Advancing Understanding of Toddler and Preschooler Sport Participation: A Research Area in its Infancy

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Abstract

The purpose of this doctoral dissertation was to advance understanding of early-years (<6) sport and organized physical activity (OPA) participation. This research involved a scoping review, followed by a qualitative case-study, which drew upon multiple data collection methods (semi-structured interviews, observation) from multiple perspectives (toddlers, preschoolers, parents, coaches; N=27), providing a comprehensive picture of early-years sport (Baxter & Jack, 2008; Creswell, 2012). Specific goals across four manuscripts/studies were to: (1) systematically review and synthesize research examining developmental outcomes associated with early-years sport involvement, (2) explore parents', coaches', and children's perceived outcomes and experiences of early-years sport, (3) explore early-years sport pathways and patterns of engagement, and (4) explore coaches' experiences in early-years sport, focusing on challenges-faced and strategies drawn-upon for effective coaching. Scoping review findings (Study 1) offer preliminary evidence that early sport and OPA participation is related to primarily positive outcomes (e.g., enhanced social skills, pro-social behaviours, self-regulation); however, negative and inconclusive outcomes were also identified. Study 2 showed some alignment between parents', coaches', and children's perceived outcomes and experiences in early-years sport in the areas of physical activity, energy management, sport skill acquisition, physical literacy, learning to win and lose, and social/life skills. Findings were moderated by children's age, developmental capacities, 'sport readiness', and attendance in other programs (e.g., music, preschool). Study 3 offered insight into early-years sport, OPA, and unstructured sport pathways, highlighting common features and engagement patterns within programming (e.g., structure, movement/sport skill focus, play-based activities). Findings suggest existing life-span sport participation/development models may not align with delivery of and experiences within early-

years sport programming. Finally, Study 4 highlighted unique challenges and strategies for effective coaching across diverse early-years coaching contexts, showing differences according to program-type (i.e., private and club-based versus community-based). Collectively, this research advances limited understanding of early-years sport and OPA participation, which may help inform key stakeholders' decisions around early-years sport programming; several important future research directions are outlined.

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Overview of Dissertation

The following document is a scholarly presentation of my doctoral research, which sought to advance understanding of early-years (<6) sport and organized physical activity (OPA) participation. In total, there are six chapters, followed by a reference list and relevant appendices.

Chapter One provides a study introduction, as well as comprehensive review of literature, identifying key gaps in the literature, which inform the study rationale, and specific study objectives. An outline of the chosen methodology used to implement the study follows. Chapter Two (Study 1) is a scoping review of literature, which sought to investigate and synthesize scholarly research examining psychological, emotional, social, cognitive, or intellectual developmental outcomes associated with sport involvement of children 2-5 years of age (Harlow, Wolman & Fraser-Thomas, 2018). Chapter Three (Study 2) explores the perceived outcomes and experiences of early-years sport participation from the perspectives of toddlers, preschoolers, parents, and coaches, while Chapter Four (Study 3) sought a greater understanding of these children's sport take-up, pathways, and general patterns of engagement within early-years sport programming. Chapter Five (Study 4) examines coaches' experiences in early-years sport contexts, with a specific focus on challenges-faced and strategies drawn-upon for effective coaching. Finally, Chapter Six offers a general discussion, summarizing key findings/themes across all four original studies, identifying key study strengths and contributions, and highlighting study limitations and future research directions to overcome them, before offering a final study conclusion.

Chapter One

Introduction and Review of Literature

Introduction

In recent years, significant discourse has surrounded the physical activity (PA) patterns and behaviours of children during the early-years, a period of time subject to significant growth and development (Timmons et al., 2012). The 'early years' broadly encompasses infancy (<1), toddlerhood (1-2), and the preschool years (3-5) (Ontario Ministry of Education, 2007). Until roughly the last two decades, the early-years were largely overlooked in terms of PA requirements, under the assumption that young children were inherently 'active-enough' (Timmons et al., 2012), yet emerging research indicates that as few as 15% of 3-4 year-olds and 5% of 5 year-olds are meeting both the PA and sedentary behavior guidelines for healthy development (Colley et al., 2013). Accompanying low PA adherence are trends which indicate reduced engagement in childhood active-play (Active Healthy Kids Canada, 2012), yet paradoxically, upwards to 50% of 3-4 year-olds participate in structured classes, league, or team sports a year (ParticipACTION, 2018).

Researchers attribute the rise in structured or organized sport participation during early-childhood (as opposed to unstructured sport, or active-play) to a number of evolving societal beliefs or perceptions, suggesting that parents view sport participation as a 'privilege' (Stirrup, Duncombe, & Sandford, 2014). Accompanying this perception is the growing pressure parents face trying to offer young children early enrichment experiences (Vincent & Ball, 2006) that will aid in their child's cultivation of capital or skills, increasing their chances of future success (Karsten, 2005; Stirrup et al., 2014). Earlier start-age in sport may also be attributed to the generally positive perception regarding the value of sport participation on young children (Neely & Holt, 2014). This perception is bolstered by empirical evidence suggesting that sport may enhance older children and youths' physical (motor skills, health and fitness), social (teamwork,

cooperation), and personal (goal setting, responsibility, confidence) development (Côté & Fraser-Thomas, 2016; Holt et al., 2017). In other words, parents may assume that the earlier they enroll children in sport, the sooner they will cultivate the aforementioned benefits, develop their abilities in any one sport, ultimately helping their children 'get ahead' in life or become successful athletes (Fraser-Thomas & Safai, 2018; Nonis, 2005). In assuming the positive benefits of sport may extend to the early-years, however, parents may be ignoring the potential negative or harmful impact that sport may also have on youth participants (Merkel, 2013) - impacts that may be magnified during the early-years (American Academy of Pediatrics, 2001).

To entertain (or perhaps take advantage) of parents' enthusiasm for early-years sport, a booming industry of sport programs geared towards toddlers and preschoolers has emerged across western nations, an industry that is both community-based and privatized (AAP, 2001; Calero, Beesley, & Fraser-Thomas, 2018; Overman, 2014). These programs boast to enhance children's physical, in addition to psychological/emotional, social, and intellectual development (Calero et al., 2018); however, many of these programs' claims should be considered with caution, given they are not routed in empirical research, highlighting a significant practice-to-research gap.

In contrast to parents' and sport organizations/programs' eagerness towards early-years sport, researchers and child-interest groups appear to have more reservations, with Overman (2014) warning: "the promotion of sports competition and the accompanying products and services aimed at developing toddlers into star athletes is misguided, is most likely counterproductive, and may be harmful" (p. 82). Similar caution is offered by both the American and Canadian Academy of Pediatrics (2001; 2005), who advocate for a more thorough appraisement of children's readiness to participate prior to enrollment in organized sport

programming. Despite these warnings, research suggests that parents generally make assumptions about children's readiness for sport based on the fact that programming exist (Aicinena, 1992). Considering that sport programs directed towards the early-years demographic are appearing more commonplace (e.g., Calero et al., 2018), it is anticipated that early-years sport programming, and by extension participation - may be here to stay.

Review of Literature

This review of literature is comprised of six sections. The review begins by (1) demonstrating the importance of PA during the early-years, before (2) tracing the emergence of sport within the broader landscape of evolving PA patterns and trends, followed by (3) mixed-messages about its appropriateness. Next follows a (4) general introduction of positive youth development through sport, including an overview of positive and negative developmental outcomes associated with participation among older children and youth. Finally, (5) key social influencers (i.e., parents, siblings, coaches) surrounding youth sport are introduced, who may be particularly relevant in supporting young children's sport participation, alongside (6) life-span sport participation and development models, which describe the conditions for optimal physical and psychosocial development in sport at different stages over the lifespan.

Physical Activity During the Early-Years

Engagement in PA during children's early-years has been identified as vital in supporting children's healthy growth and development, as it has been associated with improved measures of adiposity, psychosocial health, cognitive brain development, cardiometabolic health indicators, and motor skill development (Carson et al., 2015; Timmons et al., 2012). In particular, fundamental movement skills (such as catching, throwing, hopping, running) are considered the building blocks for more advanced movement skills, which children acquire through a range of

recreational pursuits, including PA (Gallahue & Ozmun, 2002; Hardy, King, Farrell, Macniven, & Howlett, 2010; Malina, 1991). Researchers have acknowledged that the early years are an ideal time to promote PA, as children are highly malleable and lack ingrained PA habits or lifestyles (Active Healthy Kids Canada, 2012; Goldfield, Harvey, Gratton, & Adamo, 2007). There is also evidence that PA behaviours track from early-childhood into adulthood, thus it is worthwhile to encourage positive PA habits during children's early-years, rather than correct maladaptive behaviours after they have developed (Boreham & Riddoch, 2001; Malina, 1996; Telama et al., 2014).

