs have been developed with the objective of using sport as a context to facilitate development of life skills. For example, SUPER is a thirty-hour, ten session, sports-based life skills program that is deployed like sports clinics with youth partaking in three distinct phases: learning sport-specific skills, learning life related sport skills, and playing the sport (Danish, 1996). Additionally, the TPSR model is a sport-based life skill program aimed at developing personal and social responsibility in youth through physical activity (Hellison & Wright, 2003).

Sport is an environment that lends itself to a variety of experiences that can positively and negatively impact an individual's development (Camiré & Kendellen, 2016). Many variables including the interpersonal relationships with peers, parents, and coaches have been identified to be the foundation of development through sport (Turnnidge et al., 2016). Among these social relationships, coaches have been recognized as the most influential in sport (Petitpas et al., 2005). For example, a study by Kinoshita et al. (2023) explored how environmental factors such as parent and coach behaviours were related to thriving and found a more robust influence from coaches. This is because coaches assume responsibility for creating the environment in which the developmental experiences occur (Bergeron et al., 2015).

There has been debate in the literature about the mechanism of life skills transfer through sport. Turnnidge et al. (2014) identified two main approaches to explain this process. The implicit and explicit approach. The implicit approach suggests that life skills are developed through the teaching of sport-specific skills and from participating in sport (Bean et al., 2018). As such, the implicit approach assumes that life skills develop naturally through sport participation without intervention. The explicit approach is concerned with deliberate targeting

and intent to develop and transfer life skills (Turnnidge et al, 2014). The explicit approach purports that the transfer process requires much more than just involvement.

Both implicit and explicit approaches have been shown to result in PYD outcomes (Bean & Forneris, 2016; Holt et al., 2008; Newman, 2020), although the explicit approach seems to have more support in the literature (Bean & Forneris, 2016; Santos et al., 2020). Holt et al.'s (2008) investigation into the development of life skills among student-athletes through involvement in high school sport supports the implicit approach. Teamwork and leadership were identified by the athletes as skills that transferred to other areas of their lives, and that these skills were not explicitly taught by the coach. Furthermore, a study by Newman (2020) focused on youth experiences and perspectives of developing and transferring life skills within a sport-based PYD program. Through semi-structured interviews they found youth were able to select, describe, and implement interpersonal and intrapersonal life skills that were both explicitly taught and others that were not taught. More recently, Bean and Forneris (2016) conducted a comparison of implicit and explicit sport programs and found that sport programs who employed a more explicit approach had higher levels program quality and developmental outcomes. Regardless of which approach is used, there are a plethora of studies supporting the development and transfer of life skills within sport (Bean et al., 2022; Chinkov & Holt, 2016; Kendellen & Camiré, 2021).

A model of life skills transfer was developed by Pierce et al. (2017) to help clarify how implicit and explicit transfer occurs. They argue that within the sporting context, athletes experience implicit and explicit factors that influence there learning. The experiences of these life skills are internalized by way of psychosocial skills, knowledge, dispositions, and identity transformation (Pierce et al., 2017). Furthermore, they describe the transfer process as ongoing,

where the individual chronically interacts and perceives their environment to influence life skills transfer outcomes (Pierce et el., 2017). Pierce et al. (2017) define life skills transfer as:

> The ongoing process by which an individual further develops or learns and internalises a personal asset (i.e., psychosocial skill, knowledge, disposition, identity, construction, or transformation) in sport and then experiences personal change through the application of the asset in one or more life domains beyond the context where it was originally learned (p. 194).

Other researchers have focused on assessing how deliberate programs are at promoting the development and transfer of psychological and life skills (Bean et al., 2018; Danish et al., 1992; Pierce et al., 2018). Bean et al. (2018) suggest there are six levels of deliberateness that can exist in a program relate to life skills: (a) organizing the sporting environment; (b) promoting a positive climate; (c) discussing life skills; (d) practicing life skills; (e) discussing transfer; and (f) practicing transfer. Organizing the sporting environment can be defined as constructing and informative, supportive, and intrinsically motivating environment where athletes feel secure both psychologically and physically enough to take chances, learn from mistakes, and engage meaningfully with others (Bean et al., 2018; Petitpas et al., 2005). Promoting a positive climate can be defined as actively creating a place where athletes can experience sustained positive relationships, especially one where coaches model these positive behaviours (Bean et al., 2018; Turnnidge et al., 2016). Discussing life skills can be defined as intentional and deliberate efforts to talk about life skills within the sporting context (Bean et al., 2018). Practicing life skills can be defined as providing athletes with specific opportunities to apply and develop life skills within sport (Bean et al., 2018). Discussing life skills transfer involves coaches deliberate addressing the concept of transfer and its importance with athletes (Bean et al., 2018). Practicing transfer

involves offering athletes opportunities to apply and refine their life skills in domains outside of sport (Bean et al., 2018). Each level differs in the approach they take. For instance, lower levels utilize more of an implicit approach whereas higher levels become more explicit in their approach (Mossman et al., 2021).

Other researchers have looked at which strategies are effective in promoting life skills development and transfer. For instance, Pierce et al. (2018) proposed seven strategies for coaches to aid athletes transfer life skills to other areas of there life: (a) prioritize coaching life skills and recognize the need to intentionally promote transfer; (b) foster life skills mastery and reinforce life skills transfer outside of sport; (c) maintain positive coach-athlete relationships; (d) generate opportunities for athletes to implement life skills beyond sport; (e) establish cooperative relationships with key social agents; (f) employ life skill boosters; (g) assist athlete self-reflection. These coaching behaviours are derived from different theoretical approaches that have all been shown to produce positive developmental outcomes. It is also emphasized that parents and coaches need to facilitate a perspective shift that emphasizes a framework of life development rather than just athletic development to help athletes generalize their sporting experiences to other aspects of life (Danish et al., 1992).

Some approaches that reflect this shift in developmental focus are the Mastery Approach to Coaching (MAC), Autonomy-supportive coaching, and transformational leadership (Vella et al., 2016). MAC is derived from goal orientation theory (McClelland, 1961), a social cognitive theory that aims to understand the reasons or purpose that individuals are motivated. This theory believes that goal orientation effects cognitive and emotional views of circumstances that will activate behavioural responses (Dweck & Leggett, 1988). MAC is designed to create a mastery climate characterized by developing one's abilities, effort, and driven by enjoyment (Ames,

1992). Mastery orientation has been shown to support motivational patterns that facilitate long-term quality engagement learning strategies (Ames). In addition, has been linked with young athletes' intent to continue with sport, thriving in sport, and increased life skill gains (Gould et al., 2012; Kinoshita et al., 2023).

Autonomy-supportive coaching is also consistent with a developmental approach because it promotes choice, independence, and involvement in decision-making (Mageau & Vallerland, 2003). Autonomy supportive coaching is born out of self-determination theory and focuses on satisfying the three basic needs of autonomy, competence, and relatedness (Ryan & Deci, 2000a). Autonomy is defined as an individual's perception that they are in control of their own behaviour and direction in life (Ryan & Deci, 2000a). Competence is the need to feel effective in navigating one's environment and having opportunities to develop and express skills and knowledge (Ryan & Deci, 2000). Relatedness refers to individuals' need for a sense of belonging and connection with others (Ryan & Deci, 2000a). According to Hodge et al. (2016) when these three needs are met individuals undergo positive psychological development and optimal psychological well-being which are the outcomes sought after in nearly all PYD life skill curriculums.

Another prevalent developmental model is the full range leadership model (FRLM; Avolio & Bass, 1991). The FRLM is a framework introduced by Avolio and Bass (1991) that encompasses a spectrum of leadership styles that range in effectiveness and involvement, as well as passiveness to proactiveness. The model accounts for nine leadership behaviours that are then encompassed by three broader leadership categories of transformational leadership, transactional leadership, and laissez-faire leadership (Ryan & Tipu, 2013). The styles range on the continuum with transformational being on the high end of effort and engagement and laissez-fair leadership on the low end (Ryan & Tipu, 2013).

While these leadership and coaching approaches provide frameworks for fostering youth development, it's crucial to consider the underlying cognitive development processes that enable young athletes to acquire and transfer life skills across different domains. Cognitive development refers to the progression of mental processes that enable individuals to acquire knowledge and skills (Gauvain & Richer, 2016). As cognitive abilities develop, individuals enhance their metacognitive and self-regulatory skills, which are essential for learning and transferring life skills (Flavell, 1979). Metacognition is defined as the awareness of one's cognitive processes, or more simply, being aware of one's own thinking (Flavell, 1979). Self-regulation, on the other hand, refers to the process by which individuals' control and manage their thoughts, emotions, and behaviors to achieve long-term goals (Zimmerman, 2000). The development of these skills begins as early as childhood, and by adolescence, metacognition and self-regulation become more pronounced (Lai, 2011). According to Kuhn and Dean (2004), metacognition and self-regulation allow an individual who has been taught a particular strategy in one context to retrieve and apply that strategy in a similar but new context. This research demonstrates that adolescence is an appropriate stage for examining life skill development and transfer.

Life Skills Transfer and Mental Health

The relationship between life skills transfer and mental health is unclear. Majority of the literature simply investigates life skills outcomes (Mahanta et al., 2021; Segrin & Taylor, 2007) which are then used to purport on the status of mental health and well-being, leaving the transfer process unaccounted for. Nevertheless, there has been some research between these two factors in the realm of social work, counselling, and sport psychology (Newman, 2021; McKnight et al., 2009; Danish et al., 1993). In particular, the focus has been on how acquiring and transferring

skills from domains such as sport can impact an individual's present and future functioning (Crook & Robertson, 1991; Newman et al., 2022; McKnight et al., 2009).

In the counselling and sport psychology fields, the relevant literature around these topics pertain to strategies and interventions that focus on transferring skills from sport in order to successfully navigate life transitions (Crook & Robertson, 1991). For example, Crook and Robertson (1991) outlined several factors related to successful career transition:

1. Anticipatory Socialization
2. Identity and Self-esteem
3. Personal Management Skills
4. Social Support Systems
5. Voluntary Versus Involuntary Retirement

In addition to these factors Danish et al. (1992) suggested there are six important factors for transferring skills across domains: (a) the awareness and understanding that their skills have value in other environments; (b) they must comprehend that these are indeed skills, both physical and psychological; (c) know the context in which they learned the skill and explore other potential useful contexts; (d) feelings of anxiety induced by new surroundings can lead to lack of confidence and ability to apply the skills; (e) narrowed view of identity tied to sport may require motivation to take risks; (f) unwillingness to seek social supports due to potential stigma can also hinder the transference of a skill. Consequently, McKnight and colleagues (2009) examined these factors and developed an emotionally focused treatment plan that integrates psycho-educational and cognitive behavioural components. The treatment plan outlines seven steps:

1. Engagement in Counselling
2. Emotionality

3. Knowledge of Transferable Skills
4. Awareness of Transferable Skills
5. Perceived Competency
6. Developing a Support Network
7. Evaluating the Success of the Transition

Additionally, the authors note the importance of counsellors recognizing the need identify athletes' strengths, self-efficacy, and capacity to successfully transition (McKnight et al., 2009).

Development

When considering the impact of the developmental context on youth development, it is important to consider the age and developmental stage of your targeted population. To do so, one can look to developmental psychology, which is a broad field that focuses on the scientific comprehension of how humans experience changes over the course of their lifetime (Butterworth & Harris, 2014). These changes include physical, cognitive, affective, relational, and temperamental aspects of development (APA, 2014). It aims to provide descriptions of the source and purpose of growth and behavior, and the expected changes that will occur under specific circumstances (Newman & Newman, 2022). These descriptions attempt to encompass the complex interactions of both social and biological interactions (Newman & Newman, 2020). Understanding developmental psychology is imperative for counsellors and psychologists. These professions repeatedly deal with impairment in function (i.e., physical, cognitive, affective, relational, temperamental), where treatment approaches and interventions are informed by understanding human development. Some notable contributors to the field include psychologists such as, Erik Erikson, and Urie Bronfenbrenner (Butterworth & Harris, 2014). Each put forth key ideas that laid the groundwork for subsequential developmental research.

Historically, human development has attempted to be explained by philosophers such as John Lock (1632-1714) and Jacques Rousseau (1712-1778). Locke held an environmentalist view where humans are considered a tabula rusa (blank slate), where a child's neutrality is influenced through experience (Buckley & Budzyna, 2023). In contrast, Rousseau presented a view of development where children have the propensity for goodness that puts less emphasis on the impact of nurture and experience (Buckley & Budzina, 2023). These early ideas set a framework for revolutionary thinkers to put forth some of the earliest theories of human development.

A key theorist who drew heavily on psychoanalytic theory, and more specifically the psychosocial stages of development was Erik Erikson. Erikson's theory of the stages of psychosocial development were best described in *Childhood and Society* (Erikson, 1950) and were expanded upon in later works such as *Insight and Responsibility* (1964) and *Identity: Youth and Crisis* (1968). Erikson's Stages of Psychosocial Development describe eight stages of human development individuals proceed through during their journey from birth to death (Orenstein & Lewis, 2020). These stages explain both the processes of ego and identity development that take place while one curates a sense of self (Knight, 2017). Erikson emphasizes the influence of social engagement and developmental complications associated with certain temporal life transitions (Orenstein & Lewis, 2020). The theory encompasses a biopsychosocial perspective that accounts for family, culture, and psychosocial development across the lifespan (Kivnick & Wells, 2014). Each stage is defined by two diametrically opposing psychological forces that an individual can move towards (Budzyna & Buckley, 2023). The stages of his theory are:

1. Trust vs. Mistrust (Infancy)
2. Autonomy vs. Shame/Doubt (Toddlerhood)

3. Initiative vs guilt (Preschool Years)
4. Industry vs. Inferiority (Elementary Years)
5. Identity vs. Confusion (Adolescence)
6. Intimacy vs. Isolation (Early Adulthood)
7. Generativity vs. Stagnation (Middle Adulthood)
8. Integrity vs. Despair (Older Adulthood)

These opposing forces present a conflict in which the resolution moves an individual either towards the positive or negative psychological tendency. The outcome of each conflict resolution is affected by prior resolutions at different stages, meaning that each stage is interrelated and inability to resolve a crisis can impact healthy personality development (Branje & Koper, 2018). For example, if an individual deals effectively with each psychosocial developmental task, then they adopt the positive psychological strength and use it throughout their life (Orenstein & Lewis, 2020). In contrast, ineffective conflict resolution can lead to poor outcomes like emotional despair and static development (Malone et al., 2016).

In total, Erikson emphasized the significance of successfully navigating each stage of development for their psychological health and overall well-being (Branje & Koper, 2018). His theory highlights the importance of social interactions and cultural influences in impacting an individual's development across the lifespan (Orenstein & Lewis, 2020).

Another consequential theory that emphasizes the importance of the environment in shaping human development is Urie Bronfenbrenner's Ecological Systems Theory (1979). This theory posits that an individual's development and maturation is influenced by the complex interplay of elements in their environment (Bronfenbrenner, 1979). These elements encompass different systems that differ in proximity to the developing individual, from direct intimate

spheres, such as family, to overarching frameworks of society, such as cultural norms and institutions (Bronfenbrenner, 1977). According to Bronfenbrenner (1979), these systems are structured in nested layers that are embedded within each other based on their adjacency to the individual. These systems were named the microsystem, mesosystem, exosystem, macrosystem, and the chronosystem.

The first level of the model is the *microsystem* and is made up of an individual's immediate environment. It consists of the people and places that one interacts with daily. Next is the mesosystem. The *mesosystem* is characterized by the connections between microsystems (Backonja et al., 2014). It includes the interactions and relationships between microsystems, such as between an individual's parents and their teachers or between their family and friends (Backonja et al.). The next level is the *exosystem*, where social structures that do not directly interact with the individual, exert influence on the mesosystem (Backonja, et al., 2014). These include a parent's workplace, community resources, and government policies (Backonja et al., 2014). For example, a parent with a demanding career may take those stresses home and affect the relationship with their child. The next level is the *macrosystem*, which involves broader cultural and societal structures in which all other systems are embedded (Newman & Newman, 2022). Significant factors in this system are social norms, values, laws, media, and healthcare, that construct the larger social, political, educational, and financial contexts for development (Bennett & Grimley, 2001). Lastly, there is the *chronosystem*. The chronosystem is the most peripheral layer and involves the dimension of time and the changes that both an individual and their environment go through (Zwemer et al., 2022). It represents the entirety of events and circumstances that unfold over an individual's lifespan and shape their psychosocial development. For instance, an individual goes through multiple transitions and experiences over

life such as marriage, death of a family member, and technological advancements that affect their behaviour and decision making (Zwemer et al., 2022).

Overall, this model underscores the complex bidirectional relationship that that an individual has with their environment during development (Bronfenbrenner, 1979). Furthermore, it recognizes that changes at one level of a system can directly or indirectly influence another level. Additionally, ecological systems theory acknowledges the impacts of time, in that humans and environments are constantly evolving and transforming (Tudge & Rosa, 2020).