Given the many health benefits associated with early engagement in PA, health professionals have released targeted guidelines for the early-years age demographic, urging parents to help young children be active, as well as assigning ideal timeframes for children to move, sleep, and sit each day (e.g., 24-hour Movement Guidelines for the Early-Years; Canadian Society for Exercise Psychology, 2017). Currently, Canadian Early-Years Guidelines suggest that toddlers and preschoolers engage in 180 minutes of PA at any intensity over the course of the day, and upwards to 60 minutes of energetic play (i.e., moderate-to-vigorous PA) by five years of age (Canadian Society for Exercise Psychology, 2012).

The Emergence of Early-Years Sport

The emergence of sport participation as a distinct form of PA during the early-years can be traced through three evolving societal trends. The first notable trend is that despite efforts to encourage children in the early-years to be active, early-childhood is marked by high rates overweight or obesity (Goldfield et al., 2012; Shields, 2006) and high rates of sedentary behaviour (Pereira, Cliff, Sousa-Sá, Zhang, & Santos, 2018), suggesting children are not meeting recommended PA levels for healthy development (Colley et al., 2013; ParticipACTION, 2018).

Secondly, children are spending less time engaged in free-play than previous generations (Active Healthy Kids Canada, 2012; Burdette & Whitaker, 2005; Clements, 2004). Free play is a term used to denote play that is unstructured, child-led, occurring inside or outside one's home (Gray, 2011); it is associated with a number of cognitive, psychosocial, and biological developmental benefits (Pellegrini, 2009; Piaget, 2007). Free play may also be referred to as 'active- play,' which is a form of free-play involving unstructured PA (Canadian Sport for Life [CS4L] 2016; ParticipACTION, 2018). Children's decreased engagement in free-play over time is attributed to a number of factors, including parental 'overprotection' and fear for children's safety (i.e., traffic and strangers) while in unsupervised urban areas and public spaces (Malone, 2007; Valentine & McKendrick, 1997). An emergent inference is that children's free-play has given way or been replaced by organized sport participation (AAP, 2001).

According to a recent study, parents described unsupervised free-play as 'idle,' offering opportunities for children to engage in problem or risk-taking behaviours (Watchman & Spencer-Cavaliere, 2017). Instead, parents prioritize organized sports, which they believed to be of greater value to children's overall development than free-play. Moreover, enrolling children in structured (as opposed to unstructured or active-play based) activities appears to be a strategy adopted by parents to promote the acquisition of physical or cultural capital (Karsten 2005; Pinkster & Fortuijn 2009; Pynn et al., 2018), underscored by the premise that equipping young children with skills will enhance their likelihood of future success (Stirrup et al., 2015). Overall, parents' desire to give children enriching early learning experiences has contributed to the increased enrolment of young children in formal (often privatized) activities, such as music, arts, and most significantly- organized sport (Stirrup et al., 2015; Vincent & Ball, 2006).

Mixed-Messages Surrounding Early-Years Sport

Most relevant to the current study is this third trend, whereby children are engaging in organized sport programming at increasingly younger ages across western nations (AAP, 2003; 2019; De Knop, Engström, & Skirstad, 1996; ParticipACTION, 2018). Interestingly, despite shifting societal trends, sport participation prior to six years of age is met with considerable contention, with child-interest groups and sport organizations/programs suggesting opposing messages about its appropriateness.

For instance, according to the CPS (2005), "it is not until they [children] reach the age of six years that sufficient combinations of fundamental skills are attained to allow them to begin participating in organized sports" (p. 343). Similarly, the AAP (2001) have cautioned that the younger the sport participation, the greater the need to question the safety of and benefit to children, suggesting that considerably more research is needed to assess children's readiness, and determine the optimal time for children to begin participating in organized sports. While children's readiness for sport is determined based on the "match between a child's level of growth and development (motor, sensory, cognitive, social/emotional), and the tasks/ demands of the competitive sport" (DiFiori et al., 2014, p. 4), the question remains whether children's readiness to participate is being considered by parents prior to, or during enrollment within early-years sport programs.

While professionals appear to generally discourage sport participation prior to six years of age, parents' sense of urgency or obligation towards such programs remain apparent, with nearly 50% of children 3-4 years of age participating in organized lessons, leagues, or team sports in Canada each year (ParticipACTION, 2018). Parents have indicated that their children's early entry into organized activities is largely impacted by the availability of programs for young children (Aicinena, 1992; Watchman & Spencer- Cavaliere, 2017). Furthermore, opportunities

for children's early enrollment in sport are made possible by the proliferation of sport programs and organizations available to children prior to six years of age, which offer the promise of enhanced physical, psychosocial, and even intellectual gains to children during early-childhood (see Calero et al., 2018 for a review). With such alluring program descriptions, it is perhaps not surprising that parents opt for early sport enrollment, under the guise that they are helping their young children gain capital or 'get ahead' (Fraser-Thomas & Safai, 2018; Stirrup et al., 2015).

Preliminary research involving parent perceptions on the utility of early-years sport echo just that – parents perceive that sport is a platform for preschoolers' psychosocial and life skill development (Fraser-Thomas & Safai, 2018). However, it is important to note these remain parental perceptions, and more research is needed to appraise children's first-hand experiences of early-years sport participation and programming. To date, there has been a considerable reliance on proxy-reporting by parents (above) and teachers (e.g., Nonis, 2005) to learn about toddler and preschoolers PA and sport habits, as children's young age and developmental capacities make them challenging to engage in research using standard methods (i.e., interviews or self-report questionnaires) (Dwyer, Baur, & Hardy, 2008; Timmons, Naylor, & Pfeiffer, 2007; Welk, Corbin, & Dale, 2000). Moving forward, the need to use modified research approaches (i.e., observation, modified interview techniques, or a combination of both) to fully capture young children's experiences in sport is necessary (Alderson, 2005; Bagnoli, 2009; Koller & San Juan, 2015).

Overall, while the concept of using sport as a vehicle to teach children valuable skills is not a new notion (e.g., Bruner et al., 2017; Gould & Carson, 2008), it is unknown whether this concept can be extended to early-years sport participants. While research supports the utility of PA for children's healthy development during the early-years (Carson et al., 2015; Timmons and

colleagues, 2012), the developmental outcomes, benefits, or risks associated with sport participation as a distinct form of PA during the early-years are largely unknown.

Positive Youth Development through Sport

The original notion that organized or structured youth programs are ideal contexts for individuals' to "thrive" or gain skills/capital is grounded in the Positive Youth Development (PYD) approach, which stems from positive developmental psychology, and is as a strengths-based conception of individual development (Lerner, Kier, & Brown, 2005; Snyder & Lopez, 2002). Proponents of a PYD approach view children and adolescents as 'resources to be developed.' This approach is in contrast to the deficit-reduction approach to development that sees children as 'problems to be managed,' focused on preventing or eliminating youth problem behaviours (Damon, 2004; Lerner, et al., 2005; Roth, Brooks-Gunn, Murray, & Foster, 1998). Programs using a PYD philosophy "strive to influence adolescents' development toward healthy (positive) outcomes, by increasing their exposure to developmental opportunities and supports" (Roth & Brooks-Gunn, 2003, p. 94). It follows, that PYD through sport emerged as a sub-discipline of PYD, under the assumption that community-based programs, such as sport, have the potential to promote PYD in youth (Eccles & Gootman, 2002).

Since the emergence of PYD through sport, a number of seminal frameworks have adopted core themes or elements from developmental psychology, for consideration in sport programs to ensure their promotion of PYD (e.g., '4Cs,' Côté, Bruner, Strachan, Erickson, & Fraser-Thomas, 2010; 'Big Three,' Lerner, 2004; 'Developmental Assets;' Petitpas, Cornelius, Van Raalte, & Jones, 2005). Moreover, youth sport programs should be designed to support three key objectives ('3Ps' of sport), including: (a) providing opportunities for PA, leading to improved health through participation (b) providing opportunities for learning and performance

of motor skills, which serve as a foundation for competitive or recreational sporting pursuits; and (c) the facilitation of personal development and opportunities to learn life skills (Côté, Strachan, & Fraser-Thomas, 2008).