Both Eriksons's insights on psychosocial development and Bronfenbrenner's ecological systems theory offer valuable insights into how sports can influence development. Research has shown that participation in sports can positively impact various aspects of personal and social development, including identity formation, academic achievement, and psychological well-being (Barber et al., 2001; Eccles & Barber, 1999; Panza et al., 2020). Moreover, youth sports offer a unique opportunity for development, being a prevalent leisure activity with rates of at least one third participation in nearly every nation (Aubert et al., 2018). This provides an ideal setting for social interaction and personal growth (O'Donelle et al., 2020). Furthermore, sports are considered a vehicle for exercise which a host of downstream health benefits including improving mental health and well-being (Harrison & Narayan, 2003; O'Donelle et al., 2020).

An integral study by Barber et al. (2001) known as the Michigan Study of Adolescent Life Transitions, investigated youth sports participation and multiple academic outcomes. The authors found that engagement in team sports was positively associated with self-reported enjoyment of school, higher grades, and increased likeliness to attend college. Furthermore, sport has implications for psychosocial development (O'Donelle et al., 2020). According to Erikson, a primary developmental task of adolescence is to resolve ones' identity crisis (Erikson, 1968).

Sport offers a unique context for this identity development to occur, presenting an opportunity establish a sense of self (Danish et al., 1993). For example, a study by Busseri et al. (2011) investigated sport engagement identity status (i.e., perception of self in relation to others and beliefs) and found that sport involvement was associated with higher interpersonal identity achievement (i.e., feeling confident and secure). Furthermore, a seminal study more sport-specific by Harrison and Narayan (2003) examined the effects of sports participation on psychological benefits and healthy behaviours. They found a host of psychosocial benefits from individuals who played team sports including a positive outlook on parental relationships, more inclined to exhibit high self-esteem, and less likely to experience feelings of sadness, anxiety, or suicidal behaviour. More recently, research has supported the psychological benefits of sport participation (Panza, et al., 2020; Wang et al., 2022). For example, Panza et al. (2020) examined the relationship between adolescents' involvement in organized sports and their experiences of anxiety and depression. Their analyses suggests that individuals who engaged in organized sport exhibited notably fewer symptoms of anxiety and depression compared to their counterparts who were not involved in sports. Furthermore, a meta-analysis conducted by Wang et al. (2022) investigated the effects of exercise on depression in adolescents. The results indicated that engaging in physical activity has a beneficial impact on alleviating depression in this population.

One can use these theories to further examine and understand the mechanisms in which influence these outcomes. From an ecological systems perspective it is understood that interactions within the microsystem and macrosystem exert the most influence when creating suitable contexts for positive youth development (PYD) (Holt & Neely, 2011). Although sport would be considered primarily part of an individual's microsystem and mesosystem, it is also impacted by external factors that include the exosystem and macrosystem. At the individual level

the focus is on parents, peers, and coaches (Holt & Neely, 2011) Research has shown that relationships characterized by positive interactions such as a having a supportive family environment and effective coaching can cultivate positive youth development (Holt & Neely, 2011). For example, a study by Gould and colleagues (2012) found that coaches who curated a supportive, caring mastery-oriented environment led to increased positive developmental experiences in youth. These findings are consistent with Erikson's biopsychosocial perspective that emphasizes the influence that social interaction and culture have on an individual.

Overall, developmental psychology offers insight and understanding for how both individual and environmental factors influence youth development. Erikson's psychosocial stages and Bronfenbrenner's ecological systems theory accentuate the importance of social interactions, the environment, and individual characteristics on impacting an individual's growth.

Sociocultural Context

In the current study, the relationship between life skills, life skills transfer, and mental health were studied within a population of youth athletes in Portugal. Portugal presents a compelling context for studying the relationships between life skills, life skill transfer, and mental health among youth athletes. For instance, a nationwide study conducted in Portugal revealed alarming statistics, with 42% of young individuals exhibiting signs of depression (Público, 2022). Despite calls in Portugal to use a diverse range of educational settings such as youth sport to promote mental health, decision makers in these countries have had very few discussions relating to the intersection of mental health and youth sport (Burge et al., 2023).

The unique sporting context in Portugal is also important to consider as it pertains to the current study. For instance, youth sport in Portugal is mainly centered on performance development (i.e., technical, tactical, physical development) and winning (Santos et al., 2021)

and mental health remains relatively absent from formal sport policies, and from youth sport organizations' philosophies and practices. Santos et al. (2024) revealed the extent that coaches in Portugal, influenced by these social and cultural forces often disregarded the development and transfer of life skills due the pressure to win, considering it out of their scope of practice. Therefore, demonstrating links between life skills learned in sport, life skills transfer, and mental health in the context of Portuguese youth sport may contribute to a more balanced conversation about youth development through sport, and address calls for more focus on mental health.

Chapter 3: Methods

Recruitment

The current project is part of a larger research program. Ethics approval was attained through the Center for Research and Innovation in Education in Portugal (reference PA02/CE/23, see Appendix 1). Recruitment occurred between January and May 2024 by members of the larger research team. Purposeful sampling was used to recruit youth athletes from sports teams in Portugal. Two researchers from one local polytechnic institute in Portugal recruited athletes via two venues. Willing parents were also contacted directly through a database established from previous studies conducted in Portugal by the researcher from the polytechnic institute in Portugal. These parents were provided with a parental consent form (see Appendix 2). The parental consent form stated the purpose, procedures, benefits, as well as any foreseeable potential harms of the study. The parental consent form also highlighted that the study was not an assessment, participation was voluntary, and participants had the right to withdraw at any time with no negative consequences. To maintain confidentiality and facilitate data management, each participant was assigned a unique identifier. This code enabled the linking of participant data while ensuring anonymity. Parents were informed that all information and data would be destroyed if participants wished to withdraw from the study. This process involved using the unique participant code to securely identify and delete the data upon request. Youth interested in participating were directed to a personal link on the Qualtrics website. Youth were notified of their right to anonymity and confidentiality. They were also informed that data were acquired from multiple programs simultaneously, and were analyzed and reported at the program level to protect the confidentiality of any one-sport program or any one athlete. After providing informed consent, athletes were directed to an online survey where they completed questions about life

skills, life skill transfer, and mental health. After all data were collected and anonymized using the unique participant codes, I (Landon Gross) obtained access to the dataset.

Participants

Purposeful sampling was used to recruit 12–18-year-old athletes in Portugal, which encompasses the start and end of youth sport participation. The athletes were required to be participating in a competitive youth sport program to ensure they had sufficient exposure to organized youth sport. A power analysis was run (input power and effect size used), which determined that 580 athletes was needed to adequately power the study.

In total, 271 participants completed the survey. We removed 106 participants from the study for failing to complete the study. The final sample was comprised of 165 (121 male, 44 female) competitive youth sport athletes from Portugal. The average age of athletes was 15.31 (SD = 2.28) years. The athletes represented different sports: soccer (*n* = 143), futsal (*n* = 13), rowing (n = 8), and basketball (*n* = 1). The average amount of years playing competitive sport was 6.44 (SD = 3.46).

Measures

Athletes completed a demographic questionnaire (see Appendix 3), the Life Skills Scale for Sport—Transfer Scale (LSSS-TS Mossman et al., 2021, see Appendix 4), and the Sport Mental Health Continuum – Short Form (Sport MHC-SF; Foster & Chow, 2019, see Appendix 5).

Life Skills Scale for Sport—Transfer Scale (LSSS-TS)

Life skills and Life Skills transfer were assessed using Life Skills Scale for Sport-Transfer Scale Portuguese Version (P-LSSS-TS; Nascimento Junior, in progress, see Appendix 6). The P-LSSS-TS is a translated and adapted version of the Life Skills Scale for Sport- Transfer

Scale (Mossman et al., 2021, see Appendix 4). The P-LSSS-TS is constructed in two parts, with part one measuring life skill development and the second measuring life skill transfer. Life skill development was assessed based on participants' responses, who were to asked to rate how much they think playing sports has helped them develop or learn various life skills. Life skills were measured on eight different dimensions: Teamwork (7 items), Goal Setting (7 items), Social skills (5 items), Problem solving (4 items), Time management (4 items), Communication (4 items), Leadership (8 items), and Emotional skills (4 items). Participants responded to each item on a five-point Likert-scale ranging from 1 (not at all) to 5 (very much).

Life skills transfer was assessed based on whether participants perceived they transferred eight key life skills to five different domains away from sport. For example, when assessing communication skills, the item stem for transfer is "I use these communication skills…" Example items include social settings (e.g., "when interacting with friends"), education (e.g., "in school/education"), home life (e.g., "at home"), in the community (e.g., "within my community"), employment (e.g., "in my job/when doing chores"), and a general life skill (e.g., "in other areas of my life"). Participants respond to items on a scale ranging from 1 (not at all) to 5 (very much). The 40-item transfer scale addresses five key domains: 1) school/education, 2) home/family, 3) community, 4) social settings, and 5) employment. Initial evidence for the content, factorial, and convergent validity, as well as the internal reliability consistency has been shown for the LSSS-TS scale in youth sport participants from a variety of sports (Mossman et al., 2021). For the purposes of this study, we will be using the translated version.

Mental Health Continuum in Sport —Short Form (Sport MHC-SF)

The mental health functioning of athletes was measured using the Sport Mental Health Continuum Portuguese Version (P-Sport MHC-SF; see Appendix 7). The P-Sport MHC-SF is a

translated and adapted version of the Sport Mental Health Continuum – Short Form (Sport MHC-SF; Foster & Chow, 2019, see Appendix 5). The P-Sport MHC-SF is a 14-item scale that is designed to measure three dimensions of sport: a) subjective, (b) social, (c) psychological. Sport subjective well-being is defined as a sense of satisfaction and happiness within sport, with a focus on emotions and feelings (Foster & Chow, 2019). Sport psychological well-being is successful daily functioning and personal improvement in sport (Foster & Chow, 2019). Sport social well-being is defined as the extent of an individual's functionality in sport (Foster & Chow, 2019). The instrument was adapted from the Mental Health Continuum Short Form (MHC-SF, Keyes et al., 2008) and represents a sport-specific version of the test. The Sport Mental Health Continuum—Short Form has yet to be validated in Portuguese. Thus, members of our researcher team translated the items. However, the MHC-SF has been adapted to Portuguese (i.e., P-MHC-SF, see Appendix G) by Fonte et al. (2020) and evidence for the scale's factorial validity, convergent and divergent validity, and internal consistency reliability has been found with population of 905 Portuguese adolescents. The P-MHC-SF was also shown to have evidence for external and internal validity, reliability, and factor structure in adults (Fonte et al., 2020). Evidence for the internal consistency and discriminant validity of the MHC-SF has also been found using data from Portuguese youth (Carvalho et al., 2016).

Analyses

Analyses were conducted in four steps. The first step involved performing missing data and patterns of missingness analyses. Results showed that 0.2% of data were missing. Results from a Levene's test of equal variance were non-significant. This suggests that the patterns of missingness were random. The missing data were imputed using a Markov chain Monte Carlo (MCMC) imputation method. The second step involved calculating descriptive statistics (see

table 1). Data from the P- LSSS-TS and the P-Sport MHC-SF were screened at the factor-level for normality. All factors were considered negatively skewed. Mental health and subjective sport well-being were leptokurtic, while social sport well-being, teamwork, teamwork transfer, goal setting, goal setting transfer, social skills, social skills transfer, problem solving, problem solving transfer, emotional skills, emotional skills transfer, leadership, leadership transfer, time management, time management transfer, communication, and communication transfer were found to be platykurtic. Due to issues with Skewness and Kurtosis, we used the maximum likelihood estimator (MLR) for our analyses as it is robust to non-normality (Byrne, 2016).

The third step involved assessing bivariate correlations between factors from the P-LSSS-TS, and the P-Sport MHC-SF to see if further mediation analyses were justified. Mediation analyses are justified when (a) significant relationships exist between the independent variables (i.e., Life skill development) and dependent variables (i.e., mental health outcomes); (b) significant relationships exist between the independent variables (i.e., Life skill development) and the mediator variables (i.e., Life skills transfer); and (c) significant relationships exit between the mediator variables (i.e., Life skills transfer) and the dependent variables (mental health outcomes).

The fourth step involved performing path analyses using the Mplus software. Three models were tested. First, we assessed the cross-sectional relationships between life skill development and mental health outcomes. Second, the cross-sectional relationships between life skill development and life skills transfer were tested. Third, we tested associations between life skills transfer and mental health outcomes. For the final step, we used Mplus to perform mediational analyses to explore the relationships between the independent variables (i.e., life skill development) and our dependent variables (i.e., mental health outcomes) when the mediator

(i.e., life skills transfer) was included in the model. Direct and indirect effects were estimated using a bootstrap estimator, which does not impose the assumption of normality and provides more accurate confidence intervals especially for small sample sizes and non normal distributions.

Full mediation was assumed if (a) a significant relationship existed between an independent and a dependent variable when tested independently; (b) a significant relationship existed between the independent variable and the mediator variable, as well as the mediator variable and a dependent variable when the mediator was entered into the model; and (c) the previously significant relationship between the independent and dependent variable were no longer significant when the mediator was added to the model. Partial mediation was assumed if the same circumstances occurred, but the relationship between the independent and dependent variable remained significant when the mediator is added to the model. Finally, indirect effects were tested by assessing changes on the dependent variable when (a) scores on the independent variable were held fixed; and (b) scores on the mediator variable corresponded with a standardized one-unit increase on the independent variable.

Chapter Four: Results

In this section, the results from the analyses of each research question are presented. The descriptives and bi-variate correlations are included below.

Descriptive Statistics

See Table 1 and Table 2 for descriptives.

Correlation analyses

Results indicated small to large correlations (.17-.92) between life skill development, life skills transfer, and mental health (Field, 2017). Since significant correlations existed between the independent and dependent variables, independent and mediator variables, and mediator and dependent variables, the rationale for pursing mediation analyses was supported. See Tables 3, 4, and 5 for Pearson correlation coefficients between all variables.

Table 1

Descriptive Statistics

Variable	MH	SubSWB	SocSWB	PsycSWB	TW	TWTS	GS	GSTS	SS	SSTS
Mean	4.20	4.24	4.10	4.18	4.42	3.94	4.29	3.98	4.03	3.95
Standard Deviation	0.79	0.83	0.93	0.86	0.52	0.78	0.59	0.77	0.77	0.79
Skew	-1.57	-1.33	-1.31	-1.33	-0.55	-0.82	-0.69	-0.79	-0.57	-0.95
Kurtosis	4.84	3.99	2.26	3.02	-0.48	1.27	0.08	0.93	-0.15	1.92

Note. MH- Mental health; SubSWB- Subjective Sport well-being; SocSWB- Social Sport well-being; PsycSWB- Psychological Sport well-being; TW- Teamwork; TWTS; Teamwork transfer; GS- Goal setting; GSTS- Goal setting transfer; SS- Social skills; SSTS- Social skills transfer

Table 2

Descriptive Statistics

Variable	PS	PSTS	EMS	EMSTS	LEAD	LEADTS	TM	TMTS	COM	COMTS
Mean	4.08	3.93	4.18	3.84	4.12	3.79	4.00	3.90	4.14	3.99
Standard Deviation	0.70	0.79	0.67	0.85	0.65	0.91	0.78	0.83	0.70	0.77
Skew	-0.75	-0.77	-0.75	-0.37	-0.28	-0.67	-0.38	-0.46	-0.52	-0.78
Kurtosis	1.13	1.17	0.84	-0.50	-0.47	0.28	-0.49	-0.06	-0.32	0.84

Note. PS- Problem solving; PSTS- Problem solving transfer; EMS- Emotional skills; EMSTS- Emotional skills transfer; LEAD- Leadership; LEADTS- Leadership transfer; TM- Time management; COM- Communication; COMTS- Communication transfer

Table 3

Bivariate Relationships

Variable	MH	SubSWB	SocSWB	PsycSWB	TW	TWTS	GS	GSTS	SSA	SSTS	PS	PSTS	EMS	EMSTS	LEAD	LEADTS	TM	TMTS	COM	COMTS
MHAV	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SubSWB	.79***	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SocSWB	.92**	.67**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PsycSWB	.92**	.61**	.74**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TW	.44**	.37**	.38**	.42**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TWTS	.45**	.38**	.42**	.40**	.58**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GS	.35**	.24**	.29**	.38**	.68**	.56**	1	-	-	-	-	-	-	-	-	-	-	-	-	-

Note. MH- Mental health; SubSWB- Subjective Sport well-being; SocSWB- Social Sport well-being; PsycSWB- Psychological Sport well-being; TW- Teamwork; TWTS; Teamwork transfer; GS- Goal setting; GSTS- Goal setting transfer; SS- Social skills; SSTS- Social skills transfer; PS- Problem solving; PSTS- Problem solving transfer; EMS- Emotional skills; EMSTS- Emotional skills transfer; LEAD- Leadership; LEADTS- Leadership transfer; TM- Time management; COM- Communication; COMTS- Communication transfer; *$p \leq 0.05$, ** $p \leq 0.01$, ** $p \leq 0.001$

Table 4

Bivariate Relationships

Variable	MH	SubSWB	SocSWB	PsycSWB	TW	TWTS	GS	GSTS	SS	SSTS	PS	PSTS	EMS	EMSTS	LEAD	LEAD	TM	TMTS	COM	COMTS
GSTSAVG	.32**	.28**	.29**	.28**	.51**	.78**	.47**	1	-	-	-	-	-	-	-	-	-	-	-	-
SSAVG	.27**	.21**	.26**	.26**	.58**	.65**	.54**	.67**	1	-	-	-	-	-	-	-	-	-	-	-
SSTSAVG	.37**	.27**	.36**	.34**	.48**	.70**	.46**	.82**	.76**	1	-	-	-	-	-	-	-	-	-	-
PSAVG	.23**	.21**	.18*	.24**	.57**	.56**	.70**	.56**	.69**	.62**	1	-	-	-	-	-	-	-	-	-
PSTSAVG	.37**	.30**	.33**	.34**	.52**	.75**	.48**	.81**	.73**	.85**	.66**	1	-	-	-	-	-	-	-	-
EMSAVG	.25**	.17*	.19*	.27**	.50**	.46**	.63**	.49**	.62*	.51**	.73**	.57**	1	-	-	-	-	-	-	-
EMSTSAVG	.31**	.26**	.28**	.29**	.48**	.70**	.46**	.75**	.60**	.72**	.55**	.76**	.59**	1	-	-	-	-	-	-

Note. TW- Teamwork; GS- Goal setting; SS- Social skills; PS- Problem solving; EMS- Emotional skills; LEAD- Leadership; TM- Time management; COM- Communication; TWTS- Teamwork transfer; GSTS- Goal setting transfer; SSTS- Social skills transfer; PST- Problem solving transfer; EMSTS- Emotional skills transfer; LEADTS- Communication transfer; MH- Mental health;

*$p \leq 0.05$, ** $p \leq 0.01$, ** $p \leq 0.001$

Table 5

Mediation Relationships

Variable	MH	SubS WB	SocS WB	PsycS WB	TW	TWTS	GS	GSTS	SS	SSTS	PS	PSTS	EMS	EMST S	LEAD	LEAD TS	TM	TMTS	COM	COM TS
LEADA VG	.41**	.35**	.36**	.38**	.71**	.62**	.68**	.63**	.69**	.64**	.73**	.67**	.69**	.63**	1	-	-	-	-	-
LEADT SAV	.33**	.28**	.32**	.27**	.49**	.67**	.49**	.78**	.65**	.78**	.63**	.81**	.52**	.77**	.68**	1	-	-	-	-
TMAVG	.28**	.24**	.27**	.23**	.55**	.57**	.58**	.56**	.61**	.59**	.68**	.64**	.66**	.61**	.72**	.67**	1	-	-	-
TMTSA VG	.34**	.29**	.33**	.29**	.51**	.68**	.52**	.74**	.62**	.76**	.62**	.77**	.58**	.79**	.71**	.84**	.75**	1	-	-
COMAV G	.34**	.28**	.29**	.32**	.57**	.63**	.61**	.58**	.76**	.66**	.73**	.66**	.62**	.53**	.78**	.60**	.64**	.65**	1	-
COMTS AVG	.33**	.26**	.29**	.31**	.54**	.62**	.50**	.75**	.69**	.75**	.56**	.76**	.54**	.73**	.66*	.80**	.56**	.79**	.66**	1

Note. TW- Teamwork; GS- Goal setting; SS- Social skills; PS- Problem solving; EMS- Emotional skills; LEAD- Leadership; TM- Time management; COM- Communication; TWTS- Teamwork transfer; GSTS- Goal setting transfer; SSTS- Social skills transfer; PSTS- Problem solving transfer; EMSTS- Emotional skills transfer; LEADTS- Communication transfer; MH- Mental health;

*$p \leq 0.05$, ** $p \leq 0.01$, ** $p \leq 0.001$

Path Analyses

Research Question 1. The structural models included life skills development as the independent variables and mental health functioning as the dependent variable. Notably, a single measure of mental health was used in the first model. The single measure was calculated by averaging the scores on all 14 mental health items of the Mental Health Continuum in Sport – Short Form. Mental health was positively and significantly associated with life skill development in teamwork ($\beta = 0.67$, $p < 0.001$), and goal setting ($\beta = 0.79$, $p < 0.001$), social skills ($\beta = 0.38$, $p < 0.001$), problem solving ($\beta = 0.28$, $p < 0.001$), emotional skills ($\beta = 0.27$, $p < 0.01$), leadership ($\beta = 0.30$, $p < 0.001$), time management ($\beta = 0.26$, $p < 0.001$), and communication ($\beta = 0.27$, $p < 0.001$). When including teamwork, goal setting, social skills, problem solving, emotional skills, leadership, time management, and communication as the independent variable in the model, the models explained 45.40%, 63.10%, 14.50, 8.00%, 7.40%, 8.80%, 6.70%, and 7.60% of the variance in mental health respectively.

The next structural models included life skill development as the independent variables and the subjective sport well-being (mental health subscale) as the dependant variable. Subjective sport well-being was positively and significantly associated life skill teamwork ($\beta = 0.33$, $p < 0.001$), goal setting ($\beta = 0.34$, $p < 0.001$), social skills ($\beta = 0.68$, $p < 0.001$), problem solving ($\beta = 0.74$, $p < 0.001$), emotional skills ($\beta = 0.76$, $p < 0.001$), leadership ($\beta = 0.77$, $p < 0.001$), time management ($\beta = 0.79$, $p < 0.001$), and communication ($\beta = 0.84$, $p < 0.001$). The proportions of variance in subjective sport well-being explained by the models were 11.20%, 11.80%, 46.60%, 55.30%, 57.20%, 58.40%, 62.10%, when teamwork, goal setting, social skills,

problem solving, emotional skills, leadership, time management, and communication were the independent variables in the model respectively.

The structural models included life skills development as the independent variables and social sport well-being (mental health subscale) as the dependent variable. Social sport well-being was positively and significantly associated with life skill development in team work (β = 0.29, $p < 0.001$), goal setting ($\beta = 0.34$, $p < 0.001$), social skills ($\beta = 0.63$, $p < 0.001$), problem solving ($\beta = 0.58$, $p < 0.001$), emotional skills ($\beta = 0.66$, $p < 0.001$), leadership ($\beta = 0.66$, $p < 0.001$), time management ($\beta = 0.53$, $p < 0.001$), and communication ($\beta = 0.60$, $p < 0.001$). When including teamwork, goal setting, social skills, problem solving, emotional skills, leadership, time management, and communication as the independent variable in the model, the models explained 8.50%, 11.30%, 39.00%, 33.10%, 43.10%, 42.90%, 27.90%, 35.60% of the variance in social sport well-being respectively.

The structural models included life skills development as the independent variable and psychological sport well-being (mental health subscale) as the dependant variable. Psychological sport well-being was positively and significantly associated with life skill development in teamwork ($\beta = 0.29$, $p < 0.001$), goal setting ($\beta = 0.33$, $p < 0.001$), social skills ($\beta = 0.62$, $p < 0.001$), problem solving ($\beta = 0.75$, $p < 0.001$), emotional skills ($\beta = 0.75$, $p < 0.001$), leadership ($\beta = 0.76$, $p < 0.001$), time management ($\beta = 0.73$, $p < 0.001$), and communication ($\beta = 0.80$, $p < 0.001$). The proportions of variance in psychological sport well-being explained by the models were 8.60%, 10.80%, 38.30%, 56.90%, 56.30%, 57.40%, 52.70%, 64.10%, when teamwork, goal setting, social skills, problem solving, emotional skills, leadership, time management, and communication were the independent variables in the model respectively.

Research Question 2. The structural model included life skills development as the independent variables and life skills transfer as the dependent variables. Each life skills transfer scale was positively and significantly associated with its respected life skills development scale: teamwork ($\beta = 0.74$, $p < 0.001$), goal setting ($\beta = 0.44$, $p < 0.001$), social skills ($\beta = 0.56$, $p < 0.001$), problem solving ($\beta = 0.67$, $p < 0.001$), emotional skills ($\beta = 0.62$, $p < 0.001$), leadership ($\beta = 0.57$, $p < 0.001$), time management ($\beta = 0.63$, $p < 0.001$), and communication ($\beta = 0.67$, $p < 0.001$). When including teamwork, goal setting, social skills, problem solving, emotional skills, leadership, time management, and communication as the independent variable in the model, the models explained 54.80%, 19.30%, 31.30%, 44.80%, 38.90%, 32.60%, 39.00%, 45.00% of the variance in life skills transfer respectively.

Research Question 3. The structural model included life skills transfer as the independent variables and mental health functioning as the dependent variable. Mental health was positively and significantly associated with life skills transfer in each domain: teamwork ($\beta = 0.61$, $p < 0.001$), goal setting ($\beta = 0.37$, $p < 0.001$), social skills ($\beta = 0.23$, $p < 0.001$), problem solving ($\beta = 0.21$, $p < 0.05$), emotional skills ($\beta = 0.20$, $p < 0.05$), leadership ($\beta = 0.17$, $p < 0.05$), time management ($\beta = 0.35$, $p < 0.001$), and communication ($\beta = 0.24$, $p < 0.01$). The proportions of variance in mental health functioning explained by the models were 36.60%, 13.40%, 5.60%, 4.40%, 4.10%, 2.80%, 12.50%, 5.50% when teamwork, goal setting, social skills, problem solving, emotional skills, leadership, time management, and communication were the independent variables in the model respectively.

Mediation analyses

Research question 4. In this series of models, life skills development was included as the independent variables, life skills transfer was included as the mediator variable and mental health functioning served as the dependent variable. See Tables 6, 7. 8, and 9.

Teamwork.

There was a positive relationship teamwork and mental health ($\beta = 0.67$, $p < 0.001$) that was partially mediated by the ability to transfer teamwork skills ($\beta = 0.17$, $p < 0.05$, 95% CI = 0.05-0.34). The positive relationships between teamwork and subjective sport well-being ($\beta = 0.33$, $p < 0.001$), social sport well-being ($\beta = 0.29$, $p < 0.001$) psychological sport well-being ($\beta = 0.29$, $p < 0.001$), and were not mediated by the ability to transfer teamwork skills ($\beta = 0.07$, $p = 0.040$, 95% CI = -0.09-0.24; $\beta = 0.17$, $p = 0.040$, 95% CI = -0.01-0.37; respectively). The model explained 47.90% of the variance in mental health.

Goal Setting.

The positive relationships between goal setting and subjective sport well-being ($\beta = 0.34$, $p < 0.001$), social sport well-being ($\beta = 0.34$, $p < 0.001$), and psychological sport well-being ($\beta = 0.33$, $p < 0.001$) were fully mediated by the ability to transfer goal setting skills ($\beta = 0.19$, $p < 0.001$, 95% CI = 0.11-0.3; $\beta = 0.23$, $p < 0.001$, 95% CI = 0.14-0.36; $\beta = 0.22$, $p < 0.001$, 95% CI = 0.14-0.32 respectively). There was positive relationship between goal setting and mental health ($\beta = 0.79$, $p < 0.001$) that was not mediated by the ability to transfer goal setting skills. The proportion of variances explained in the mental health outcomes by the models were 19.30%, 19.30%, 19.30% respectively.

Social Skills.

The positive relationships between social skills and subjective sport well-being ($\beta = 0.68$, $p < 0.001$), social sport well-being ($\beta = 0.63$, $p < 0.001$), and psychological sport well-being ($\beta =$

0.62, $p < 0.001$) were partially mediated by the ability to transfer social skills ($\beta = 0.11$, $p < 0.01$, 95% CI = 0.04-0.20; $\beta = 0.21$, $p < 0.05$, 95% CI = 0.12-0.34; $\beta = 0.13$, $p < 0.01$, 95% CI = 0.04-0.22 respectively). There was a positive relationship between social skills and mental health ($\beta = 0.38$, $p < 0.001$) that was not mediated. The proportion of variances explained in the mental health outcomes were by the models were 31.10%, 31.10%, 31.10% respectively.

Problem Solving.

There was a positive relationship between problem solving and social sport well-being ($\beta = 0.58$, $p < 0.001$) that was fully mediated by the ability to transfer problem solving skills ($\beta = 0.45$, $p < 0.001$, 95% CI = 0.35-0.56). The positive relationships between problem solving and subjective sport well-being ($\beta = 0.74$, $p < 0.001$) and psychological sport well-being ($\beta = 0.75$, $p < 0.001$) were partially mediated by the ability to transfer problem solving skills ($\beta = 0.15$, $p < 0.01$, 95% CI = 0.06-0.25; $\beta = 0.22$, $p < 0.001$, 95% CI = -0.12-0.34 respectively). There was a positive relationship between problem solving and mental health ($\beta = 0.28$, $p < 0.001$) that was not mediated by the ability to transfer problem solving skills. The proportion of variances explained in the mental health outcomes by the models were 44.80%, 44.80 %, 44.80% respectively.

Emotional Skills.

The positive relationships between emotional skills and subjective sport well-being ($\beta = 0.76$, $p < 0.001$) and social sport well-being ($\beta = 0.66$, $p < 0.001$) were partially mediated by the ability to transfer emotional skills ($\beta = 0.15$, $p < 0.01$, 95% CI = 0.06-0.26; $\beta = 0.32$, $p < 0.001$, 95% CI = 0.24-0.43 respectively). The positive relationships between emotional skills and mental health ($\beta = 0.27$, $p < 0.01$), and psychological sport well-being ($\beta = 0.75$, $p < 0.001$) were not mediated by the ability to transfer emotional skills ($\beta = 0.03$, $p = 0.62$, 95% CI = -0.08-0.18;

$\beta = 0.10$, $p = 0.07$, 95% CI = -0.01-0.20 respectively). The proportion of variances explained in the mental health outcomes by the models were 38.90%, 38.90 respectively.

Leadership.

There was a positive relationship between leadership and subjective sport well-being ($\beta = 0.77$, $p < 0.001$), and social sport well-being ($\beta = 0.66$, $p < 0.001$) were partially mediated by the ability to transfer leadership ($\beta = 0.12$, $p < 0.01$, 95% CI = 0.04-0.21; $\beta = 0.21$, $p < 0.001$, 95% CI = 0.11-0.33 respectively). The positive relationships between leadership and mental health ($\beta = 0.30$, $p < 0.001$) and psychological sport well-being ($\beta = 0.76$, $p < 0.001$) were not mediated by the ability to transfer leadership skills. The proportion of variances explained in the mental health outcomes by the models were 32.60 %, 32.60% respectively.

Time Management.

There was a positive relationship between time management and mental health ($\beta = 0.26$, $p < 0.001$) that was fully mediated by the ability to transfer time management skills ($\beta = 0.20$, $p < 0.01$, 95% CI = 0.80-0.34). The positive relationships between time management and subjective sport well-being ($\beta = 0.79$, $p < 0.001$), social sport well-being ($\beta = 0.53$, $p < 0.001$), and psychological sport well-being ($\beta = 0.73$, $p < 0.001$) were partially mediated by the ability to transfer time management skills ($\beta = 0.22$, $p < 0.001$, 95% CI = 0.13-0.33; $\beta = 0.12$, $p < 0.00$, 95% CI = 0.12- -0.33; $\beta = 0.21$, $p < 0.001$, 95% CI = 0.12-0.33 respectively. The proportion of variances explained in the mental health outcomes by the models were 12.80%, 39.00%, 39.00%, 39.00% respectively.

Communication.

The positive relationships between communication and subjective sport well-being ($\beta = 0.84$, $p < 0.001$) and social sport well-being ($\beta = 0.60$, $p < 0.001$) were partially mediated by the

ability to transfer communication skills ($\beta = 0.23$, $p < 0.001$, 95% CI = 0.12-0.36 $\beta = 0.30$, $p < 0.001$, 95% CI = 0.18-0.44 respectively). The positive relationships between communication and mental health ($\beta = 0.27$, $p < 0.001$) and psychological sport well-being ($\beta = 0.80$, $p < 0.001$) were not mediated by the ability to transfer communication skills. The proportion of variances explained in the mental health outcomes by the models were 45.00%, 45.00% respectively.