Recently, Côté, Turnnidge, and Vierimaa (2014) offered a comprehensive framework outlining the elements necessary for a developmentally sound approach to youth sport, tying together many of the aforementioned key elements of youth sport settings. According to the Personal Assets Framework (PAF), an individual's development in sport is shaped by three dynamic elements, including: (a) personal engagement patterns and every-day activities of sport; (b) social interactions and relationships formed with others within sport; and (c) the specific sport setting. The culmination of these elements creates an individual sport experience, which over time, leads to growth in four key areas ('4Cs': competence, confidence, connection, and character; Côté et al. 2010), as well as contributes to three long-term outcomes: (a) sport expertise; (b) life-long participation; and (c) personal development ('3Ps;' Côté et al., 2008). According to a recent qualitative meta-study involving 63 studies with children (ages 6+), adolescents, and adults (Holt et al., 2017), if/when individuals experience a developmentally sound approach to sport, they may experience enhanced physical (fundamental movement skills, healthy active living), personal (i.e., increased positive self-perceptions, confidence, and self-esteem), and social development (i.e., meeting and developing friendships with others, learning leadership roles, and honing communication skills).

However, although it might be assumed that all youth sport programs intend to foster PYD and are developmentally sound contexts, research suggests that many programs fall short, and that sport participation alone does not guarantee PYD (Danish, Forneris, Hodge, & Heke, 2004; Hodge & Danish, 1999). Instead, research has demonstrated that sport participation can

contribute to negative developmental outcomes and experiences, including children/youth's decreased self-esteem, parental pressure, poor coaching, peer victimization, aggression, physical injury, and dropout/withdrawal (Côté & Fraser-Thomas, 2016; Fraser-Thomas, Côté, & Deakin, 2005). Further, researchers have emphasized that concerted effort is necessary to achieve expertise or elite performance in a given sport (Ericsson, Krampe, & Tesch-Römer, 1993; Wiersma, 2000), and that the specific pattern of training that this requires, involving early investment in competitive sport, and significant time training on a year-round basis (i.e., 'early-specialization') has been associated with psychological burnout, injury, emotional exhaustion, and dropout from sport (DiFiori, et al., 2014; Feeley, Agel, & LaPrade, 2016; Gould, Tuffey, Udry, & Loehr, 1996; Myer et al., 2016; Wiersma, 2000). These findings are particularly troubling, in light of trends towards even earlier start-age in sport, inferring that parents' eagerness towards earlier sport enrollment may be related to parent's desires for their child's success, rather than their child's development (Fraser-Thomas & Safai, 2018).

In sum, while parents may feel that the earlier children start sport, the sooner they may acquire beneficial sport outcomes or hone their sport-specific skills (enhancing their chances of future sporting success), they fail to consider whether early-years sport programs are designed as optimal settings for children's development, or if any of the negative outcomes associated with sport participation – some that coincide with early-specialization specifically – may be exacerbated or magnified given that children are not yet six years of age (AAP, 2001).

PYD Climate in Youth Sport

As outlined in the PAF (Côté et al., 2014), social interactions and relationships with others surrounding sport participation play key roles in shaping a developmentally sound youth sport experience and the likelihood of acquiring PYD outcomes. In recent years, while an

increase in research has examined the overall family-unit in sport (e.g., Bean, Fortier, Post, & Chima, 2014; Fraser-Thomas & Beesley, 2015), research examining the unique roles and influence of siblings in sport have also been highlighted (e.g., Allbaugh, Bolter, & Shimon, 2016). When considering early-years sport participation, the roles of parents, siblings, and coaches may be particularly relevant and/or influential.

Parents play one of the most significant roles in children's sport involvement, given that they are the gatekeepers to participation, particularly with young children (Dwyer, et al., 2008; Welk, Wood, & Morss, 2003). Research has examined parental involvement in sport, including how parents may impact children's enjoyment, motivation, and long-term participation (Côté & Hay, 2002; Fredricks & Eccles, 2004; Holt & Knight, 2014), as well as the specific ways that parents may support children in sport (i.e., tangibly, emotionally, informationally; Côté & Hay, 2002). Further, an early key model of parental involvement in sport describes parental involvement along a continuum, from underinvolved, to moderately involved, and finally overinvolved (Hellstedt ,1987). While underinvolved parents are noted for their lack of emotional, financial, or functional investment in sport, moderately involved parents offer firm parental direction, yet allow youth some involvement in decision making (Hellstedt, 1987). Generally, this type of involvement is associated with being emotionally supportive by offering encouragement and praise (Côté & Hay, 2002; Fraser-Thomas & Côté, 2009). Alternatively, parents may place excessive pressure on their children to do well or succeed in sport, often accompanied by behaviours such as yelling and interpersonal disagreements (described as overinvolved parenting practices) (Côté & Hay, 2002; Côté & Fraser-Thomas, 2016; Gould, Lauer, Rolo, Jannes, & Pennisi, 2006; Sagar & Lavallee, 2010). Recently, researchers have acknowledged a supplementary form of involvement, referred to as 'deep' involvement,

characterized as: “attending most or all games, engaging in one-to-one ‘coaching’, post-game debriefing and talk of individual strategies for further development and opportunities, and essentially using the arena of sports as the primary context for being and bonding with the child” (Stefansen, Smette, & Strandbu, 2016, p. 168).

Despite the plethora of research examining parental involvement and support in sport, it is unclear what optimal parent involvement/support looks like during the toddler and preschooler years. However, some research suggests types of involvement may *not* be in optimal, including overzealous (e.g., overinvolved or deep) parenting with very young children (AAP, 2001), which may result in lower self-esteem, and internalized feelings of failure at a particularly sensitive age (McElroy & Kirkendall, 1981). Additionally, Fraser-Thomas and Safai (2018) highlighted the existence of questionable or concerning parenting practices surrounding preschooler sport participation, including the presence of ‘pushy’ parents on the sidelines, who appear to forget their children’s age. This type of parenting may be reflective of parents having unrealistic goals or expectations for their young children in sport which may exceed their physical or cognitive development (AAP, 2001). Overall, it is important to note whether parents are making informed decisions that are right for children about early-sport participation.

An emerging body of work has examined siblings’ influences on children’s sport participation (e.g., Fraser-Thomas & Beesley, 2015; Knight, Berrow, & Harwood, 2017), as siblings are seminal socializing agents for other (often younger) siblings in sport (Buhrmester & Furman, 1990; Pike, Coldell, & Dunn, 2009). Specifically, older siblings and parents’ interest, abilities, and participation in sports often predict younger siblings’ attitudes, interests, skills and behaviours in these same sports (Osai & Whiteman, 2017).

Past research indicates that siblings can positively impact one another's health and PA by encouraging one another to be physically active (Hohepa, Scragg, Schofield, Kolt, & Schaaf, 2007), and through modelling (i.e., when one sibling chooses to participate in the same activity as a sibling; Whiteman, McHale, & Crouter, 2007). Research on siblings participating in the same activity has also led to a body of research surrounding sibling interactions and dynamics within competitive sport settings, which can be positive or negative (Davis & Meyer, 2008). For example, siblings may measure their abilities against one another, and these comparisons can either enhance (i.e., lead to support), or challenge (i.e., lead to feelings of bitterness and jealousy) sibling relationships (Côté & Hay, 2002; Fraser-Thomas, Strachan, & Jeffery-Tosoni, 2013; Trussell, 2014). While research on sibling dynamics has picked up traction in elite youth sport contexts (e.g., Hopwood, Farrow, MacMahon, & Baker, 2015; Nelson & Strachan, 2017), sibling dynamics are scarcely considered during early-years sport. One study examined the impact of birth-order on motor skill development among preschooler-aged children, finding that preschool children with older siblings often outperform only or first-born children on motor tasks (Krombholz, 2006), however, the impact of siblings on psychosocial outcomes during the early-years remains unknown.

Finally, a significant body of literature is devoted to the central role that coaches play in shaping the youth sport experience, as well as how they may enhance or impede a range of PYD outcomes for participants (Bean & Forneris, 2016; Camiré, Forneris, Trudel, & Bernard, 2011; Conroy & Coatsworth, 2006; Fraser-Thomas, et al., 2005). According to researchers, effective youth sport coaches exercise a "consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character" (Côté & Gilbert's, 2009, p. 316). Furthermore, according to work with exceptional

youth sport coaches, Camiré and colleagues (2011) assert that youth sport coaches should: (1) carefully develop their coaching strategy, (2) develop meaningful relationships with youth athletes, (3) intentionally plan developmental strategies into practices, (4) practice life skills, and (5) teach athletes how life skills transfer to non-sport settings.