Table 6

Mediation Relationships

Relationship Tested	Mediator	Direct without mediator	Direct After Mediation	Specific indirect	Relationship
TW→MH	TWT	0.67***	0.50***	0.17*	Partial mediation
GS→MH	GST	0.79***	0.79***	0.009	No mediation
SS→MH	SST	0.38***	0.36***	0.02	No mediation
PS→MH	PST	0.28***	0.25**	0.03	No mediation
EMS→MH	EMST	0.27**	0.24*	0.03	No mediation
LEAD→MH	LEADT	0.30***	0.30***	-0.002	No mediation
TM→MH	TMT	0.26***	0.06	0.20**	Full mediation
COM→MH	COMT	0.28***	0.22**	0.06	No mediation

Note. TW- Teamwork; GS- Goal setting; SS- Social skills; PS- Problem solving; EMS- Emotional skills; LEAD- Leadership; TM- Time management; COM- Communication; TWT- Teamwork transfer; GST- Goal setting transfer; SST- Social skills transfer; PST- Problem solving transfer; EMST- Emotional skills transfer; LEADT- Leadership transfer; TMT- Time management transfer; COMT- Communication transfer; MH- Mental health

*$p \leq 0.05$, ** $p \leq 0.01$, ** $p \leq 0.001$

Table 7

Mediation Relationships

Relationship Tested	Mediator	Direct without mediator	Direct After Mediation	Specific indirect	Relationship
TW→SubSWB	TWT	0.33***	0.26*	0.07	No mediation
GS→SubSWB	GST	0.34***	0.15	0.19***	Full mediation
SS→SubSWB	SST	0.68***	0.57***	0.11**	Partial mediation
PS→SubSWB	PST	0.74***	0.59***	0.15**	Partial mediation
EMS→SubSWB	EMST	0.76***	0.61***	0.15**	Partial mediation
LEAD→SubSWB	LEADT	0.77***	0.65***	0.12**	Partial mediation
TM→SubSWB	TMT	0.79***	0.57***	0.22***	Partial mediation
COM→SubSWB	COMT	0.84***	0.61***	0.23***	Partial mediation

Note. TW- Teamwork; GS- Goal setting; SS- Social skills; PS- Problem solving; EMS- Emotional skills; LEAD- Leadership; TM- Time management; COM- Communication; TWT- Teamwork transfer; GST- Goal setting transfer; SST- Social skills transfer; PST- Problem solving transfer; EMST- Emotional skills transfer; LEADT- Leadership transfer; TMT- Time management transfer; COMT- Communication transfer; SubSWB- Subjective Sport well-being; *$p \leq 0.05$, ** $p \leq 0.01$, ** $p \leq 0.001$

Table 8

Mediation Relationships

Relationship Tested	Mediator	Direct without mediator	Direct After Mediation	Specific indirect	Relationship
TW→SocSWB	TWT	0.29***	0.12	0.17	No mediation
GS→SocSWB	GST	0.34***	0.11	0.23***	Full mediation
SS→SocSWB	SST	0.63***	0.42***	0.21***	Partial mediation
PS→SocSWB	PST	0.58***	0.12	0.45***	Full mediation
EMS→SocSWB	EMST	0.66***	0.34***	0.32***	Partial mediation
LEAD→SocSWB	LEADT	0.66***	0.44***	0.21***	Partial mediation
TM→SocSWB	TMT	0.53***	0.07	0.46***	Full mediation
COM→SocSWB	COMT	0.60***	0.30***	0.30***	Partial mediation

Note. TW- Teamwork; GS- Goal setting; SS- Social skills; PS- Problem solving; EMS- Emotional skills; LEAD- Leadership; TM- Time management; COM- Communication; TWT- Teamwork transfer; GST- Goal setting transfer; SST- Social skills transfer; PST- Problem solving transfer; EMST- Emotional skills transfer; LEADT- Leadership transfer; TMT- Time management transfer; COMT- Communication transfer; Social Sport well-being;

*$p \leq 0.05$, ** $p \leq 0.01$, ** $p \leq 0.001$

Table 9

Mediation Relationships

Relationship Tested	Mediator	Direct without mediator	Direct After Mediation	Specific indirect	Relationship
TW→PsycSWB	TWT	0.29***	0.14	0.15	Underpowered to determine
GS→PsycSWB	GST	0.33***	0.11	0.22***	Full mediation
SS→PsycSWB	SST	0.62***	0.49***	0.13**	Partial mediation
PS→PsycSWB	PST	0.75***	0.54***	0.22***	Partial mediation
EMS→PsycSWB	EMST	0.75***	0.66***	0.10	No mediation
LEAD→PsycSWB	LEADT	0.76***	0.67**	0.09	No mediation
TM→PsycSWB	TMT	0.83***	0.51***	0.21***	Partial mediation
COM→PsycSWB	COMT	0.80***	0.78***	0.02	No mediation

Note. TW- Teamwork; GS- Goal setting; SS- Social skills; PS- Problem solving; EMS- Emotional skills; LEAD- Leadership; TM- Time management; COM- Communication; TWT- Teamwork transfer; GST- Goal setting transfer; SST- Social skills transfer; PST- Problem solving transfer; EMST- Emotional skills transfer; LEADT- Leadership transfer; TMT- Time management transfer; COMT- Communication transfer; PsycSWB- Psychological Sport well-being; *$p \leq 0.05$, ** $p \leq 0.01$, ** $p \leq 0.001$

Chapter Five: Discussion

The purpose of this study was to test the relationships between life skills, life skills transfer, and mental health, with a particular interest in whether life skills transfer mediated the relationships between life skills and mental health. In this chapter, I discuss implications of findings presented in Chapter 4, make suggestions for targeted counselling interventions programs, and identify the strengths and weaknesses of this study.

Similar to previous studies, our results showed strong associations between life skills, life skills transfer, and mental health (Mahanta et al., 2021; Savoji & Ganji, 2013; Segrin & Taylor 2007). However, the current study adds to the literature by investigating the mediating effects of life skills transfer. The inclusion of life skills transfers as a mediator allowed us to explore a potential explanatory mechanism that offers a more nuanced understanding of how life skills influence mental health. For example, we can identify which life skills need to be transferred to have an effect on mental health. Notably, there were no life skills that were directly related to all mental health outcomes without being mediated by life skills transfer. These results add to the conversation around the explicit and implicit nature of teaching life skills through sport (Bean et al., 2018; Danish et al., 1992; Pierce et al., 2018), and suggest that an explicit approach may be more favourable. In other words, the results suggest that when targeting mental health outcomes, practitioners (e.g., coaches and counselling and sport psychologists) should explicitly focus on the transfer of life skills (especially relationships that are fully mediated) when tailoring interventions for youth athletes to maximize the effectiveness of their intervention.

Through mediation analyses, it is also possible to detect which life skills may depend most on explicit approaches. For instance, time management transfer either fully or partially mediated relationships between time management and all aspects of mental health. Similarly,

goal setting transfer fully mediated the relationships between three facets of mental health in sport (subjective, social, and psychological) but not the relationship with overall mental health. This suggests that time management or goal setting taught only as a sport specific skill will have little to no impact on mental health outcomes.

Conversely, teamwork, goal setting, social skills, problem solving, emotional skills, leadership, and communication were all directly linked with at least one mental health outcomes without mediation. Moreover, many direct effects between life skills and mental health outcomes (e.g., social skills, teamwork) were not contingent on transfer when measuring overall mental health. These results suggest that implicit approaches can contribute positively to mental health outcomes (Bean et al., 2018; Holt et al., 2017; Turnnidge et al., 2014; Pierce et al., 2017). Together, our results highlight the complexity of life skills transfer, whereby, individuals' continuous interactions with and interpretations of their environments can lead to either positive or negative outcomes through explicit or implicit processes (Pierce et al., 2017).

Through our models, we can also learn which life skills have the greatest impact on mental health development. Of the life skills, goal setting had the strongest relationships to overall mental health functioning. One reason may be that goal setting increases interest in the activity as well as self-efficacy (Latham, 2004). Suggesting that athletes are more engaged in daily activities and that when they proceed towards their goal, they believe more in their ability to succeed. These findings are supported by fundamental neuroscience research showing connections between goal directed behaviours and the brains reward systems (Shultz et al., 1997). Specifically, when individuals participate in goal setting, the brains dopaminergic pathway, called the mesolimbic system or reward systems is activated and dopamine is released into brain structures throughout this pathway (Lewis et al., 2021).

One of these structures is the ventral striatum, which is associated with a sense of pleasure and reinforcement during goal directed behaviours contributing to amplification of motivation and achievement (Shultz et al., 1997). With each small step towards that goal, athletes should feel a sense of accomplishment and an associated release of dopamine to create positive emotions associated with goal directed behaviour. Thus, goal setting itself may be inherently therapeutic due to its unique connection to positive emotion and increased self-efficacy.

The large effect size observed between teamwork and mental health may be explained by developmental theories and empirical research on social connections. Self-Determination theory (Ryan & Deci, 2000b) suggests that human beings have three fundamental psychological needs of autonomy, competence, and relatedness. Relatedness refers to the need for a sense of belonging and meaningful connection to others (Ryan & Deci, 2000a) and is pertinent to our understanding of how teamwork impacts mental health outcomes in sport. Teamwork may fulfill the core human need of relatedness by enhancing meaningful relationships with teammates through social connections, shared goals, support, and identity development (Baumeister & Lear, 1995; Kozlowski & Bell, 2003).

When looking at subjective sport well-being, communication had the strongest relationship, with the relationship being partially mediated by the ability to transfer communication skills. The large relationship between these two variables may be understood by communications ability to shape an athletes emotional and psychological environment in sport. For example, communications skills may facilitate positive interactions with coaches and teammates and help develop stronger relationships. Given that communication can enhance relationships with coaches, who have been identified as key social agents in the development and transfer of life skills (Camiré et al., 2019; Cronin & Allen, 2018), improved communication may

create a positive feedback loop. Specifically, better communication skills strengthen coach-athlete relationships, which in turn improves the development and transfer of life skills, forming a positive feedback loop. Additionally, better communication skills may allow individuals to express and articulate their emotions more effectively. This directly aligns with the definition of subjective sport well-being that emphasizes feelings and emotions when accounting for a sense of satisfaction and happiness in sport.

For social sport well being, leadership and emotional skills equally had the strongest relationship with social skills being third and all with large effect sizes (β = 0.66; β =0.66; β = 0.63; respectively). The prominence of leadership, emotional, and social skills as predictors of social well-being aligns with Keyes' (1998) framework of social functioning. Keyes proposed five aspects of social functioning (a) social coherence; (b) social acceptance; (c) social actualization; (d) social contribution; (e) social integration. These skills may help an athlete execute behaviours that allow for role fulfillment and satisfy aspects of social functioning in sport which is essential for social sport well-being. For example, leadership skills are likely to enhance an athlete's ability to exert influence over their team. This could look like controlling team direction, attitude, and motivation. Having the ability to mould their team's performance and culture may suggest that they are capable of functioning effectively within their sport, therefore increasing social sport well-being.

The emergence emotional and social skills may not be surprising when thinking about the how they might interact. For example, effective leadership skills in sport calls for both emotional skills (understand and regulate emotions) and social skills (communication and motivation), suggesting they are interrelated. These skills then allow for an athlete to understand and recognize not only their own emotional experience but also their teammates. This should be

important for high pressure situations and dealing with adversity throughout a season. As such, individuals with greater emotional and social skills should be better leaders, suggesting that these skills are interrelated and play a role in increasing functionality in sport.

For psychological sport well-being, time management was shown to have the strongest relationship. This relationship may be explained by the notion of environmental mastery. According to Ryff's (1989), psychological well-being (PWB) consists of six components, with one of them being the ability to contend on their own accord to the complex environment around them (i.e., environmental mastery; Ryf & Keyes, 1995). Athletes with strong time management skills may manage their schedules more efficiently, allowing them to balance their schedule maximizing sport and personal responsibility. With improved schedules and a greater sense of responsibility, athletes may then feel a greater sense of control and competency that allows for growth and functioning in sport.

Limitations and Future Directions

While this study provides valuable insight into the potential explanatory mechanism of life skills transfer when looking at the relationship between life skill development and mental health outcomes in sport, it is not without limitations. First, based on a power analysis we determined that 580 participants would be required for our mediational analyses. Despite our numerous attempts to collect data, our final sample was composed of only 165 athletes. Being underpowered can lead to more error, increased variability, and the inability to detect relationships that may exist. For instance, when testing whether the relationship between teamwork and psychological sport well-being was mediated by teamwork transfer, the results indicated an initial relationship ($\beta = 0.29$, $p < 0.001$) between teamwork and psychological sport well-being when the mediator was not included in the model. When the mediator was entered

into the model the direct effect between teamwork and psychological sport well-being became non-significant ($\beta = 0.14$, $p = 0.18$), suggesting full mediation. However, the indirect effect was only trending toward being significant ($\beta = 0.15$, $p = 0.07$), suggesting no mediation. With the current sample size, it is possible that this relationship was in fact mediated by transfer, but we lacked sufficient statistical power to detect the relationship. This relationship should not be expounded as no relationship but rather as unclear and justifies further exploration.

Another limitation was that the sample predominantly consisted of males. While Portugal scored 32nd on the Global Gender Gap report in 2023 (World Economic Forum, 2023), indicating high sex parity, our sample does not reflect this balance. Results from previous research presents prominent sex differences in youth development, including psychological and mental health outcomes (Platt et al., 2021; Salk et al., 2017). For example, a meta-analysis from Salk and colleagues (2017) revealed several major findings. The sex difference in depression emerges early and peaks during adolescence, and that countries with higher sex equity showed greater differences in depression diagnoses but not for overall symptoms. This is supported by a more recent investigation that confirmed that gap increase among adolescents (Platt et al., 2021). Additionally, there are sex differences in sports engagement as well as females experiencing more adverse social experiences in sport (Slater & Tiggemann, 2011). Thus, our results may largely represent male perspectives in sport and the reader should consider important aspects of female development in sport. Future studies should consider purposively sampling a homogenous group of female adolescents to attain a better understanding. Additionally, whether the sex paradox applies to the context of sport participation.

This study also consisted of athletes from predominantly one sport: soccer. This single sport focus has both strengths and limitations. Soccer is the most popular sport in the world.

According to Fédération Internationale de Football ´ Association's (FIFA's) Big Count (2006) there was 265 million players worldwide. Additionally, soccer is considered to the most popular sport in Portugal. While a more diverse range of sports may help with comparing developmental outcomes across sporting contexts, the findings speak to the cultural significance that soccer holds in Portugal and the world. This suggests that the results of our study are generalizable to wide range of individuals. In contrast, the results may be less generalizable to countries with less enthusiasm for soccer.

While this study focused on youth athletes in Portugal, there are compelling reasons to believe our findings could generalize to Western countries such as Canada and the United States, particularly for those involved in ice hockey and football. The similarities in adolescent development, team sport dynamics, and the cultural significance of these sports in their respective countries provide a strong basis for comparison. In Portugal, soccer holds a place of cultural prominence similar to ice hockey in Canada and American football in the United States. Additionally, the psychological and social challenges faced by adolescent males in team sports environments are likely to be comparable across these contexts (Slater & Tiggemann, 2011). This similarity in the role and structure of culturally significant team sports for adolescent males provides a strong foundation for the potential generalizability of our findings to Canadian hockey players and American football players, offering valuable insights that could inform youth sport programs and mental health initiatives in these countries.

Another limitation of this study was the exclusion of participants due to incomplete responses. A total of 106 responses were removed from the analysis, which affected the sample size. Initially, forced responses were not enabled and the surveys were part of a larger battery, likely contributing to participant fatigue and incomplete data. After identifying this issue, the

surveys were given separately with a shorter completion time, and forced responses were turned on to improve data collection.

Lastly, this study only measures the mediation effect of life skills transfer (i.e., whether transfer is occurring). Future studies could look even deeper at the relationship between life skills and mental health by testing which specific domain of transfer is most important (i.e., work, home) to the relationship between life skills and mental health.

Chapter 6 General Discussion

The present results contribute significantly to the body of literature from a contextual, theoretical, and clinical/applied perspective.

Contextual Relevance

Recently, Santos et al. (2021) outlined major problems in the current sports culture in Portugal, with one being the mission for many sport clubs is to win at all costs, all the while, also boasting about the character development that occurs automatically through sport participation. Our results highlight that life skill development is complex and that while some skills may be implicitly taught (i.e., occur naturally), there were no life skills that were directly related to all mental health outcomes without being mediated by life skills transfer. This suggests that participation in sport alone may not be sufficient to generate mental health benefits, and that more explicit approaches to teaching life skills should be adopted within the Portugues sport setting. Especially since, "The value of this approach has yet to be acknowledged in the Portuguese sport system but may be crucial for substantial and sustainable change in the current status quo." (Santos et al., 2021).

Santos et al. (2021) also called for policy changes in the Portuguese sport system that focus on what specific developmental outcomes (i.e., life skills) should be pursued. Our results point to specific life skills that should be focused within sport. For instance, goal setting, communication, leadership, emotional skills, and time management were most strongly related to mental health outcomes, highlighting their importance as developmental outcomes deserving of focused attention. Moving forward, our results suggest the Portuguese sport system could prioritize these specific life skills as a starting point to create sporting experiences that promote development beyond performance and support mental health and well-being as well.

Theoretical Implications

Past research has identified sport as a vehicle for positive youth development (PYD) and authors have begun to make ties between life skill development and mental health (Savoji & Ganji, 2013; Segrin & Taylor 2007). For instance, Savoji & Ganji (2013) showed that university students who developed life skills also improved their mental health. Segrin and Taylor (2007) discovered that enhanced social skills were positively associated with indicators of psychological well-being. However, the connection between life skills and mental health has been limited to a didactic perspective, where teaching life skills has been simply correlated with mental health or proxies of mental health (Mahanta et al., 2021). Thus, although a connection between life skills and mental health has been found, there is no information on how life skills are related to mental health. In the current study, we tested life skills transfer as a potential explanatory mechanism for these relationships. We looked at 32 different relationships and found that 6 were fully mediated and 14 were partially mediated. Showing that 20/32 relationships relied, at least in part, on this explanatory mechanism. These results give us confidence that the ability to transfer many of these skills to other areas of life is an important consideration when explaining the relationship between life skills and mental health.

Our results also add to the well-being literature grounded in Keyes' (2002) model of mental health. Keyes proposed that mental health requires three components of well-being: emotional well-being (EWB), psychological well-being (PWB), and social well-being (SWB). Our study is the first to our knowledge to identify which life skills are connected to each facet of mental health in a sports context. If you want to improve subjective well-being, emphasis should be placed on communication. If you want to enhance social well-being focus on leadership and emotional skills. To boost psychological well-being focus on time management. Thus, our study

expands on Keyes' model and provides guidance for improving mental health in sport by connecting life skills with certain dimensions of well-being.