While the aforementioned strategies are examples offered by exceptional youth sport coaches in fostering PYD, it is important to note that the vast majority of coaches at the youth sport level are volunteers, who vary greatly with respect to their background and training (McCallister, Blinde, & Kolenbrander, 2000; Trudel & Gilbert, 2006; Wiersma & Sherman, 2005). More specifically, research has highlighted that many volunteer coaches lack training in developmentally appropriate coaching practices (Gould, Krane, Giannini, & Hodge, 1990; Weiss & Hayashi, 1996). To explore coaches training needs further, one study asked volunteer coaches to identify their coach education areas of need, which were summarized under pedagogical, psychological, and management/ leadership aspects. In this study, coaches identified that they needed more direction in communicating and working with children, in handling skill-level diversity as well as skill development progression, and in how to teach athletes psychosocial skills such as self-confidence and teamwork (Wiersma & Sherman, 2005). Training in these skill areas is even more critical when engaging with and coaching toddler and preschooler age-groups, given the unique challenges children in this age group present, including having vast developmental differences, and a limited understanding of rules and elements of competition (AAP, 2001; Fraser-Thomas & Safai, 2018). In fact, some experts feel that many coaches of children at this age "are not equipped to deal with the needs or abilities of children" (AAP, 2001, p. 1459), which may contribute to children having negative first experiences in sport and deterring future participation. While the obvious direction to alleviate or manage some of these

coaching challenges or needs is to provide additional coach education or training, the challenge facing community sports and recreational programs is how to offer such training to volunteers in a manner that would maximize the attendance of coaches (Wiersma & Sherman, 2005), given the volunteer nature of their roles, and balancing of other roles and responsibilities.

Life-Span Sport Participation and Development Frameworks

Finally, two life-span sport participation and development models are prominent within sport literature and offer frameworks for guiding and understanding sport engagement patterns/ activities over the life-course: (a) the Long-Term Athlete Development Model ([LTAD]; CS4L, 2016), and (b) the Developmental Model of Sport Participation ([DMSP]; Côté, 1999; Côté & Fraser-Thomas, 2016). Both models describe common sport engagement or activity patterns, which concern individual patterns of involvement, such as the amount, intensity, and timing of sport participation (Evans et al., 2017).

The Developmental Model of Sport Participation ([DMSP]; Côté & Fraser-Thomas, 2016) is an empirically-informed model, which outlines three possible sport pathways, as well as the processes, and outcomes associated with sport participation over the course of childhood and adolescence (Côté & Fraser-Thomas, 2016). Three distinct sport pathways are described: (1) recreational participation through sampling, (2) elite performance through sampling, and (3) elite performance through early specialization. The first two pathways of the DMSP involve the same initial participation patterns, whereby between the ages of 6 and 12, athletes 'sample' or try a variety of different sports, during which time they primarily engage in deliberate play, described as activity which is inherently enjoyable, governed by flexible rules, standards, and expectations, which is modified to meet children of varied ability levels (Côté, Baker, & Abernethy, 2007). From the sampling years, sport participants may wish to remain engaged in sport solely for the

purpose of fun and enjoyment, as well as maintaining one's health (i.e., recreational participation), or they may pursue an elite performance trajectory – transitioning into specialization and later investment stages of the model. By contrast, the third sport pathway/trajectory referred to as elite performance through early-specialization is described as "limiting participation to one sport that is practiced on a year-round basis, usually involving high amounts of deliberate practice and low amounts of deliberate play from a young age" (Côté & Fraser-Thomas, 2016, p. 264). Compared to deliberate play, deliberate practice activities are effortful, not inherently enjoyable, yield no immediate rewards, but are associated with improved sport-specific performance over time (Ericsson et al., 1993). Researchers have highlighted a myriad of benefits associated with the early sampling pathway (i.e., pathways one and two), including that it is more enjoyable, reduces the occurrence of injury and burnout, and may increase the longevity of an individual's sporting career (see Myer et al., 2016 for a review). Despite known benefits of sampling, research suggests that children may be engaging in early specialization to a greater extent than other pathways, and to a greater degree than in the past (Feeley et al., 2016). While it cannot be inferred that all children participating in sport from a young age will be early-specializers, it is important to consider the implications of early specialization alongside patterns of earlier sport enrollment.

Secondly, the Long-Term Athlete Development Model ([LTAD]; CS4L, 2016) is a policy-based resource offering guidelines to sport organizations and their coaches to teach the 'right thing, at the right time' in sport, designed to help individuals be active for life, or lead competitive sport careers. Version (2.1) of the model is comprised of seven stages, including: Active Play, FUNdamentals, Learn to Train, Train to Train, Train to Compete, Train to Win, and Active for Life. Of relevance to the current study is the first Active Play stage of the model, as it

encompasses children from zero to six years of age. According to the model, children should develop their general movement skills, participate in 'some' organized PA, and engage in daily PA, which is fun, yet entails some challenge during the first six years of life, within the Active Start stage. Notably, while 'some organized PA' may encompass sport, sport is not directly described, while it is suggested that all games/activities should be non-competitive and focus on participation. The model also stipulates that individuals must first be made aware of what sport opportunities exist for them, and that their first involvement must be positive in order to ensure ongoing participation. Moreover, aside from stating that children's first sport experiences should be positive, it remains unclear when sport should be introduced, how often (i.e., amount), or the intensity of programming (i.e., appropriate level of 'challenge').

Collectively, both LTAD (CS4L, 2016) and the DMSP (Côté & Fraser-Thomas, 2016) describe organized sport involvement from six years of age onward, yet children's sport participation patterns and every-day activities of sport prior to this time are not being adequately captured within these models. It is also unknown whether children's sport engagement patterns prior to six years should be considered/reappraised against the models, to determine their age or developmental appropriateness. The lack of clear, consistent description/guidelines offered by both models regarding the nature or type of PA that preschoolers should engage in prior to six years of age, alongside increased enrolment rates in sport among this age group (ParticipACTION, 2018), suggest a potential disconnect between research and practice, and a critical need to further investigate early-years sport participation.

Study Rationale and Research Objectives

This review of literature illustrates the many gaps in knowledge surrounding early-years sport, a research area largely in its infancy. ***To this end, the overall aim of this dissertation was***

to advance understanding of early-years sport and OPA participation.

While research supports the utility of PA towards children's healthy development during the early-years (Carson et al., 2015; Timmons et al., 2012), the developmental outcomes, benefits, and/or risks associated with sport participation as a distinct form of PA during this time require more thorough consideration. Moreover, while the concept of using sport as a platform to teach valuable life skills is supported among older children and youth (e.g., Bruner et al., 2017; Gould & Carson, 2008), it is unknown whether this notion can be extended to early-years sport participants, or whether earlier start-age in sport presents any unique negative outcomes or concerns. Therefore, the utility of a comprehensive review of literature to synthesize and summarize the developmental outcomes associated with early-years sport participation is merited. Specifically, there is a need to bring together a vast range of literature into a single source, providing a foundation for future research in this area (Graham & Tetroe, 2009; Holt et al., 2017). As such, ***Objective 1 was to systematically gather, review, and synthesize research examining developmental outcomes associated with early-years sport involvement.***

Secondly, more research is needed discerning the experience of early-years sport participation, as well as the supporting roles and experiences of parents and siblings during this unique period of development. In particular, understanding early-years sport through the lens of children (i.e., toddlers and preschoolers) rather than solely from the perspectives of parents, is necessary, to provide further insight into children's learnings, take-aways, and overall understanding of their sport participation. ***Objective 2 of the dissertation was to explore parents', coaches' and children's perceived outcomes and experiences of early-years sport.***

Thirdly, there is a lack of clarity on what children's early-sport participation patterns or every-day activities within sport programming 'look like', or whether early-years sport programs

are optimal settings for children's development (i.e., developmentally or age-appropriate). This lack of clarity is further magnified by early-years' lack of inclusion within current life-span sport participation and development models (i.e., DMSP; Côté & Fraser-Thomas, 2016; LTAD; CS4L, 2016). Therefore, research exploring the structure/layout of early-years sport programs is warranted to provide insight into these research gaps. ***Objective 3 was to explore early-years sport pathways and patterns of engagement through observing early-years sport and OPA contexts***.

Finally, it is necessary to more closely examine early-years sport contexts in order to provide insight on the unique experiences and roles of coaches working in early-years sport. ***Objective 4 of this dissertation was to explore the unique experiences and roles of coaches in toddler and preschooler sport settings, with a focus on challenges-faced and strategies-used to deliver effective coaching.***

Methodology

While the methodology for each study of the dissertation is outlined in detail within each of the four manuscripts, this section provides brief supplementary details on the guiding epistemology (constructivism), and methodology (case-study research) for the qualitative portion of the dissertation (i.e., Studies 2, 3, and 4).

Epistemology

To begin, this study was informed by a constructivist perspective, which acknowledges a subjective human creation of meaning, which is formed through people's interactions with others (Crabtree & Miller, 1999; Creswell, 2014). Overall, constructivists believe in a social construction of reality (Searle & Willis, 1995). Crotty (1998) defined constructivism as "the view that all knowledge, and therefore all meaningful reality as such, is contingent upon human

practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context" (p. 42). In other words, those using constructivism seek to understand, implore multiple participant perspectives or meanings, and draw meaning through participants' views of the situation being studied (Creswell, 2003).

Most research drawing from a constructivist perspective is qualitative in nature, as well as exploratory, and inductive, encouraging researchers to "generate or inductively develop a theory or pattern of meanings" (Creswell, 2003, p. 9) - making it a suitable approach for this dissertation, given the relative scarcity of research on early-years sport, and the researcher's objective to explore participants' experiences at length. Moreover, constructivists often draw-upon on multiple methods of data collection, in line with the optimal approach for this project.

Methodology

This section outlines the methodological approach of case study research, as it guided the subsequent research. Notably, key case study researchers include Yin, Stake, and Merriam (Yazan, 2015). Case studies are defined as an approach to research that facilitates the exploration of a case within its context, using a variety of data sources (Baxter & Jack, 2008). Case-studies are used to seek out both what is common, and what is particular about a given case, while Stake (2005) argues, the most important component of case study research is "interpreting" the case, which means learning as much contextual insight about the case as possible – being less concerned with the generalizability of a chosen case. In other words, case-study researchers are generally more concerned with selecting case studies that provide the greatest opportunity for researchers to learn, than with generalization, based on the premise that more can be learned from the particular or the "exception" than can be learned from studying the norm or the "common" (Stake, 2005). The emphases on a rich contextual understanding of the case,

alongside the triangulation of methods that are employed in case study research, justify its choice of approach for this project (Baxter & Jack, 2008).

Overall, case studies are an attractive methodology because they enable researchers to gain great depth and insight into a case (Stake, 2005). In exploring a case within its context, one can draw details from the nature of the case, its historical background, its physical setting, and the impact of other social and political contexts (Stake, 2005). Case studies also gain credibility through triangulation, which can be defined as the process of using multiple perceptions to clarify meaning, or multiple methods of data-collection to clarify findings (Stake, 2005). Case study methodology also advocates for smaller sample-sizes, multiple methods of data collection (i.e., semi-structured interviews, and observations), and seeking multiple vantage points (i.e., children, parents, coaches) making it a fitting research methodology for this study.

Chapter Two

Study One

Should toddlers and preschoolers participate in organized sport? A scoping review of developmental outcomes associated with young children's sport participation

Harlow, M., Wolman, L., & Fraser-Thomas, J. (2018). Should toddlers and preschoolers participate in organized sport? A scoping review of developmental outcomes associated with young children's sport participation. *International Review of Sport and Exercise Psychology,* 1-25.

Abstract

Organized sport is offered at increasingly younger ages, with many programs geared towards preschoolers, toddlers, and infants. While sport is promoted as an amendable context for healthy development of school-age children, little is empirically known about potential benefits or risks associated with organized sport participation in early childhood. A scoping review of nine electronic databases identified English-language, peer-reviewed, original research articles which addressed psychological, emotional, social, cognitive, or intellectual developmental outcomes of organized sport involvement of children aged 2-5 years; included studies were appraised for quality. Findings offer preliminary evidence that early sport participation is related to primarily positive outcomes (e.g., enhanced social skills, pro-social behaviours, self-regulation), while negative and inconclusive outcomes were also identified. Results suggest limited existing research has primarily relied on parent or teacher proxy-report or assessment, and reinforces that little is known about toddler and preschooler organized sport participation as a distinct form of physical activity, despite pervasive availability of programming, and positive parental perceptions of early enrolment. Additional research with stronger methodological design and rigor is needed; recommendations to enhance the quality of future studies with young children are discussed.

Keywords: Early years, preschooler, toddler, sport participation, organized sport, developmental outcomes

Should toddlers and preschoolers participate in organized sport? A scoping review of developmental outcomes associated with young children's sport participation

Children's early years (i.e., <6 years) have been identified by researchers as a critical time to instil and develop healthy behaviours, such as being physically active (Boreham & Riddoch, 2001; Goldfield, Harvey, Grattan, & Adamo, 2012; Jones et al., 2011; Malina, 1996; Tammelin, Yang, Leskinen, Kankaanpaa, Hirvensalo, & Tammelin, 2014; Ward, Vaughn, McWilliams, & Hales, 2010). While current recommendations suggest that toddlers and preschoolers should acquire at least 180 minutes of a variety of physical activities throughout the day, and upwards to 60 minutes of energetic play by 5 years (Tremblay et al., 2017), an estimated 62% of children aged 3-4 are meeting this requirement (ParticipACTION, 2018). Those in support of children's early introduction to physical activity (PA) share the common belief that the early years are an "ideal window" to promote PA, as children are highly malleable, are at a critical age for growth and development, and have not yet adopted unhealthy PA habits or lifestyles (Active Healthy Kids Canada, 2011; Goldfield et al., 2012). With a reported 46% of children between the age of 3 and 4 enrolled in organized lessons, team, or league sports in the past year, organized sport programs specifically geared towards preschoolers, toddlers, and even infants have significantly increased globally over the last few decades (American Academy of Pediatrics [AAP], 2001; Caldwell & Timmons, 2013; ParticipACTION, 2018). The rise in programming at this age may be related to the growing pressure to equip young children with quality early learning experiences that allow them to be physical active, while also teaching them the developmental skills required for future success (Stirrup, Duncombe, & Sandford, 2015). As well, research on expertise and talent development in sport often speaks to the benefit of beginning sport at an early age (termed 'early specialization') and engaging in high levels of

effortful or deliberate practice on a year-round basis, which may contribute to parents' eagerness for early sport enrolment (Ericsson, Krampe, & Tesch-Römer, 1993; Wiersma, 2000).

It is widely published that organized sport is commonly associated with positive physical (i.e., increased levels of PA, fundamental movement skill [FMS] acquisition), psychological (i.e., enhanced self-esteem, discipline, competence), and social (i.e., teamwork, cooperation, friendship) developmental outcomes relating to children and youth (Côté & Fraser-Thomas, 2016; Holt et al., 2017). Various systematic reviews have outlined the psychological and social benefits of sport participation among children and adolescents (e.g., Eime, Young, Harvey, Charity, & Payne, 2013), while one recent review highlighted the impact of various forms of PA on health indictor outcomes of children 0-4 (Carson et al., 2017); no such reviews exist which explicitly examine developmental outcomes associated with toddlers' and preschoolers' participation in organized sport.

Currently, differing messages are being offered to parents by sport organizations and child interest groups regarding the benefits or risks of enrolling young children in sport. For instance, in a Canadian study by Calero, Beesley, & Fraser-Thomas (2018) a systematic web search yielded over 100 preschooler-focused sport programs in one large urban centre, with each program claiming an array of outcomes focused on physical, psychological, emotional, social, and intellectual development. However, much uncertainty exists as to whether programs' claims of developmental outcomes align with young children's actual developmental experiences and outcomes. Paradoxically, both the Canadian Paediatric Society (CPS; 2005) and the AAP (2001) have cautioned against infant, toddler and preschooler sport participation, suggesting that the demands and expectations of sport may far exceed the physical and cognitive readiness of children before they reach six years old.

To date, research conducted on early-years sport participation has highlighted the physical merits to children's motor development (e.g., motor control or FMS acquisition) (e.g., Salaj, Krmpotic, & Stamenkovic, 2016; Sigmundsson & Hopkins, 2009), with few studies focusing on psychological, emotional, social, or intellectual development, identified as key domains of healthy development and well-being (National Research Council and Institute of Medicine, NRCIM, Eccles & Gootman, 2002). Despite limited empirical research in the area, a recent study by Fraser-Thomas & Safai (2018) reported that parents of preschool-aged children felt organized sport fostered a range of psychosocial and life skill development including interpersonal skills (e.g., meeting new friends, interacting in a group setting), competence and confidence (e.g., developing increased skill and ability), being a team member, and learning about winning and losing. In addition, parents, teachers and coaches have identified outcomes related to preschooler sport participation. For example, Adriana (2010) found that 74% of coaches felt that 4-6/7 years of age was an appropriate start-age for practicing judo with an experienced and trained coach, while Adriana and Mircea (2011) suggested that judo was an appropriate organized sport program for young children to learn how to manage their emotions. Furthermore, in a study by Nonis (2005), kindergarten teachers suggested that organized sport participation during the preschool years had the potential to enhance physical, cognitive, emotional, and social development, including children's self- esteem, confidence, self-discipline and emotional wellbeing. However, teachers also felt some parents discouraged early sport participation because of their own negative views on sport (e.g., feeling it was a waste of time, that it did not guarantee success) or because they were over-protective of their children (e.g., sheltering them from the risk of experiencing failure), and instead placed an emphasis on academic achievement. Although perceived outcomes from preschoolers' social agents are

insightful, they do not provide actualized outcomes of preschooler sport participation, and should also be considered with caution, as parents' responses may be inflated due to social desirability or response bias (Alderson, 2005; Van de Mortel, 2008). Finally, a pervasive issue identified across the aforementioned literature is the significant overlap in terminology used to describe sport or sport-like activities for children in their early years, depending on the discipline (e.g., physical activity, play, active play, energetic play, vigorous physical activity, sport), and the interchangeable use of terminology for specific age groupings (i.e., infants, toddlers, preschoolers, early years, young children, etc.). As such, this review, which carefully considered studies that may examine sport under the guise of physical activity or other sport-like terms, and aimed to identify young children through extensive distinct terminology, offers a unique contribution for researchers/stakeholders.