Our findings also add to the conversation about explicit and implicit teaching of life skills (Turnnidge et al., 2014). Previous research has shown support for both approaches (Holt et al., 2008; Newman, 2020). For instance, Holt and colleagues (2008) executed a case study with athletes from a high school soccer team and found that life skills were being developed even with little evidence for the teaching of them. Conversely, Bean and Forneris (2016) examined the differences in developmental outcomes across youth programs based on how intentionally they taught life skills and found that programs with deliberately structured approaches that explicitly focused on teaching life skills scored higher in both positive youth development and program quality. Others have found mixed results. For instance, based on results from semi-structured interviews after a university program aimed at explicitly teaching life skills, Newman (2020) found that youth identified and applied life skills that were both explicitly taught and others that were not. Although there is support for each type, there explicit approach appears to be more widely supported (Bean et al., 2014; Santos et al., 2020). A limitation of the aforementioned studies is that their methodology did not allow for testing the intricate relationships between the approaches and the resulting developmental outcomes. In our study, we included transfer as a mediator that allowed us to identify which skills are more likely to need implicit and explicit approaches. We found that time management, goal setting, problem solving, and social skills may require more explicit approaches seeing that their effect on mental health needed transfer, while teamwork appeared was the only skill impacting mental health irrespective of transfer.

Our study adds to the field of developmental psychology by aligning with Erikson's (1968) theory of psychosocial development, particularly during the critical stage of identity

formation versus role confusion (i.e., adolescence). Erikson emphasized that adolescence is a period where individuals must navigate social interactions and cultural contexts to form a clear sense of self. According to Erikson (1968), successful navigation of this stage results in the development of a strong, stable identity and solid understanding of who they are and where they belong in their world. In our study, our leadership measure (i.e., ability to positively influence a group, organize team members, and motivate others) provided a proxy measure for their social interactions and capacity to navigate the cultural context of sport. Moreover, our measure of social sport well-being (i.e., the extent of and individual's functionality in sport) provided a proxy for how well athletes' felt they fit within the cultural context of sport. Given leaderships association with social sport well-being, we can argue sport is venue for adolescents to develop a sense of self through social interactions and manipulation and experimentation within this environment. However, to make more substantive claims about the role that sport plays, and the impact of life skills have on identity formation versus role confusion, future research is required that specifically measures these outcomes. For instance, studies could use the Erikson Psychosocial Stage Inventory (EPSI) (Rosenthal et al., 1981) or the updated version, the Modified EPSI (MEPSI) (Darling-Fisher, 2019), to assess such outcomes.

Our results also extend the connection with Bronfenbrenner's ecological systems theory (1979). Bronfenbrenner suggests that human development is influenced by the interaction of multiple interconnected systems such as the microsystem (i.e., family, sport, teammates) and mesosystem (interactions between microsystems). By using life skills transfer as a mediator, we show how interactions between contexts within athletes' microsystems influence mental health and well-being. For example, developing time management skills in the sport microsystem was associated with subjective, social, and psychological well-being. However, the mediation effects

suggest the relationship between time management learned in sport and mental health is dependent on interactions with other microsystems (i.e., applying skills learned in sport to school and work). Taken together, our findings show support for the crucial interactions between nested systems (i.e., the mesosystem) serve as a key mediator between microsystem experiences and mental health outcomes.

Clinical/Applied Implications

From an applied perspective, our findings have implications for both counselling/sport psychology as well sport club staff. By further understanding the relationship between life skills, life skills transfer, and mental health, we can inform the development/enhancement of clinical interventions, and sport guidelines/policy. From our results we can identify which life skills are more closely related to overall mental health (i.e., goal setting) and subsets of mental health in sport (e.g., communication, leadership and emotional skills, and time management). We also uncovered which skills require practitioners to focus on the transfer process for promoting mental health. Our results suggest practitioners (i.e., coaches, counselling, and sport psychologists) should prioritize the transfer of life skills—for the relationships that were fully mediated (i.e., time management) when designing interventions to maximize effectiveness on mental health outcomes.

Sport club staff could use these finding to inform their day-to-day work as well as guidelines/policy. The results suggest that coaches should be trained to implement coaching strategies that explicitly teach life skills and emphasize their transfer to other areas of life. For example, coaches could engage in workshops and learn about the connection between life skills and mental health to enhance their work with athletes. Such programs exist, like the Coaching for Life skills program, which was created to aid high school coaches in curating environments

that were favourable for teaching life skills (Camiré et al., 2018). Specifically, workshops were presented in five units: (a) provide coaches with information about their position to teach life skills, (b) present evidence on coaching philosophies in high school sport, (c) focus on coach-athlete relationships, (d) be provided with strategies for promoting the development of life skills in sport, (e) provide information on life skills transfer (Camiré et al., 2018). A recent randomized controlled trial evaluating this online coaching for life skills program showed evidence for its effectiveness, showing that coaches' perceptions can be positively shifted after program completion (Camiré et al., 2020). Taken together, this suggests that providing coaches with knowledge and tools to explicitly support the development of life skills and their transfer, sport clubs may be able to maximize the benefits of sport participation and support the mental health and well-being of their athletes.

In practice counselling/sport psychologists may use these findings in a variety of ways including through psychoeducation, skill building, goal setting, role-playing etc. For example, when providing psychoeducation, the clinician could explain the concept of time management within and beyond sport. Additionally, to begin skill building, the clinician may collaborate with the client to create routines and practice daily scheduling. Subsequently, the clinician could reinforce the transfer process by prompting the client to reflect on how time management could be applied to other areas of life. As we know from previous recommendations from counselling/sport psychologists, enhancing knowledge and awareness of transferable skills is crucial (Danish et al., 1992; McKnight et al., 2007). Opportunities practice the transfer of life skills could also be provided through role playing and the assignment of behavioural activation activities (i.e., real life). Ultimately, counselling/sport psychologists can empower clients to apply life skills across a variety of contexts promoting mental health and well-being.

Conclusion

To the best of our knowledge there has been no research on the potential mediating role of life skills transfer in the relationship between life skills development and mental health functioning. In doing so, we introduced a mechanism through which the development of life skill and its influence on mental health can be understood. Our findings add to the literature of positive youth development and counselling by identifying what life skills are more important for mental health outcomes and which life skills may need to be applied in other areas of life in order to affect mental health outcomes.

References

Allen, G., Rhind, D., & Koshy, V. (2015). Enablers and barriers for male students transferring life skills from the sports hall into the classroom. *Qualitative Research in Sport, Exercise and Health, 7*(1), 53-67. https://doi.org/10.1080/2159676X.2014.893898

American Psychological Association. (2014). *Developmental psychology studies humans across the lifespan*. American Psychological Association. https://www.apa.org/education-career/guide/subfields/developmental#:~:text=Developmental%20psychologists%20study%20human%20growth,primarily%20on%20research%20or%20teaching.

Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*(3), 261-271. https://psycnet.apa.org/buy/1993-03487-001

Aubert, S., Barnes, J. D., Abdeta, C., Nader, P. A., Adeniyi, A. F., Aguilar-Farias, N., Andrade Tenesaco, D. S., Bhawra, J., Brazo-Sayavera, J., Cardon, G., Chang, C., Nyström, C. D., Demetriou, Y., Draper, C. E., Edwards, L., Emeljanovas, A., Gába, A., Galaviz, K. I., González, S. A., ... Tremblay, M. S. (2018). Global matrix 3.0 physical activity report card grades for children and youth: Results and analysis from 49 countries. *Journal of Physical Activity and Health, 15*(2), 251-273. https://doi.org/10.1123/jpah.2018-0472

Avolio, B. J., & Bass, B. M. (1991). *Full range leadership development* (2nd ed.). Sage Publications.

Backonja, U., Hall, A. K., & Thielke, S. (2014). Older adults' current and potential uses of information technologies in changing world: A theoretical perspective. *International Journal of Aging and Human Development, 80*(1), 41-63. https://doi.org/10.1177/0091415015591109

Barber, B. L., Eccles, J. S., & Stone, M. R. (2001). Whatever happened to the jock, the brain, and the princess? Young adult pathways linked to adolescent activity involvement and social identity. *Journal of Adolescent Research, 16*(5), 429-459. https://doi.org/10.1177/0743558401165002

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497-529. https://doi.org/10.1037/0033-2909.117.3.497

Bean, C., & Forneris, T. (2016). Examining the importance of intentionally structuring the youth sport context to facilitate positive youth development. *Journal of Applied Sport Psychology*, *28*(4), 410–425. https://doi.org/10.1080/10413200.2016.1164764

Bean, C., Kromers. S., Forneris, T., & Camiré, M. (2018). The implicit/explicit continuum of life skills development and transfer. *Quest, 70*(4), 456-470. https://doi.org/10.1080/00336297.2018.1451348

Bean, C., Kromers, S., Harlow, M. (2022). Exploring life skills transfer processes in youth hockey and volleyball. *International Journal of Sport and Exercise Psychology, 22*(1), 263-282. https://doi.org/10.1080/1612197X.2020.1819369

Bennett, J., & Grimley, L. K. (2001). Parenting in the global community: A cross-cultural/international perspective. In M. J. Fine & S. W. Lee (Eds.), *Handbook of diversity in parent education: The changing faces of parenting and parent education* (pp. 97–132). Academic Press. https://doi.org/10.1016/B978-012256483-3/50006-X

Benson, P. L. (2003). Developmental assets and asset-building community: Conceptual and empirical foundations. In R. M. Learner & P. L Benson (Eds.). *Developmental assets and*

asset-building communities: Implications for research, policy, and practice (pp.19–43). https://doi.org/10.1007/978-1-4615-0091-9_2

Bergeron, M. F., Mountjoy, M., Armstrong, N., Chia, M., Côté, J., Emery, C. A., Faigenbaum, A., Hall Jr, G., Kriemler, S., Léglise, M., Malina, R. M., Pensgaard, A. M., Sanchez, A., Soligard, T., Sundogt-Borgen, J., van Mechelen, W., Weissensteiner, J. R., & Engebretsen, L. (2015). International Olympic committee consensus statement on youth athletic development. *British Journal of Sports Medicine*, *49*(13), 843-851.

Botvin, G. J., & Griffin, K. W. (2004). Life skills training: Empirical findings and future directions. *Journal of Primary Prevention, 25*(2), 211-232. https://doi.org/10.1023/B:JOPP.0000042391.58573.5b

Botvin, G. J., Griffin, K. W., & Williams, C. (2015). Preventing daily substance use among high school students using a cognitive-behavioral competence enhancement approach. *World Journal of Preventive Medicine, 3*(3), 48-53. https://doi:10.12691/jpm-3-3-1

Branje, S. J. T., & Koper, N. (2018). Psychosocial development. In M.H. Bornstein (Eds.), *The SAGE encyclopedia of lifespan human development* (pp. 1772-1774). SAGE Publications, Inc. http://dx.doi.org/10.4135/9781506307633.n661

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*(7), 513–531. https://doi.org/10.1037/0003-066X.32.7.513

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.

Bronfenbrenner, U., & Morris, P. A. (1998). The Ecology of developmental processes. In W. Damon, & R. M. Lerner (Orgs.), *Handbook of child psychology, Vol. 1: Theoretical models of human development* (pp. 993-1028). New York: John Wiley.

Brooks, D. K. (1984). A life-skills taxonomy: Defining elements of effective functioning through the use of Delphi technique. Unpublished doctoral dissertation. The University of Georgia.

Buckley, L. D. & Budzyna, D. D. (2023). *The whole child: Development in the early years*. Remixing Open Textbooks with and Equity Lens Project. https://rotel.pressbooks.pub/whole-child/front-matter/introduction-2/

Burge, L., Santos, F., Camiré, M., Ferreira, M., MacDonald, D. J. (2023). Examing Portugese national sport organizations' managerial strategies towrds human development: What counts as effective practice in youth sport? *Motricade, 19*(4), https://doi.org/10.6063/motricidade.31384

Busseri, M. A., Costain, K. A., Campbell., K. M., Rose-Krasnor, L., & Evans, J. (2011). Brief report: Engagement in sport and identity status. *Journal of Adolescence, 24*(5), 1087-1091. https://doi.org/10.1016/j.adolescence.2010.06.004

Butterworth, G., & Harris, M. (2014*). Principles of developmental Psychology*. In Psychology Press eBooks. https://doi.org/10.4324/9781315804675

Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basica concepts, applications, and programming* (3rd ed.). Psychology press. https://doi.org/10.4324/9781315757421

Camiré, M., Kendellen, K. (2016). Coaching for positive youth development in school sport. In N. L. Holt (Eds.), *Positive Youth Development Through Sport* (2nd ed., pp. 126-136.). Routledge/Taylor & Francis Group.

Camiré, M., Kendellen, K., Rathwell, S., & Charbonneau, E. F. (2018). Evaluation of the pilot implementation of the coaching for life skills program. *International Sport Coaching Journal*, *5*(3), 227-236. https://doi.org/10.1123/iscj.2018-0006

Camiré, M., Rathwell, S., Turgeon, S., & Kendellen, K. (2019). Coach–athlete relationships, basic psychological needs satisfaction and thwarting, and the teaching of life skills in Canadian high school sport. *International Journal of Sports Science & Coaching, 14*(5), 591–606. https://doi.org/10.1177/1747954119869542

Camiré, M., Kendellen, K., Rathwell., & Turgeon, S. (2020) Evaulating the coaching for life skills online trainng program: A randomised controlled trial. *Psychology of Sport and Exercise, 48*: 101649. https://doi.org/10.1016/j.psychsport.2020.101649

Carvalho, J. S., Pereira, N. S., Pinto, A. M., & Marôco, J. (2016). Psychometric properties of the mental health continuum-short form: A study of Portuguese speaking children/youths. *Journal of Child and Family Studies, 25*(7), 2141-2154. https://doi.org/10.1007/s10826-016-0396-7

Chinkov, A. E., & Holt, N. L. (2016). Implicit transfer of life skills through participation in Brazilian jiu-jitsu. *Journal of Applied Sport Psychology*, *28*(2), 139– 153. https://psycnet.apa.org/doi/10.1080/10413200.2015.1086447

Cronin, L. D., & Allen, J. (2018). Examining the relationships among the coaching climate, life skills development and well-being in sport. *International Journal of Sports Science & Coaching*, *13*(6), 815-827. https://doi.org/10.1177/1747954118787949

Crook, J. M., & Robertson, S. E. (1991). Transitions out of elite sport. *International Journal of Sport Psychology, 22*(2), 115-127. https://psycnet.apa.org/record/1992-11053-001

Damon, W. (2004). What is positive youth development? *The ANNALS of the American Academy of Political and Social Science*, *591*(1), 13–24. https://doi.org/10.1177/0002716203260092

Danish, S. J. (1983). Musings about personal competence: The contributions of sport, health, and fitness. *American Journal of Community Psychology*, *11*(3), 221–240. https://doi.org/10.1007/bf00893365

Danish, S. J. (1996). Interventions for enhancing adolescents' life skills. *The Humanistic Psychologist, 24*(3), 365-381. https://doi.org/10.1080/08873267.1996.9986864

Danish, S. J. (2002). SUPER *(Sports United to Promote Education and Recreation) Program: Leader Manual* (Third Edition). Richmond, VA: Life Skills Center, Virginia Commonwealth University.

Danish, S. J., Petitpas, A. J., & Hale, B. D. (1992). A Developmental-Educational Intervention Model of Sport Psychology. *The Sport Psychologist*, *6*(4), 403–415. https://doi.org/10.1123/tsp.6.4.403

Danish, S. J., Petitpas, A. J., & Hale, B. D. (1993). Life development intervention for athletes: Life skills through sports. *The counseling psychologist*, *21*(3), 352-385. https://doi.org/10.1177/0011000093213002

Darden, C. A., Ginter, E. J., & Gazda, G. M. (1996). Life-skills development scale—adolescent form: The theoretical and therapeutic relevance of life-skills. *Journal of Mental Health Counseling. 18*(1)*,* 142-163.

Darling-Fisher, C. S. (2019). Application of the modified Erikson psychosocial stage inventory: 25 years in review. *West Journal of Nursing Research, 41*(3), 431-458. https://doi.org/10.1177/0193945918770457

Doré, I., Sabiston, C. M., Sylvestre, M., Brunet, J., O'Loughlin, J., Nader, P. A., Gallant, F., & Bélanger, M. (2019). Years participating in sports during childhood predicts mental

health in adolescence: A 5-year longitudinal study. *Journal of Adolescent Health. 64*(6), 790-796. https://doi.org/10.1016/j.jadohealth.2018.11.024

Durand-Bush, N., McNiell, K., Harding, M., & Dobransky, J. (2015). Investigating stress, psychological well-being, mental health functioning and self-regulation capacity among university undergraduate students: Is this population optimally functioning? *Canadian Journal of Counselling and Psychotherapy, 49*(3), 253-274.

Dweck, C., & Legget, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*(2), 256-273. https://psycnet.apa.org/doi/10.1037/0033-295X.95.2.256

Dworkin, J. B., Larson, R., & Hansen, D. (2003). Adolescents' accounts of growth experiences in youth activities. *Journal of Youth and Adolescence*, *32*(1), 17–26. https://doi.org/10.1023/a:1021076222321

Eccles, J. S., & Barber, B. L. (1999). Student council, volunteering, basketball, or marching band, What kind of extracurricular involvement matters? *Journal of Adolescent Research, 14*(1), 10-43. https://doi.org/10.1177/0743558499141003

Eime, R.M., Young, J.A., Harvey, J.T., Charity, M.J., & Payne, W.R. (2013). A systematic review of the psychological and social benefits of participation in sport for children and adolescents: Informing development of a conceptual model of health through sport. *International Journal of Behavioral Nutrition and Physical Activity, 10,* 1-21. https://doi.org/10.1186/1479-5868-10-98

Erikson, E. H. (1950). *Childhood and society.* W. W. Norton & company.