In sum, more research is needed to discern or synthesize whether the commonly proposed positive outcomes of sport participation are salient among toddler and preschool sport participants (Timmons, Naylor, & Pfeiffer, 2007), whether any common negative outcomes associated with youth sport participation (e.g., excessive pressure, decreased self-confidence, burnout) are evident among, or even exacerbated by the young age of toddlers and preschoolers, and finally, whether early sport participation presents any unique considerations (AAP, 2001; Kostka et al., 2011). For example, both the AAP (2001) and CPS (2005) call for an assessment of young children's 'sport readiness' prior to enrolment, which involves the evaluation of a child's cognitive, social, and motor development to determine his or her ability to meet the demands of sport. Similar caution is offered by Tofler and Butterbaugh (2005), who suggest that during the preschool and early grade school years children may not be 'emotionally mature enough for competition, or cognitively able to follow and understand the rules' (p. 784). Instead,

these organizations suggest moving away from structured sport, and encourage a return to earlier unstructured free-play, which emphasizes fun, playfulness, and exploration, and does not involve competition. Lastly, much debate has surrounded an 'over-scheduling' hypothesis in youth sport, which is based on the premise that too much organized activity participation may require excessive time commitments, and create unnecessary competitive environments and pressure from parents, which may undermine family functioning and create psychological distress in participants (Mahoney & Vest, 2012; Ömeroğlu, 2001; Rosenfeld & Wise, 2000); however, no research to date has examined the presence or impact of this phenomenon at the toddler or preschooler age. Age-specific research into toddler and preschooler sport participation and outcomes could not only support parents in making more informed decisions about enrolment, such research may also provide additional clarity for sport administrators (e.g., coaches, program directors) in their pursuit and development of age-appropriate programming. Accordingly, the purpose of this exploratory scoping review was to investigate and synthesize scholarly articles, which examine psychological, emotional, social, cognitive, or intellectual developmental outcomes of organized sport involvement of children between 2 and 5 years of age.

Methods

Research Protocol

This review was guided by *The Preferred Reporting Items for Systematic Reviews and Meta-Analysis* (PRISMA; Moher, Liberati, Tetzlaff, Altman, & Group, 2009). PRISMA provides a 27-item checklist offering explicit steps for carrying out a systematic review - from conducting initial literature searches, synthesizing results, and reporting on findings. The present review was

not registered.

Inclusion and Exclusion Criteria

Studies were included in the present review if they were: (a) peer reviewed research articles; (b) available in English; (c) published between 1996 – June 2017; (d) explicitly examined participation in organized sport programs; (e) examined children aged 2-5 years; and lastly, (f) addressed psychological, emotional, social, cognitive or intellectual outcomes of sport participation. Additionally, studies were excluded if they: (a) examined a wider age range of children (6>; <2 years of age); (b) addressed adapted sport participation of individuals with physical or intellectual disability; and lastly, (c) examined only FMS, physical health, or physiological outcomes of sport participation. When considering the first exclusion criteria, studies examining children <2 years of age were omitted, given the researchers' focus on examining independent sport programming (i.e., parent-tot or direct parental support programs were not included); studies examining children 6> were omitted, given the researchers' focus on examining children prior to school attendance, and it is not compulsory for children in Canada, Europe, and many American States to be enrolled in school until approximately age 6 (i.e., children remain "preschoolers" up until and including age 5) (Education Commission of the United States, 2018; Ontario Ministry of Education, 2018; Sharp, 2002). Additionally, other systematic reviews (e.g., Eime et al., 2013) exist which summarize the developmental outcomes of sport participation among school-age children and adolescents.

When considering the fourth inclusion criteria (i.e., explicitly examined participation in organized sport programs), a working definition of organized sport was required. Sport Canada's definition was initially considered:

> An activity that involves two or more persons engaged for the purpose of competition, which involves formal rules and procedures, requires tactics and strategies, specialized neuromuscular skills, and a high degree of difficulty and effort (Canadian Heritage, 2013, p. 13).

Sport Canada's conceptualization also stipulates that activities must take place "regularly", described as at least once a week for a certain period of the year (Canadian Heritage, 2013). However, taking into consideration that not all toddler/preschooler sport programs truly meet all of these criteria (i.e., not all programs have a competition component due to toddler/preschoolers' cognitive and social development stages), we chose to broaden our definition to include additional forms of organized physical activity (OPA), while still considering other key elements of the Sport Canada definition (i.e., rules, procedures, tactics, strategies, specialized neuromuscular skills, high degree of difficulty and effort, regularity of engagement). The National Longitudinal Survey of Children and Youth (2008/2009) describes OPA as physical activities that take place outside of school hours, and are led by a coach or instructor (Statistics Canada, 2008). Within this broader conceptualization of sport, traditionally grey-area organized sport programming that are popular among preschoolers (e.g., dance, swimming, or martial arts) and meet key criteria of the Sport Canada definition (i.e., entail rules, a degree of effort and strategy, are led by a coach, and are practiced regularly (Canadian Heritage, 2013; Caldwell & Timmons, 2013; Fraser-Thomas & Safai, 2018) were included.

Search Strategy

A rigorous search of literature was conducted to assess the extant research relating to sport and OPA participation among the toddler and preschooler population. Within each chosen research database (described below), carefully thought out search strings and key terms were

used to identify relevant literature. Key search terms included “preschooler,” “sport,” or “organized physical activity,” as well as synonyms (i.e., toddler, or infant) or varied versions (i.e., pre-schooler) of each term, identified through a review of terminology used in previous work on the topic. Truncated versions of each word to account for variance in operational definitions across studies were also considered. Popular individual and team sports among preschooler children were also included in the search string, including swimming, gymnastics, dance, soccer, ice hockey, and t-ball (Caldwell & Timmons, 2013). The search string was refined and tested in consultation with an expert research librarian at the affiliate university, and was peer-reviewed by the third author, yielding the following final search string: (sport* OR gymnast* OR soccer* OR t-ball or swim* OR danc* OR hockey OR organized physical activit*) AND (infant* or (preschool* or pre-school*) or toddler*). When possible in a given database, an advanced search strategy was used to apply additional limitations, including that: (1) articles were in English; (2) articles were peer reviewed; and (3) articles were published between 1996 and June of 2017. With regard to the third advanced search strategy, two decades (i.e., just short of a generation) was determined in consultation with an expert research librarian at the affiliate institution, to be an appropriate window of review to capture relevant studies; the search period was extended from 2016 to June 2017, given the length of time required for the review.

Information Sources

Nine electronic bibliographic databases and citation indexes were searched, including: PsycINFO, Sociological Abstracts, Educational Abstracts, SPORT Discus, Scopus, Web of Science, ERIC, Cochrane, and MEDLINE (Ovid), yielding an initial 4951 records. These databases were deemed appropriate through consultation with an expert research librarian at the affiliate researchers’ university. Additional search strategies yielded 1398 articles extracted from

the table of contents of relevant journals in the topic area, specifically from (a) Journal of Sport and Exercise Psychology (n= 328); (b) Pediatric Exercise Science (n=94); (c) Psychology of Sport and Exercise (n=130); (d) Annals of Leisure Research (n=260); (e) Sociology of Sport (n=279); and (f) Leisure Sciences (n=307). Further, 42 articles were suggested through a hand search by the senior author (deemed a 'topic expert' in the field of positive youth development in sport, specializing in sport during the preschool years), and 27 articles were pulled from the references of seminal papers. Prior to the removal of duplicates or ineligible references, the original review consisted of total of 6418 records.

Study Selection

All of the studies retained from initial database searches or identified through other sources were exported according to key study criteria including study title, author, year, journal, and abstract into the citation management program entitled Endnote. At this stage of the review, studies were broadly screened by journal name for appropriateness or exclusion (e.g., adapted physical activity journals were omitted), while all visible duplicates were removed using an automated duplicate removal function in the Endnote program. All remaining records (n= 4438) were then exported into Microsoft Excel for initial screening. Figure 1 presents a detailed flowchart of the study selection process.

An eligibility-screening tool was developed by the research team (based on the inclusion/exclusion criteria) and was used throughout the screening process to allow for detailed reasons for including/excluding studies in the scoping review. Prior to commencing the review, a pilot review was undertaken, whereby the first 50 titles were screened and assessed by the first and second authors, with a focus on whether each study met inclusion or exclusion criteria, followed by a discussion around the rationale for each decision. During this process,

discrepancies were explored between the first and second authors' decisions, with a particular focus on whether discrepancies were due to differences in interpretations of studies, or differences in interpretation of eligibility criteria. This in turn led to further communications (occasionally including the third author), and minor adjustments in interpretations of criteria.

Following the piloting exercise, the first and second authors each screened the title of half of the 4438 titles for appropriateness or exclusion (i.e., the first author read all 2219 odd records; the second author read all 2219 even records), removing additional duplicates where appropriate, reducing the sample to 893 records. The first author then screened all 893 records by abstract, further reducing the sample to 83 eligible records. The remaining 83 records were each assessed with more scrutiny by both authors, with consideration of their entire texts. From the 83 records, n=4 studies were deemed to have samples outside of target range (>6 years); n=15 of the studies involved PA interventions but did not explicitly entail sport as conceptualized for this study (e.g., focused on isolated FMS such as overarm throwing, dribbling a ball, galloping, running or jumping and/or did not occur regularly; or free-play movement activities); n=46 of the studies assessed only physical or motor skill outcomes; and lastly, n=9 of the records were deemed non-empirical (e.g., discussed sport as beneficial for preschoolers without conducting an empirical study).

At each stage of the review, discrepancies over articles included or excluded were discussed between the first and second author until consensus was reached, while the third author was used as a sounding board when agreement was not found. Issues commonly arose related to classification of intervention studies as either sport (as conceptualized for this study) or PA. For example, many studies involved focusing on isolated FMS and components of sport such as dribbling and running, but did not explicitly involve sport as conceptualized for this study (e.g.,

did not take place regularly, entail formal rules, effort, and strategy, were not led by a coach/instructor; Caldwell & Timmons, 2013; Canadian Heritage, 2013; Fraser-Thomas & Safai, 2018), thus were not included in the study. After review and screening, nine articles remained that met selection criteria, which were then subject to further data collection, quality assessment, and analysis.

Data Collection

The lead and second author read each of the nine eligible studies at length, confirming and discussing their fit in the overall review. Two templates were created to systematically extract and record relevant study information and variables, including the study author(s), date of publishing, study location, aim(s), study design, sample size, age, ethnicity, gender, method of data collection, measures used, sport type, sport frequency, and sport outcomes reported. The lead researcher completed both templates in their entirety; they were then assessed for accuracy and completion by the second author. None of the study authors were blind to study author(s), institution, or journal during this process.

Quality Assessment

Each of the studies under review was independently appraised for quality by two researchers using Version 2011 of the Mixed Methods Appraisal Tool (MMAT; Pluye et al., 2011). The MMAT is deemed appropriate for use to appraise and describe the methodological quality of qualitative, quantitative, and mixed-methods studies, and all three study designs emerged in the present review. Part 1 of the tool contains assessment criteria, including two screening questions and 19 appraisal items, while Part 2 includes a tutorial for completion of the tool. The reliability of the MMAT was initially established by Pace and colleagues (2012) as moderate to perfect, while it was more recently assessed using a larger sample of studies and

found to vary by criterion from fair to perfect (Souto et al., 2015). The tool takes approximately 15 minutes to complete. Methodological quality scores for all included studies are presented in Table 1. Overall, two studies met 100% of the MMAT methodological quality criteria (Griffiths Dowda, Dezateux, & Pate, 2010; Lobo & Winsler, 2006), one study met 75% (Piché, Fitzpatrick, & Pagani, 2015), four met 50% (Biber, 2016; Jorgensen, 2016; Landers & Fine, 1996; Metwaly, 2015), and two met only 25% of the criteria (Pollatou, Gerodimos, Zissi, Zervanou, & Karadimou, 2008; Sterkowicz-Przybycień, Klys, & Almansba, 2014). Given the small number of studies included in the review and the exploratory nature of the study, studies of low quality were not excluded.

Results

Characteristics of Studies

An overview of study characteristics can be found in Table 1. Of the nine studies included in the review, three of the studies drew from samples which originated in North America (Landers & Fine, 1996; Lobo & Winsler, 2006; Piché et al., 2015), an additional five studies originated in each of the United Kingdom (Griffiths et al., 2010), Turkey (Biber, 2016), Australia (Jorgensen, 2016), Egypt (Metwaly, 2015), and Greece (Pollatou et al., 2008), and one study had authors from both Canada and Poland, but did not specify where data collection took place (Sterkowicz- Przybycień et al., 2014). Only one of the studies explicitly adopted a theoretical framework (Jorgensen, 2016), which was guided by Pierre Bourdieu's Theory of Social Capital (2011), while another was guided loosely by phenomenology (Landers & Fine, 1996). Seven of the studies utilized quantitative methodologies, two of which involved secondary analyses of cohort data (Griffiths et al., 2010; Piché et al., 2015), one entailed a randomized experimental design (Lobo & Winsler, 2006), two used non-randomized

experimental designs (Biber, 2006; Metwaly, 2015), and two were cross-sectional analyses of data (Pollatou et al., 2008; Sterkowicz- Przybycień et al., 2014). Across the seven quantitative studies, methods of data analysis varied, including: MANOVA, T-Test, linear regression, 2-way ANOVA, and least-squared regression. Only one of the retained studies used qualitative methodology (Landers & Fine, 1996), and the method of data analysis was not reported or discernable in the text. Finally, one study in the review was deemed mixed-methods (Sterkowicz- Przybycień et al., 2014) and researchers described creating an evaluation scale based on the frequency of "yes" answers to each survey question. As noted in Table 1, six of the nine studies involved gathering information through administering questionnaires (Biber, 2016; Griffiths et al., 2010; Lobo & Winsler, 2006; Metwaly, 2015; Piché et al., 2015; Sterkowicz-Przybycień et al., 2014) completed either by a parent or teacher proxy. Three of the studies in the review involved studying preschoolers directly, through observations and informal interviews (Landers & Fine, 1996), through an assessment of children's language and cognitive abilities (Jorgensen, 2016), and through a researcher administered spatial ability task (Pollatou et al., 2008).

Characteristics of Preschoolers

An overview of preschooler sample characteristics of the extracted studies can be found in Table 2. Two of the studies had small sample sizes, with 24 preschoolers each (Landers & Fine, 1996; Metwaly, 2015). Three studies had medium size samples of 40-46 preschoolers (Biber, 2016; Lobo & Winsler, 2006; Sterkowicz- Przybycień et al., 2014). Two of the studies had moderate to large sample sizes, with 177 preschoolers (Jorgensen, 2016) and 400 preschoolers respectively (Pollatou et al., 2008). Finally, the remaining two studies had large sample sizes - 935 preschoolers in a study which drew from The Quebec Longitudinal Study of

Child Deveopment (Piché et al., 2015), and 13,470 preschoolers in a large cohort study which drew data from the United Kingdom Millennium Cohort Study (Griffiths et al., 2010). The age of preschoolers ranged from 3 to 6 years, with only two studies reporting the mean age in their samples (Lobo & Winsler. 2006; Piché et al., 2015)**.** While inclusion/exclusion criteria were set to include only children ages 2-5 years old, final eligible studies yielded nine studies that met all criteria; however, five of these studies also included 6 year old's in their samples. As data within these five studies were not analysed by age group, it was not possible to consider findings of only the sample of interest. After extensive consultation between all three authors, it was agreed that these five studies would be included, given the exploratory nature of the scoping review, and the limited number of studies that would have remained in the review had these studies been excluded. Furthermore, while the five studies had 6 year old's in their samples, the samples all had a mean age *below* 6 years of age, and did not target children above 6. Combined, 7731 male and 7401 female children were examined across nine studies, and all studies examined both male and female sexes, with the exception of one study that did not report on the sample's sex composition (i.e., Metwaly, 2015). Most of the studies had relatively even male-female participant splits, while two studies had substantively more males than females (18 males to 6 females; Landers & Fine, 1996; 36 males to 10 females, Sterkowicz-Przybycień et al., 2014). Only one-third of the studies reported the enthniciy of the samples; preschoolers were primarily Caucasion (Griffiths et al., 2010; Landers & Fine, 1996) followed by Hispanic (Lobo & Winsler, 2006). Preschoolers in the retained studies reportedly participated most commonly in dance (i.e., general, ballet, folk), while the remaining preschoolers participated in a combination of team and individual sports including t-ball, swimming, hydro-gymnastics, judo, tennis, karate, soccer, basketball, and track and field, while two studies did not specify the type(s) of sports played (i.e.,

Griffiths et al., 2010; Piché et al., 2015). Lastly, studies varied widely with respect to the frequency of sport participation, with participants engaging in sport from zero times per week to almost every day of the week.