Erikson, E. (1964). *Insight and responsibility: Lectures on the ethical implications of psychoanalytic insight*. W. W. Norton & Company

Erikson, E. 1968. *Identity: Youth and Crisis*. New York: Norton

Fédération Internationale de Football ´ Association's (FIFA). (2006). *FIFA big count 2006: 270 million people active in football.* https://rtmag.co.il/images/FIFA_BIG_COUNT.pdf#:~:text=The%20overall%20total%20%E2%80%93%20265%20million%20players%20%E2%80%93,people%20directly%20involved%20in%20football%20to%20270%20million

Field, A. (2017). *Discovering and using IBM SPSS statistics* (5th ed.). Sage Publications.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. *American Psychologist, 34(*10), 906–911. https://doi.org/10.1037/0003-066X.34.10.906

Fonte, C., Silva, I., Vilhena, E., & Keyes, C. L. M. (2020). The Portuguese adaptation of the mental health continuum-short-form for adult population. *Community Mental Health Journal, 56*(2), 368-375. https://doi.org/10.1007/s10597-019-00484-8

Foster, B. J., & Chow, G. M. (2019). Development of the sport mental health continuum—short form (Sport MHC-SF). *Journal of Clinical Sport Psychology, 13*(4), 593–608. https://doi.org/10.1123/jcsp.2017-0057

Fuller, R, D., Percy, V, E., Bruening, J., & Cotrufo R. J. (2013). Positive youth development: Minority male participation in a sport-based afterschool program in an urban environment. *Research Quarterly for Exercise and Sport, 84*(4), 469-482. https://doi.org/10.1080/02701367.2013.839025

Gauvain, M., & Richert, R. (2016). Cognitive development. In H.S. Friedman (Ed.) *Encyclopedia of mental health* (2nd ed., pp. 317–323). Academic Press.

Ginter, E. J. (1996). Three pillars of mental health counseling—watch in what you step. *Journal of Mental Health Counseling. 18,* 99-107.

Ginter, E. J. (1999). David K. Brooks contribution to the developmentally based life-skills approach. *Journal of Mental Health Counseling. 21(3),* 191-202.

Gould, D., Flett, R., & Lauer, L. (2012). The relationship between psychosocial development and the sports climate experienced by underserved youth. *Psychology of Sport and Exercise, 13*(1), 80-87. https://doi.org/10.1016/j.psychsport.2011.07.005

Graupensperger, S., Sutcliffe, J., & Vella, S. (2021). Prospective associations between sport participation and indices of mental health across adolescence. *Journal of Youth and Adolescence, 50*(7), 1450-1463. https://doi.org/10.1007/s10964-021-01416-0

Griffin, K. W., Botvin, G. J., Scheier, L. M., & Williams, C. (2023). Long-term behavioural effects of a school-based prevention program on illicit drug use among adults. *Journal of Public Health Research, 12*(1), 1-5. https://doi.org/10.1177/22799036221146914

Harrison, P. A., & Narayan, G. (2003). Differences in behavior, psychological factors, and environmental factors associated with participation in school sports and other activities in adolescence. *Journal of School Health, 73*(3), 113-120. https://doi.org/10.1111/j.1746-1561.2003.tb03585.x

Hellison, D., & Wright, P. M. (2003). Retention in an urban extended day program: A process-based assessment. *Journal of Teaching in Physical Education, 22*(4), 369-381. https://doi.org/10.1123/jtpe.22.4.369

Hodge, K., Danish, S. J., & Martin, J. (2012). Developing a conceptual framework for life skills interventions. *The Counseling Psychologist*, *41*(8), 1125–1152. https://doi.org/10.1177/0011000012462073

Hodge, K., Danish, S., Forneris, T., & Miles, A. (2016). Life skills and basic psychological needs: A conceptual framework for life skills interventions. In N. L. Holt (Eds.), *Positive Youth Development Through Sport*, (2nd ed., pp. 45-56). Routledge/Taylor & Francis Group. https://doi.org/10.1177/0011000012462073

Holt, N. L., Tink, L., Mandingo, J. L. & Fox, K. R. (2008). Do youth learn life skills through their involvement in high school sport? A case study. *Canadian Journal of Education, 31*(2), 281-304. https://www.jstor.org/stable/20466702

Holt, L., & Neely, C. (2011). Positive youth development through sport: a review. *Revista Iberoamericana De Psicología Del Ejercicio Y El Deporte*, *6*(2), 299–316.

Holt, N. L., McHugh, T. L. F., Tink, L. N., Kingsley, B. C., Coppola, A. M., Neely, K. C., & McDonald, R. (2013). Developing sport-based after-school programmes using a participatory action research approach. *Qualitative Research in Sport, Exercise and Health*, *5*(3), 332–355. https://doi.org/10.1080/2159676x.2013.809377

Holt, N. L., Deal, C. J., & Smyth, C. L. (2016). Future directions for positive youth development through sport. In N. L. Holt (Eds.), *Positive youth development through sport*, (2nd ed., pp. 229–240). Routledge/Taylor & Francis Group. https://doi.org/10.4324/9781315709499

Holt, N. L., Neely, C. K., Slater, L. G., Camiré, M., Côté, J., Fraser-Thomas, J., MacDonald, D., Strachan, L., & Tamminen, K. A. (2017). A grounded theory of positive youth development through sport based on results from a qualitative meta-study. *International Review of Sport and Exercise Psychology*, *10*(1), 1-49. https://doi.org/10.1080/1750984x.2016.1180704

Institute of Health Metrics and Evaluation. *Global Health Data Exchange (GHDx).* Retrieved April 8. 2024, from https://vizhub.healthdata.org/gbd-results

Jacobs, J. M., Wright, P. M. (2017). Transfer of life skills in sport-based youth development programs: A conceptual framework bridging learning to application. *Quest, 70*(1), 81-99. https://doi.org/10.1080/00336297.2017.1348304

Kendellen, K., & Camiré, M. (2021). A creative non-fiction story of an athlete's journey through the life skills application process. *Qualitative Research in Sport, Exercise and Health*, *13*(5), 816–831. https://doi.org/10.1080/2159676x.2020.1803392

Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly, 61*(2), 121-140. https://doi.org/10.2307/2787065

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*(2), 207-222. https://doi.org/10.2307/3090197

Keyes, C. L. M. (2003). Complete mental health: An agenda for the 21st century. In C. L. M. Keyes & J. Haidt (Eds.), *Flourishing: positive psychology and the life well-lived* (pp. 293–312). American Psychological Association. https://doi.org/10.1037/10594-013

Keyes, C. L. M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology, 73*(3), 539–548. https://doi.org/10.1037/0022-006x.73.3.539

Keyes, C. L. M. (2007). Psychological well-being. In *Encyclopedia of Gerontology,* (2nd, pp. 399–406). https://doi.org/10.1016/B0-12-370870-2/00156-6

Keyes, C. L. M., Wissing, M., Potgieter, J. P., Temane, M., Kruger, A., & Van Rooy, S. (2008). Evaluation of the mental health continuum-short form (MHC-SF) in Setswana-speaking

South Africans. *Clinical Psychology & Psychotherapy, 15*(3), 181-192, https://doi.org/10.1002/cpp.572

Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology, 82*(6), 1007–1022. https://doi.org/10.1037/0022-3514.82.6.1007

KidSport (n.d.). *What we do*. KidSport Canada. https://kidsportcanada.ca/what-we-do/

Kinoshita, K. MacIntosh, E. & Sato, S. (2023). Creating sports environments for youth to thrive: Understanding the mechanism to intentions to continue sport and subjective well-being. *International Journal of Sport and Exercise Psychology, 21*(5)*,* 1-20. https://doi.org/10.1080/1612197X.2023.2203699

Kivnick, H. Q., & Wells, C. K. (2014). Untapped richness in Erik H. Erikson's rootstock. *The Gerontologist*, *54*(1), 40-50. https://doi.org/10.1093/geront/gnt123

Knight, Z. G. (2017). A proposed model of psychodynamic psychotherapy linked to Erik Erikson's eight stages of psychosocial development. *Clinical Psychology & Psychotherapy, 24*(5), 1047-1058. https://doi.org/10.1002/cpp.2066

Kozlowski, S. W. J., & Bell, B. S. (2003). Work groups and teams in organizations. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Handbook of psychology: Industrial and organizational psychology,* (pp. 333–375). John Wiley & Sons. https://doi.org/10.1002/0471264385.wei1214

Kuhn, D., & Dean, Jr. D. (2004). Metacognition: A bridge between cognitive psychology and educational practice. *Theory into practice*, *43*(4), 268-273. https://doi.org/10.1207/s15430421tip4304_4

Lai, E. R. (2011). Metacognition: A literature review. *Always learning: Pearson research report*, *24*, 1-40.

Larson, R. W., Hansen, D. M., & Moneta, G. (2006). Differing profiles of developmental experiences across types of organized youth activities. *Developmental Psychology*, *42*(5), 849–863. https://doi.org/10.1037/0012-1649.42.5.849

Latham, G. P. (2004). The motivational benefits of goal-setting. *Academy of Management Perspectives*, *18*(4), 126-129. https://doi.org/10.5465/ame.2004.15268727

Lerner, R. M. (2004). *Liberty: Thriving and civic engagement among American youth.* Sage.

Lerner, R. M., & Castellino, D. R. (2002). Contemporary developmental theory and adolescence: Developmental systems and applied developmental science. *Journal of Adolescent Health, 31*(6), 122–135. https://doi.org/10.1016/S1054-139X(02)00495-0

Lerner, R. M., Almerigi, J. B., Theokas, C., & Lerner, J. V. (2005a). Positive youth development: A view of the issues. *The Journal of Early Adolescence*, *25*(1), 10–16. https://doi.org/10.1177/0272431604273211

Lerner, R. M., Lerner, J. V., Almerigi, J. Theokas, C., Naudeau, S., Gestsdottir, S., Naudeau, S., Jelicic, H., Alberts, A. Ma, L., Smith, L., Bobek, D., Richman-Raphael, D., Simpson, I. Christiansen, E. D., von Eye, A. (2005b). Positive youth development, participation in community youth development programs, and community contributions of fifth grade adolescents: Findings from the first wave of the 4-H study of positive youth development. *Journal of Early Adolescence*, 25 (1), 17-71. https://doi.org/10.1177/0272431604272461

Lewis, R. G., Florio, E., Punzo, D., & Borrelli, E. (2021). The Brain's reward system in health and disease. In O. Engman & M. Brancaccio (Eds.) Circadian clock in brain health and

disease (pp. 57-69). Springer International Publishing. https://doi.org/10.1007/978-3-030-81147-1_4

Mageau, G. A., Vallerand, R. (2003). The coach-athlete relationship: a motivational model. *Journal of Sports Sciences, 21*(11), 883-904. https://doi.org/10.1080/0264041031000140374

Malone, J. C., Liu, S. R., Vaillant, G. E., Rentz, D. M., & Waldinger, R. J. (2016). Midlife Eriksonian psychosocial development: Setting the stage for late-life cognitive and emotional health. *Developmental Psychology, 52*(3), 496-508. https://doi.org/10.1037/a0039875

Mahanta, P., Deuri, S. P., & Sobhana, H. (2021). Importance of life skills education among adolescents. *Indian Journal of Positive Psychology, 12*(4), 403-406.

Mayocchi, L., & Hanrahan, S. J. (2000). Transferable skills for career change. In D. Lavallee, & P. Wylleman (Eds.), *Career transitions in sport: International perspectives* (pp. 95-110). Fitness Information Technology.

McClelland, D. C. (1961). *The achieving society.* Van Nostrand.

McKnight, K. (2007). *Athletic career transition and transferable skills* [master's Thesis] University of Lethbridge.

Mossman, G. J., Robertson, C., Williamson, B., & Cronin, L. (2021). Development and initial validation of the life skills scale for sport – transfer scale (LSSS-TS). *Psychology of Sport and Exercise, 54*, Article 101906. https://doi.org/10.1016/j.psychsport.2021.101906

Navaneelan, T. (2012). *Suicide rates, an overview from 1950 to 2009*. Statistics Canada Catalogue no. 82-624-X. https://www150.statcan.gc.ca/n1/pub/82-624-x/2012001/article/11696-eng.htm

Newman, T. J. (2020). Life skill development and transfer: “They’re not just meant for playing sports”. *Research on Social Work and Practice, 30*(6), 643-657. https://doi.org/10.1177/1049731520903427

Newman, T. J., Ansderson-Butcher, D. (2021). Mechanisms of life skill development and life skill transfer: Interconnections and distinctions among socially vulnerable youth. *Journal of the Society for Social Work and Research, 12*(3), 489-519. https://doi.org/10.1086/715890

Newman, B. M., & Newman, P. R. (2022). *Theories of human development*. (3rd ed.). Taylor & Francis.

O’Donell, A. W., Pegg, K. J., & Barber, B. L. (2020). Sport participation. In S. Hupp & J. D. Jewell (Eds.), *The encyclopedia of child and adolescent development* (pp. 1-12). John Wiley & Sons. https://doi.org/10.1002/9781119171492.wecad434

Orenstein G. A, Lewis L. Eriksons stages of psychosocial development. In *StatPearls [Internet]*. StatPearls Publishing. Retrieved February 10, 2024, from https://www.ncbi.nlm.nih.gov/books/NBK556096/

Panza, M. J., Graupensberger, S., Agans, J. S., Doré, I., Vella, S., & Evans, M. B. (2020). Adolescent sport participation and symptoms of anxiety and depression: A systematic review and meta-analysis. *Journal of Sport and Exercise Psychology, 42*(3), https://doi.org/10.1123/jsep.2019-0235

Pearson, C., Janz., T., & Ali, J. (2013, September). *Health at a glance: Mental and substance use disorders in Canada.* Health statistics Canada. https://www150.statcan.gc.ca/n1/en/pub/82-624-x/2013001/article/11855-eng.pdf?st=RlB6IgjT

Peter, T., Roberts, L. W., & Dengate, J. (2011). Flourishing in life: An Empirical test of the dual continua model of mental health and mental illness among Canadian university students. *International Journal of Mental Health Promotion*, *13*(1), 13–22. https://doi.org/10.1080/14623730.2011.9715646

Petitpas, A. J., Cornelius, A. A., Van Raalte, J. L., & Jones, T. (2005). A framework for planning youth sport programs that foster psychosocial development. *The Sport Psychologist, 19*(1), 63-80. https://doi.org/10.1123/tsp.19.1.63

Pierce, S., Gould, D., & Camiré, M. (2017). Definition and model of life skills transfer. *International Review of Sport and Exercise Psychology*, *10*(1), 186–211. https://doi.org/10.1080/1750984x.2016.1199727

Pierce, S., Kendellen, K., Camiré, M., & Daniel Gould. (2018). Strategies for coaching for life skills transfer. *Journal of Sport Psychology in Action, 9*(1), 11-20. https://doi.org/10.1080/21520704.2016.1263982

Platt, J. M., Bates, L., Jager, J., McLaughlin, K. A., & Keyes, K. M. (2021). Is the US gender gap in depression changing over time? A meta-regression. *American Journal of Epidemiology*, *190*(7), 1190-1206. https://doi.org/10.1093/aje/kwab002

Público (2022). Depressão aumentou nos adolescentes e afecta 42% dos jovens. Retrieved from https://www.publico.pt/2022/09/29/p3/noticia/estudo-revela- depressao-aumentou-adolescentes-afecta-42-jovens-2022320

Rosenthal, D. A., Gurney, R. M., & Moore, S. M. (1981). From trust on intimacy: A new inventory for examining erikson's stages of psychosocial development. *Journal of Youth and Adolescence, 10*(6), 525-537. https://doi.org/10.1007/bf02087944

Roth, J. L., & Brooks-Gunn, J. (2003). What exactly is a youth development program? Answers from research and practice. *Applied Developmental Science, 7*(2), 94-111. https://doi.org/10.1207/S1532480XADS0702_6

Ryan, R. M., & Deci, E. L. (2000a). The darker and brighter sides of human existence: Basic psychological needs as a unifying concept. *Psychological Inquiry, 11*(4), 319-338. https://doi.org/10.1207/S15327965PLI1104_03

Ryan, R. M., & Deci, E. L. (2000b). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, *55*(1), 68. https://doi.org/10.1037/0003-066X.55.1.68

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*(1), 141-166. https://doi.org/10.1146/annurev.psych.52.1.141

Ryan, J. C., & Tipu, S. A. A. (2013). Leadership effects on innovation propensity: A two-factor full range leadership model. *Journal of Business Research, 66*(10), 2116-2129. https://doi.org/10.1016/j.jbusres.2013.02.038

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*(6), 1069–1081. https://doi.org/10.1037/0022-3514.57.6.1069

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, *69*(4), 719–727. https://doi.org/10.1037/0022-3514.69.4.719

Salk, R.H., Hyde, J. S., &Abramson L. Y. Gender differences in depression in representative national samples: Meta-analyses of diagnoses and symptoms. *Psychological Bulletin, 143*(8), 783-822. https://doi.org/10.1037/bul0000102

Savoji, A. P., & Ganji, K. (2013). Increasing mental health of university students through life skills training (LST). *Procedia – Social and Behavioral Sciences, 84*(9), 1255-1259. https://doi.org/10.1016/j.sbspro.2013.06.739

Santos, F., Bean, C., Azevedo, N., Cardoso, A., Pereira, P., Cruz, H. (2020). Moving from an implicit to an explicit approach of life skills development and transfer: The case of surfing in school. *Sage Open, 10*(2), 215824402093331. https://doi.org/10.1177/2158244020933316

Santos, F., Camiré, M., MacDonald, D. J., Strachan, L., Ferreira, M., & Rathwell, S. (2021). Culture, policies, and a move to integrate an assets-based approach to development in the Portuguese sport system. *Motricade,* 17(3), 1-14. https://doi.org/10.6063/motricidade.23842

Santos, F., Callary, B., Azevedo, N., Campos, R., & Furtado, S. (2024). Story surfing coaches' experiences of life skills development. *European Journal for Sport and Society,* 1-14. https://doi.org/10.1080/16138171.2024.2335579

Schultz, W., Dayan, P., & Montague, P. R. (1997). A neural substrate of prediction and reward. *Science 275*(5306), 1593-1599. https://doi.org/10.1126/science.275.5306.1593

Segrin, C., & Taylor, M. (2007). Positive interpersonal relationships mediate the association between social skills and psychological well-being. *Personality and Individual Differences, 43*(4), 637-646. https://doi.org/10.1016/j.paid.2007.01.017

Seligman, M. E. (2002). Positive psychology, positive prevention, and positive therapy. In C. R. Snyder & S. J. Lopez (Eds.) *Handbook of positive psychology* (pp. 3-9). Oxford University Press.

Slater, A., & Tiggemann, M. (2011). Gender differences in adolescent sport participation, teasing, self-objectification and body image concerns. *Journal of Adolescence*, *34*(3), 455-463. https://doi.org/10.1016/j.adolescence.2010.06.007

Smetanin, P., Stiff, D., Briante, C., Adair, C.E., & Khan, M. (2011). The life and economic impact of major mental illnesses in Canada: 2011 to 2041. Prepared for the mental health commission of Canada. Toronto: RiskAnalytica.

Smith, E. A., Swisher, J. D., Vicary, J. R., Bechtel, L. J., Minner, D., Henry, K. L., & Palmer, R. (2004). Evaluation of life skills training and infused-life skills training in a rural setting: Outcomes at two years. *Journal of Alcohol & Drug Education*, *48*(1), 51-71. https://psycnet.apa.org/record/2004-18283-005

Sobhi-Gharamaleki, N. & Rajabi, S. (2010). Efficacy of life skills training on increase of mental health and self-esteem of the students. *Procedia – Social and Behavioral Sciences, 5*(1), 1818-1822. https://doi.org/10.1016/j.sbspro.2010.07.370

Statistics Canada. (2023). Table 13-10-0392-01 *Deaths and age specific mortality rates, by selected grouped causes*. https://doi.org/10.25318/1310039201-eng

Steptoe, A., & Wardle, J. (2017). Life skills, wealth, health, and wellbeing in later life. *Proceedings of the National Academy of Sciences*, *114*(17), 4354–4359. https://doi.org/10.1073/pnas.1616011114

Swann, C., Telenta, J., Draper, G., Liddle, S.K., Fogarty, A., Hurley, D., & Vella, S.A. (2018). Youth sport as a context for supporting mental health: Adolescent male perspectives.

Psychology of Sport and Exercise, 35, 55–64. https://doi.org/10.1016/j.psychsport.2017.11.008

Tudge, J., & Rosa, E. M. (2020). Bronfenbrenner's ecological theory. In S. Hupp. (Eds.), *The encyclopedia of child and adolescent development* (pp.1-11). John Willey & Sons Ltd. https://doi.org/10.1002/9781119171492.wecad251.

Turnnidge, J., Côté, J., & Hancock, D. J. (2014). Positive Youth Development from sport to life: Explicit or implicit transfer. *Quest, 66*(2), 203-217. https://doi.org/10.1080/00336297.2013.867275

Turnnidge, J., Evans, M., Vierimaa, M., Allan, V., & Côte, J. (2016). Coaching for positive youth development. In N. L. Holt (Eds.), *Positive Youth Development Through Sport*, (2nd ed., pp. 137-150). Routledge/Taylor & Francis Group.

Wang, X., Cai, Z., Jiang, W., Fang, Y., Sun, W., & Wang, X. (2022). Systematic review and meta-analysis of the effects of exercise on depression in adolescents. *Child and Adolescent Psychiatry and Mental Health, 16*(1), 16. https://doi.org/10.1186/s13034-022-00453-2

Westerhof, G. J., & Keyes, C. L. (2010). Mental illness and mental health: The two continua model across the lifespan. *Journal of Adult Development, 17*(2), 110-119. https://doi.org/10.1007/s10804-009-9082-y

World Economic Forum. (2023, June). *Global Gender Gap Report 2023*. https://www.weforum.org/reports/global-gender-gap-report-2023/

World Health Organization. (1999). *Partners in life skills education*. Geneva, Switzerland: World Health Organization, Department of Mental Health. Retrieved from http://www.who.int/mental_health/media/en/30.pdf

World Health Organization. (2022). *Mental Health*. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response

Youth Mental Health Canada. (2019). *Youth Mental Health Stats in Canada.* Retrieved October 10, 2023, from https://ymhc.ngo/resources/ymh-stats/#:~:text=An%20estimated%201.2%20million%20children%20and%20youth%20in,of%20Canadians%20will%20have%20developed%20a%20mental%20illness.

Zaff, J. F., Kawashima-Ginsberg, K., & Lin, E. S. (2011). Advances in civic engagement research. In. R. M. Lerner, J. V. Lerner, J. B. Benson (Eds.). *Advances in child development and behavior, 41*, (pp.273–308). https://doi.org/10.1016/b978-0-12-386492-5.00011-7

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds,), *Handbook of self-regulation* (pp. 13-39). Academic press. https://doi.org/10.1016/B978-012109890-2/50031-7

Zwemer, E., Chen, F., Bec Dallaghan, G. L, Shenvi, C., Wilson, L., Martinelli, S. M., Resnick-Kahle, M., Crowner, J., Joyner., B. L., Westervelt., Jordon, J. M., Chuang. A., & Shaheen, A. (2022). Reinvigorating an academy of medical educators using ecological systems theory. *Cureus, 14*(1), e21640. https://doi.org/10.7759/cureus.21640

Appendix 1

Ethics Approval

P.PORTO

Centro de Investigação & Inovação em Educação
Centre for Research & Innovation in Education

A Comissão de Ética do Centro de Investigação e Inovação em Educação (inED) declara que o Projeto "**O Estado Atual do Desporto de Formação em Portugal: Perceções de Treinadores, Atletas e Pais**", apresentado pelo Doutor Fernando Santos, obteve um parecer favorável e cumpre os requisitos éticos necessários (**referência PA02/CE/23)**.

29 de março de 2023

Maria Manuela Pessanha de Brito e Nóbrega

(Pela Comissão de Ética)

Appendix 2

Consent Form

CONSENTIMENTO INFORMADO, LIVRE E ESCLARECIDO PARA PARTICIPAÇÃO EM INVESTIGAÇÃO de acordo com a Declaração de Helsínquia[1] e a Convenção de Oviedo[2]

Por favor, leia com atenção a seguinte informação. Se achar que algo está incorrecto ou que não está claro, não hesite em solicitar mais informações. Se concorda com a proposta que lhe foi feita, queira assinar este documento.

Título do estudo: O Estado Atual do Desporto de Formação em Portugal: Perceções de Treinadores, Atletas e Pais

Enquadramento: Ao longo das últimas décadas, diversos investigadores têm salientado a importância do desporto enquanto contexto útil para o desenvolvimento de crianças e jovens (Bruner et al., 2021; 2022). Para além do ensino de valores e competência para a vida (Harmsel-Nieuwenhuis et al., 2022), o desporto pode representar uma oportunidade para facilitar a prática regular de atividade física. Estes fatores, juntamente com a qualidade de sono e alimentação equilibrada, são preventivos das doenças crónicas não transmissíveis e promovem a saúde em todas as fases da vida (Lopes et al., 2018). A Organização Mundial de Saúde (2020) e o consórcio Europeactive (2021), têm vindo a desenvolver estratégias de forma a aumentar os níveis de atividade física e hábitos alimentares saudáveis, bem como outros comportamentos que permitam diminuir o risco de doença e facilitar uma transição bem-sucedida para a vida adulta (Shinn et al., 2020; Teixeira et al., 2019). Portugal apresenta atualmente um significativo número de novos casos de sobrepeso, de obesidade e aumento do tempo em comportamento sedentário, principalmente em período pós-pandémico (Almeida et al., 2022). Adicionalmente, verifica-se que o desporto, enquanto contexto de atividade física estruturada, pode ter um contributo, em certos casos, limitado para o ensino de valores e competências para a vida (Coakley, 2016). Neste sentido, torna-se necessário mapear, de forma compreensiva e profunda, o estado atual do desporto de formação em Portugal e o seu valor educativo. Especificamente, importa examinar de que forma, recorrendo às perspetivas de treinadores, atletas e pais, o desporto está a ser usado deliberadamente para promover o desenvolvimento dos jovens e contribuir para uma melhor qualidade de vida e funcionalidade.

Explicação do estudo: Com este estudo, pretende-se diagnosticar a qualidade das experiências de atletas em Portugal, bem como as características da intervenção pedagógica do treinador desportivo e dos pais. Neste sentido, pretende-se responder às seguintes questões de investigação: (1) Quais as perceções de jovens atletas acerca da qualidade das suas experiências no desporto de formação filhos e da relação estabelecida com os seus pais/treinador/clube?; (2) Quais as perceções de pais acerca da qualidade das experiências vivenciadas pelos seus filhos e da relação estabelecida com os atletas/treinador/clube?; (3) Quais as perceções de treinadores acerca da qualidade das experiências vivenciadas por jovens atletas e da relação estabelecida com os atletas/pais/clube?.

[1] http://portal.arsnorte.min-saude.pt/portal/page/portal/ARSNorte/Comiss%C3%A3o%20de%20%C3%89tica/Ficheiros/Declaracao_Helsinquia_2008.pdf

[2] http://dre.pt/pdf1sdip/2001/01/002A00/00140036.pdf

Este estudo visa analisar, de forma aprofundada e compreensiva, o estado do desporto de formação em Portugal, permitindo identificar implicações práticas relevantes para a mudança das políticas. Este estudo irá envolver cerca de 800 atletas dos diversos distritos de Portugal com idades compreendidas entre os 6 e 18 anos, bem como 800 pais e treinadores. Serão aplicados questionários, que serão preenchidos em formato digital, centrados em diversas variáveis, a saber: hábitos alimentares, atividade física percebida e sono; escala de desejabilidade social; suporte parental; relação treinador-atleta; clima motivacional; continuum de competências para a vida; experiências dos jovens no desporto; competências para a vida; transferência de competências para a vida; necessidades psicológicas básicas; saúde mental.
Serão, também, realizadas entrevistas com pais, atletas, treinadores e investigadores com a duração aproximada de 40 minutos.
Confidencialidade e anonimato: Será garantido o anonimato, a confidencialidade e uso exclusivo dos dados para o presente estudo. Para mais esclarecimentos, não hesite em contactar o investigador responsável (Fernando Santos, 914362337).

Grato pela sua colaboração!

Assinatura/s: … … … … … … … … … … ... … … … …... … … … … … … … … … … … … …

-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-

Declaro ter lido e compreendido este documento, bem como as informações verbais que me foram fornecidas pela/s pessoa/s que acima assina/m. Foi-me garantida a possibilidade de, em qualquer altura, recusar participar neste estudo sem qualquer tipo de consequências. Desta forma, aceito participar neste estudo e permito a utilização dos dados que de forma voluntária forneço, confiando em que apenas serão utilizados para esta investigação e nas garantias de confidencialidade e anonimato que me são dadas pelo/a investigador/a.

Nome: … … … … … … … …... … … … …... … … … … … … … … … … … … …
Assinatura: … … … … … … … …... … … … … ... … … … … … … … … … … … …
Data: …… /…… /……..

SE NÃO FOR O PRÓPRIO A ASSINAR POR IDADE OU INCAPACIDADE
(se o menor tiver discernimento deve também assinar em cima, se consentir)

NOME: …
BI/CD Nº: ..... DATA OU VALIDADE ….. /..… /…....
GRAU DE PARENTESCO OU TIPO DE REPRESENTAÇÃO: .....
ASSINATURA …

ESTE DOCUMENTO É COMPOSTO DE 1 PÁGINA/S E FEITO EM DUPLICADO:
UMA VIA PARA O/A INVESTIGADOR/A, OUTRA PARA A PESSOA QUE CONSENTE

Appendix 3

Demographic Questionnaire

Género:

_____

Nome:

_____

Idade:

_____

Sexo:

a. Masculino
b. Feminino

Qual a(s) modalidade(s) desportiva(s) que praticas?

_____

Há quantos anos praticas desporto federado?

_____

Há quantos anos estás na tua equipa atual?

_____

Frequências de treinos por semana:

_____

Duração aproximada de cada sessão de treino:

_____

Local de treino:

_____

Escola:

_____

Clube:

_____

Distrito:

_____

Localidade:

_____

País:

_____

Appendix 4

Life Skills Scale for Sport - Transfer Scale

Directions:

Life Skills Questions: Young people have all kinds of experiences and can learn a lot from playing sport. Some of the questions below ask about the skills you may have learned through playing your MAIN sport. For these questions, please rate how much your sport has taught you to perform the skills listed.

Transfer Questions: The life skills that young people learn through sport may be transferred to other areas of life. Some of the questions below ask about the areas you may transfer the life skills to. For these questions, please rate the extent to which you transfer the life skills to each area. When answering these questions, please read back through the life skills questions if necessary.

All Questions: Please answer by circling the number to the right of each question. There are no right or wrong answers, so please answer as honestly as possible.

Teamwork **This sport has taught me to…**	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
Work well within a team/ group.	1	2	3	4	5
Help another team/ group member perform a task.	1	2	3	4	5
Accept suggestions for improvement from others.	1	2	3	4	5
Work with others for the good of the team/ group.	1	2	3	4	5
Help build team/ group spirit.	1	2	3	4	5
Suggest to team/ group members how they can improve their performance.	1	2	3	4	5
Change the way I perform for the benefit of the team/ group.	1	2	3	4	5
I use these teamwork skills…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
In school/ education. [a]	1	2	3	4	5
At home. [a]	1	2	3	4	5
Within my community (e.g., when volunteering). [a]	1	2	3	4	5
In my job/ when doing chores. [a]	1	2	3	4	5
In relationships with others. [a]	1	2	3	4	5
Within my academic studies. [b]	1	2	3	4	5
When engaging with other people in my community. [b]	1	2	3	4	5
In other everyday situations. [b]	1	2	3	4	5
When interacting with friends. [c]	1	2	3	4	5

With my family. [c]	1	2	3	4	5
In other areas of my life. [c]	1	2	3	4	5

Goal Setting

This sport has taught me to…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
Set goals so that I can stay focused on improving.	1	2	3	4	5
Set challenging goals.	1	2	3	4	5
Check progress towards my goals.	1	2	3	4	5
Set short-term goals in order to achieve long-term goals.	1	2	3	4	5
Remain committed to my goals.	1	2	3	4	5
Set goals for practice.	1	2	3	4	5
Set specific goals.	1	2	3	4	5
I use these goal setting skills…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
In school/ education. [a]	1	2	3	4	5
At home. [a]	1	2	3	4	5
Within my community (e.g., when volunteering). [a]	1	2	3	4	5
In my job/ when doing chores. [a]	1	2	3	4	5
In relationships with others. [a]	1	2	3	4	5
Within my academic studies. [b]	1	2	3	4	5
When engaging with other people in my community. [b]	1	2	3	4	5
In other everyday situations. [b]	1	2	3	4	5
When interacting with friends. [c]	1	2	3	4	5
With my family. [c]	1	2	3	4	5
In other areas of my life. [c]	1	2	3	4	5

Social Skills

This sport has taught me to…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
Start a conversation.	1	2	3	4	5
Interact in various social settings.	1	2	3	4	5
Help others without them asking for help.	1	2	3	4	5
Get involved in group activities.	1	2	3	4	5

Maintain close friendships.	1	2	3	4	5
I use these social skills…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
In school/ education. [a]	1	2	3	4	5
At home. [a]	1	2	3	4	5
Within my community (e.g., when volunteering). [a]	1	2	3	4	5
In my job/ when doing chores. [a]	1	2	3	4	5
In relationships with others. [a]	1	2	3	4	5
Within my academic studies. [b]	1	2	3	4	5
When engaging with other people in my community. [b]	1	2	3	4	5
In other everyday situations. [b]	1	2	3	4	5
When interacting with friends. [c]	1	2	3	4	5
With my family. [c]	1	2	3	4	5
In other areas of my life. [c]	1	2	3	4	5

Problem Solving & Decision Making					
This sport has taught me to…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
Think carefully about a problem.	1	2	3	4	5
Compare each possible solution in order to find the best one.	1	2	3	4	5
Create as many possible solutions to a problem as possible.	1	2	3	4	5
Evaluate a solution to a problem.	1	2	3	4	5
I use these problem solving & decision making skills…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
In school/ education. [a]	1	2	3	4	5
At home. [a]	1	2	3	4	5
Within my community (e.g., when volunteering). [a]	1	2	3	4	5
In my job/ when doing chores. [a]	1	2	3	4	5
In relationships with others. [a]	1	2	3	4	5
Within my academic studies. [b]	1	2	3	4	5
When engaging with other people in my community. [b]	1	2	3	4	5
In other everyday situations. [b]	1	2	3	4	5

When interacting with friends. [c]	1	2	3	4	5
With my family. [c]	1	2	3	4	5
In other areas of my life. [c]	1	2	3	4	5

Emotional Skills

This sport has taught me to…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
Know how to deal with my emotions.	1	2	3	4	5
Use my emotions to stay focused.	1	2	3	4	5
Understand that I behave differently when emotional.	1	2	3	4	5
Notice how I feel.	1	2	3	4	5
I use these emotional skills…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
In school/ education. [a]	1	2	3	4	5
At home. [a]	1	2	3	4	5
Within my community (e.g., when volunteering). [a]	1	2	3	4	5
In my job/ when doing chores. [a]	1	2	3	4	5
In relationships with others. [a]	1	2	3	4	5
Within my academic studies. [b]	1	2	3	4	5
When engaging with other people in my community. [b]	1	2	3	4	5
In other everyday situations. [b]	1	2	3	4	5
When interacting with friends. [c]	1	2	3	4	5
With my family. [c]	1	2	3	4	5
In other areas of my life. [c]	1	2	3	4	5

Leadership

This sport has taught me to…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
Know how to positively influence a group of individuals.	1	2	3	4	5
Organise team/ group members to work together.	1	2	3	4	5
Know how to motivate others.	1	2	3	4	5
Help others solve their performance problems.	1	2	3	4	5
Consider the individual opinions of each team/ group member.	1	2	3	4	5

Be a good role model for others.	1	2	3	4	5
Set high standards for the team/ group.	1	2	3	4	5
Recognise other people's achievements.					
I use these leadership skills…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
In school/ education. [a]	1	2	3	4	5
At home. [a]	1	2	3	4	5
Within my community (e.g., when volunteering). [a]	1	2	3	4	5
In my job/ when doing chores. [a]	1	2	3	4	5
In relationships with others. [a]	1	2	3	4	5
Within my academic studies. [b]	1	2	3	4	5
When engaging with other people in my community. [b]	1	2	3	4	5
In other everyday situations. [b]	1	2	3	4	5
When interacting with friends. [c]	1	2	3	4	5
With my family. [c]	1	2	3	4	5
In other areas of my life. [c]	1	2	3	4	5

Time Management					
This sport has taught me to…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
Manage my time well.	1	2	3	4	5
Assess how much time I spend on various activities.	1	2	3	4	5
Control how I use my time.	1	2	3	4	5
Set goals so that I use my time effectively.	1	2	3	4	5
I use these time management skills…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
In school/ education. [a]	1	2	3	4	5
At home. [a]	1	2	3	4	5
Within my community (e.g., when volunteering). [a]	1	2	3	4	5
In my job/ when doing chores. [a]	1	2	3	4	5
In relationships with others. [a]	1	2	3	4	5
Within my academic studies. [b]	1	2	3	4	5

When engaging with other people in my community. [b]	1	2	3	4	5
In other everyday situations. [b]	1	2	3	4	5
When interacting with friends. [c]	1	2	3	4	5
With my family. [c]	1	2	3	4	5
In other areas of my life. [c]	1	2	3	4	5

Communication					
This sport has taught me to…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
Speak clearly to others.	1	2	3	4	5
Pay attention to what someone is saying.	1	2	3	4	5
Pay attention to people's body language.	1	2	3	4	5
Communicate well with others.	1	2	3	4	5
I use these communication skills…	**Not at all**	**A little**	**Some**	**A lot**	**Very much**
In school/ education. [a]	1	2	3	4	5
At home. [a]	1	2	3	4	5
Within my community (e.g., when volunteering). [a]	1	2	3	4	5
In my job/ when doing chores. [a]	1	2	3	4	5
In relationships with others. [a]	1	2	3	4	5
Within my academic studies. [b]	1	2	3	4	5
When engaging with other people in my community. [b]	1	2	3	4	5
In other everyday situations. [b]	1	2	3	4	5
When interacting with friends. [c]	1	2	3	4	5
With my family. [c]	1	2	3	4	5
In other areas of my life. [c]	1	2	3	4	5

Appendix 5

The Sport Mental Health Continuum—Short Form (Sport MHC-SF)

Directions:

Please answer the questions below about how you have been feeling during your participation in the sport. Mark the weekly frequency that best represents the way you've felt over the past month.

During the past month, how often did your sport participation make you feel...	**NEVER**	**ONCE OR TWICE**	**ABOUT ONCE A WEEK**	**ABOUT 2 OR 3 TIMES A WEEK**	**ALMOST EVERY DAY**	**EVERY DAY**
1. happy	**0**	**1**	**2**	**3**	**4**	**5**
2. interested in your sport	**0**	**1**	**2**	**3**	**4**	**5**
3. satisfied	**0**	**1**	**2**	**3**	**4**	**5**
4. that you had something to contribute to your team or sport community	**0**	**1**	**2**	**3**	**4**	**5**
5. that you belonged to your team or sport community	**0**	**1**	**2**	**3**	**4**	**5**
6. that your team or sport community is a good place for all participants	**0**	**1**	**2**	**3**	**4**	**5**
7. that people in your sport are basically good	**0**	**1**	**2**	**3**	**4**	**5**
8. that the way your sport is organized makes sense to you	**0**	**1**	**2**	**3**	**4**	**5**
9. that you liked most parts of your athletic personality	**0**	**1**	**2**	**3**	**4**	**5**
10. good at managing the daily	**0**	**1**	**2**	**3**	**4**	**5**

responsibilities of your sport						
11. that you had warm and trusting relationships with others in your sport	**0**	**1**	**2**	**3**	**4**	**5**
12. that you had sport experiences that challenged you to grow and become a better person	**0**	**1**	**2**	**3**	**4**	**5**
13. confident to think or express your own ideas and opinions to people in your sport	**0**	**1**	**2**	**3**	**4**	**5**
14. that you have a sense of direction or meaning within your sport	**0**	**1**	**2**	**3**	**4**	**5**

Appendix 6

Escala de Habilidades de Vida para o Esporte - Escala de Transferência

Intruções:

Questões sobre habilidades para a vida: Os jovens têm diversos tipos de experiências e podem aprender muito praticando esportes. Algumas das questões abaixo perguntam sobre as habilidades que você pode ter aprendido praticando seu esporte PRINCIPAL. Para estas questões, por favor avalie o quanto seu esporte tem te ensinado a desempenhar as habilidades listadas.

Questões de transferência: As habilidades de vida que jovens aprendem por meio do esporte talvez sejam transferidas para outras áreas da vida. Algumas das questões abaixo perguntam sobre as áreas que você possivelmente transfere estas habilidades. Para estas questões, por favor, avalie o quanto você transfere as habilidades de vida para cada área. Ao responder estas questões, se necessário, por favor, leia novamente as questões de habilidade de vida.

Todas as questões: Por favor, responda circulando o número a direita de cada questão. Não há respostas certas ou erradas. Por favor, responda de forma mais honesta possível.

Trabalho em equipe **Este esporte me ensinou a…**	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Trabalhar bem com um time/grupo.	1		2	3	4 5
Ajudar outro membro do time/grupo a desempenhar uma tarefa.	1		2	3	4 5
Aceitar sugestões dos outros para minha melhoria.	1		2	3	4 5
Trabalhar em conjunto para o bem o time/grupo.	1		2	3	4 5
Ajudar a construir um espírito de time/grupo.	1		2	3	4 5
Sugerir a membros do time/grupo como eles(as) podem melhorar o seu desempenho.	1		2	3	4 5
Mudar a maneira com que eu atuo para o benefício do time/grupo.	1		2	3	4 5

Eu uso estas habilidades de trabalho em equipe…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Na escola/educação.	1 5		2	3	4
Em casa.	1 5		2	3	4
Na minha comunidade (por exemplo, voluntariado).	1 5		2	3	4
No meu trabalho/fazendo minhas obrigações.	1 5		2	3	4
Em relacionamento com os outros.	1 5		2	3	4

Estabelecimento de metas

Este esporte me ensinou a…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Estabelecer metas para permanecer focado(a) na minha melhora.	1 5		2	3	4
Estabelecer metas desafiadoras.	1 5		2	3	4
Checar meu progresso em direção a minhas metas.	1 5		2	3	4
Estabelecer metas a curto prazo para alcançar metas a longo prazo.	1 5		2	3	4
Permanecer comprometido(a) com minhas metas.	1 5		2	3	4
Estabelecer metas para a prática.	1 5		2	3	4
Estabelecer metas específicas.	1 5		2	3	4
Eu uso estas habilidades de estabelecimento de metas…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Na escola/educação.	1 5		2	3	4
Em casa.	1 5		2	3	4
Na minha comunidade (por exemplo, voluntariado).	1 5		2	3	4
No meu trabalho/fazendo minhas obrigações.	1 5		2	3	4
Em relacionamento com os outros.	1 5		2	3	4

Habilidades sociais					
Este esporte me ensinou a…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Iniciar uma conversação.	1 5		2	3	4
Interagir em diversas situações sociais.	1 5		2	3	4
Ajudar os outros sem necessidade de pedir ajuda.	1 5		2	3	4
Se envolver em atividades em grupo.	1 5		2	3	4
Manter amizades intímas.	1 5		2	3	4
Eu uso estas habilidades sociais…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Na escola/educação.	1 5		2	3	4
Em casa.	1 5		2	3	4
Na minha comunidade (por exemplo, voluntariado).	1 5		2	3	4
No meu trabalho/fazendo minhas obrigações.	1 5		2	3	4
Em relacionamento com os outros.	1 5		2	3	4

Resolução de problemas e tomada de decisões					
Este esporte me ensinou a …	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Pensar cuidadosamente sobre um problema.	1 5		2	3	4
Comparar cada solução possível a fim de achar a melhor solução.	1 5		2	3	4
Criar o máximo de soluções possíveis para um problema.	1 5		2	3	4
Avaliar a solução para um problema.	1 5		2	3	4
Eu uso estas habilidades de resolução de problemas e tomada de decisões…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**

Na escola/educação.	1	2	3	4	5
Em casa.	1	2	3	4	5
Na minha comunidade (por exemplo, voluntariado).	1	2	3	4	5
No meu trabalho/fazendo minhas obrigações.	1	2	3	4	5
Em relacionamento com os outros.	1	2	3	4	5

Habilidades emocionais

Este esporte me ensinou a…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Saber como lidar com minhas emoções.	1	2	3	4	5
Usar minhas emoções para permanecer focado(a).	1	2	3	4	5
Entender que me comporto de forma diferente quando estou sob os efeitos de emoções.	1	2	3	4	5
Notar como me sinto.	1	2	3	4	5
Eu uso estas emoções…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Na escola/educação.	1	2	3	4	5
Em casa.	1	2	3	4	5
Na minha comunidade (por exemplo, voluntariado).	1	2	3	4	5
No meu trabalho/fazendo minhas obrigações.	1	2	3	4	5
Em relacionamento com os outros.	1	2	3	4	5

Liderança

Este esporte me ensinou a…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Saber como influenciar positivamente um grupo de indivíduos.	1	2	3	4	5
Organizar os membros de um time/grupo a trabalharem em conjunto.	1	2	3	4	5
Saber como motivas os outros.	1	2	3	4	5
Ajudar os outros a solucionar problemas de desempenho.	1	2	3	4	5
Considerar as opiniões individuais de cada membro do time/grupo.	1	2	3	4	5
Ser um bom modelo para os outros.	1	2	3	4	5
Estabelecer altos padrões para o time/grupo.	1	2	3	4	5
Reconhecer as conquistas de outras pessoas.	1	2	3	4	5
Eu uso estas habilidades de liderança…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Na escola/educação.	1	2	3	4	5
Em casa.	1	2	3	4	5
Na minha comunidade (por exemplo, voluntariado).	1	2	3	4	5
No meu trabalho/fazendo minhas obrigações.	1	2	3	4	5
Em relacionamento com os outros.	1	2	3	4	5

Manejo de tempo

Este esporte me ensinou a…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Manejar bem meu tempo.	1	2	3	4	5
Avaliar quanto tempo eu gasto em diferentes atividades.	1	2	3	4	5
Controlar como uso meu tempo.	1	2	3	4	5
Estabelecer metas para usar meu tempo efetivamente.	1	2	3	4	5

Eu uso estas habilidades de manejo de tempo…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Na escola/educação.	1	2	3	4	5
Em casa.	1	2	3	4	5
Na minha comunidade (por exemplo, voluntariado).	1	2	3	4	5
No meu trabalho/fazendo minhas obrigações.	1	2	3	4	5
Em relacionamento com os outros.	1	2	3	4	5

Comunicação

Este esporte me ensinou a…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Falar claramente com os outros.	1	2	3	4	5
Prestar atenção no que outra pessoa está dizendo.	1	2	3	4	5
Prestar atenção na linguagem corporal das outras pessoas.	1	2	3	4	5
Comunicar-se bem com os outros.	1	2	3	4	5
Eu uso estas habilidades de comunicação…	**Nem um pouco**	**Um pouco**	**Mais ou menos**	**Muito**	**Muitíssimo**
Na escola/educação.	1	2	3	4	5
Em casa.	1	2	3	4	5
Na minha comunidade (por exemplo, voluntariado).	1	2	3	4	5
No meu trabalho/fazendo minhas obrigações.	1	2	3	4	5
Em relacionamento com os outros.	1	2	3	4	5

Appendix 7

Mental Health Continuum in Sport – Short version (Sport-MHC)

Formulário para Atletas

Parte 1. Informações gerais

Nome:_____ Idade:_____

Sexo: ( ) Masculino ( ) Feminino

Modalidade desportiva: _____

Qual é o nome do seu treinador? _____

Tempo (anos) em que pratica a modalidade:_____ Tempo na equipa atual:_____

Frequência de treinos por semana: _____

Duração aproximada de cada sessão de treino:_____

Local de treino: ( ) Escola ( ) Clube

Maior nível competitivo já experienciado: ( ) Regional ( ) Nacional ( ) Internacional

Presença de psicólogo no clube/equipa: ( ) Sim ( ) Não

Se sim, realiza acompanhamento com o psicólogo do clube? *(Considere "acompanhamento" como um momento de conversa/reunião individual com o psicólogo. Desconsidere reuniões em grupo)*

( ) Sim ( ) Não

Se sim, qual a frequência mensal do acompanhamento do psicólogo?

( ) 1 vez ao mês ( ) 2 vezes ao mês ( ) 3 vezes ao mês ( ) 4 vezes ao mês ( ) 5 vezes ou mais ao mês

Parte 2. Informações Sobre o Bem-Estar e Saúde Mental no Esporte

Contínuo de Saúde Mental no Esporte – Versão resumida

Por favor, responda às questões abaixo sobre como você tem se sentido durante sua participação no esporte. Marque a frequência semanal que melhor representa a maneira com que você se sentiu durante o último mês.

1 Nunca	2 Uma ou duas vezes no mês	3 Cerca de uma vez por semana	4 Cerca de duas ou três vezes por semana	5 Quase todos os dias da semana	6 Todos os dias da semana

Durante o último mês, com que frequência a sua participação esportiva fez você se sentir...							
	Questões	**1**	**2**	**3**	**4**	**5**	**6**
1	Regularmente alegre, de bom humor, feliz, calmo e tranquilo no seu esporte.						
3	Satisfeito(a), contente e realizado(a) no seu esporte.						
2	Interessado(a) no seu esporte.						
4	Que você teve algo importante para contribuir para a sua comunidade esportiva (colegas de equipe, treinadores, pais, gestores e outros profissionais do esporte).						
5	Que você pertence à uma comunidade esportiva (colegas de equipe, treinadores, pais, gestores e outros profissionais do esporte).						
6	Que a sua comunidade esportiva (colegas de equipe, treinadores, pais, gestores e outros profissionais do esporte) é um bom lugar para todos(as) os(as) participantes.						
7	Que as pessoas no seu esporte, em geral, são legais com os outros.						
8	Que o modo como o ambiente esportivo funciona faz sentido para você.						
9	Que você gostava da maioria dos seus comportamentos e atitudes no esporte.						
10	Que você administrou bem as responsabilidades do dia a dia do seu esporte.						
11	Que você teve relacionamentos de amizade, prazerosos e de confiança com as pessoas da comunidade esportiva (colegas de equipe, treinadores, pais, gestores e outros profissionais do esporte).						
12	Que você teve experiências esportivas que o(a) desafiaram a crescer, se desenvolver e se tornar uma pessoa melhor.						
13	Que você foi confiante para pensar ou expressar suas próprias ideias e opiniões para as pessoas no seu esporte.						
14	Que você tem um propósito, um objetivo, uma meta ou sentido dentro do seu esporte.						