Preschooler Outcomes

Study outcomes were grouped into three main developmental categories, guided loosely by NRCIM's (2002) framework: 1) psychological and emotional, 2) social, and 3) cognitive or intellectual, with sub-categorization within each of these broader domains. Some studies addressed more than one outcome, which led to their inclusion in more than one category. The following section will outline the individual outcomes assessed across the nine studies.

Psychological and emotional development. In total, five studies addressed the impact that organized sport had on young children's psychological and emotional development, which broadly encompassed having a sense of personal autonomy or responsibility for the self, good mental health and coping skills, good emotional self-regulation skills, and confidence in one's personal efficacy (Eccles & Gootman, 2002).

Three studies found that sport participation led to improvements in preschooler children's psychological and/or emotional behaviour (Griffiths et al., 2010; Lobo & Winsler, 2006; Sterkowicz-Przybycień et al., 2014). A cross-sectional analysis of data by Griffiths and colleagues (2010) revealed that young children who played sports had fewer emotional problems (e.g., feeling worried or anxious), conduct issues (e.g., obedience or fighting), or hyper-inattention difficulties (e.g., being restless or overactive). Secondly, Lobo and Winsler (2006) found that an 8-week creative dance class led to a decrease in children's internalization (e.g., presence of depression, withdrawl, or anxiety) and externalization of behaviour problems (e.g., interpersonal conflicts). Lastly, a mixed-methods study by Sterkowicz-Przybycień and

colleagues (2014) found that parents saw improvement in various behavioural traits of their children who participated in the sport of judo, such as courage, respect, self-discipline, responsibility, regularity, persistance, prudence, dilligence, concentration, sensitivity, independence, assertiveness, serenity, and self-confidence. As well, the children displayed improvements in their ability to self-assess, solve problems, and in supporting other people work through challenges.

One study reported the development of perceived competence through preschooler sport participation. This qualitative study which involved a combination of researcher observations and preschooler and coach interviews by Landers and Fine (1996) revealed that in early childhood (e.g., preschool), children begin to recognize their sporting abilities in relation to others, due to the emergence of 'skill hierarchies' that are created when coaches recognize who the strongest players are, and give them more central positions on the field**.** In turn, these players are afforded more attention and opportunities to practice and hone their skills, leading to increased attention from peers and parents, which further help the children to internalize their athletic prowess and perceived competence. Correspondingly, players who were identified as 'less skilled' were given less attention and feedback and put in positions that involved limited game interaction (i.e., the outfield where preschoolers seldom hit), which in-turn often led to fewer opportunities to improve or feel competent in their abilities.

Lastly, a longitudinal study by Piché and colleagues (2015) asked parents to rate their five year old child's participation (or lack thereof) in structured physical activities (such as dance, gymnastics, or martial arts) or organized team sports led by a coach over the previous year. At follow-up in grade four (i.e., at roughly 10 years of age), teachers reported the same participants' self-regulation skills in the classroom through a measure of classroom engagement.

Findings from this study revealed that fourth grade teachers reported that involvement in structured sports at four years old was linked to high levels of fourth grade self-regulation, reflected by effortful, goal-directed, and self-disciplined behaviours in their classrooms.

Social development. In total, six studies also outlined that sport participation was associated with children's social development, broadly referred to as the ability to effectively navigate relationships between parents, peers, other adults, as well as connectedness, perceived trust, a sense of social place within one's larger social network, and commitment to conventional social norms (Eccles & Gootman, 2002).

Overall, five studies indicated that sport programming was linked to preschoolers' social skills (Biber, 2016; Griffiths et al., 2010; Lobo & Winsler, 2006; Metwaly, 2015; Sterkowicz-Przybycień et al., 2014). Firstly, results of Lobo and Winsler's (2006) experimental study revealed that children who participated in instructional creative dance classes experienced significantly more positive gains in social competence (i.e., referred to as children's capacity to attain social goals, engage effectively with others, make and maintain friendships, and gain entry into social groups), than than children that participated in an attention control program (Eisenberg & Fabes, 1992; Lobo & Winsler, 2006). A second study found that four folk dancing classes per week over two months resulted in significantly higher levels of social skills and social adjustment scores between pre and post test compared to preschoolers who did not partake in the specialized dance program (Biber, 2016). Specifically, frequency distributions revealed that after completion of the program, children increased their ability to make friends, to communicate with friends, to understand others through empathizing, to solve problems with others, and to cooperate with others. Willingness to help others around them, trying not to repeat negative behaviours after being warned, warning friends who evade rules, caring about

complying, and feeling regretful of negative behaviours also increased from pre to post test; all sub-factors indicated high levels of social adjustment. Moreover, quarrelling with friends, complaining about life, and giving up on tasks also increased, while consciously damaging surrounding objects remained constant; thus, all sub-factors exemplifying some social maladjustment levels also increased from pre to post program.

A third study found that a 10-week hydro-water gymnastics was associated with improved social skills and reduced problem social behaviours of preschool children (Metwaly, 2015). Specificly, differences were found between the experimental and control groups with regard to social cooperation, social interaction, self-centered/explosive attention, social withdrawal, and anxiety/somatic problems, such that gymnastics participants were rated significantly higher in social skills and lower in the aforementioned problem behaviours. However, the study did not find significant differences between those who did and did not participate in hydro-gymnastics on variables including social independence, attention problems, and anti-social/aggressive behaviour. In a fourth study, Sterkowicz-Przybycień and colleagues (2014) found that preschoolers learned how to cooperate better with others in their peer groups after participating in the sport of judo one to two times a week, for an average of 16 months. Finally, Griffiths and colleagues' (2010) study found that preschoolers who played sports had fewer peer relationship problems, and displayed more pro-social behaviours (such as being considerate of others feelings, or sharing readily with others).

In addition to studies focused on social skill outcomes, one qualitative study by Landers and Fine (1996) revealed that young children might become socialized to understand misguided gender stereotypes or outdated gender roles through their sport participation. For example, parents, coaches and peers regarded t-ball as a traditionally male dominated sport, where parents

often provided more support for their sons' participation compared with daughters (e.g., through the provision of feedback and initiating unstructured sport). Coaches further reproduced gender stereotypes at practices and games by taking a passive interest in female children's success on the team, at times even making references to female players in the context of 'throwing like a girl.'

Cognitive and intellectual development. Lastly, two studies examined potential associations between sport participation and cognitive or intellectual development, broadly defined as critical thinking and reasoning skills, and knowledge of essential vocational skills, and school success (Eccles & Gootman, 2002). Specifically, Pollatou and colleagues (2008) found there were no significant differences between male and female preschoolers who participated in sport (including ballet, tennis, karate, dance, soccer, basketball, and track and field), and those who did not, in terms of spatial abilities. However, a recent study by Jorgensen (2016) found that children who participated in an early-years swimming program significantly outperformed a comparison group across various cognitive and linguistic domains in categories including oral expression, brief achievement, brief reading, and mathematical reasoning, assessed through tasks including letter-word identification, understanding directions, passage comprehension, applied problem solving, picture vocabulary, and quantitative concepts activities.

Discussion

This scoping review was undertaken to investigate the scope of research on the toddler and preschooler-age demographic that examines the association between sport and OPA and psychological, emotional, social, cognitive or intellectual outcomes. Overall, nine articles of varying study design were retained, which primarily spoke to social development, followed by psychological or emotional, and cognitive or intellectual outcomes for preschoolers. The

following sections summarize key developmental outcomes related to preschooler sport and OPA participation, and consider these findings in light of what is known about school-age sport participation; quality considerations, future research avenues, and limitations of the present review are also discussed.

Developmental Outcomes

Overall, this review found nine studies that reported positive associations between preschooler sport and OPA participation and developmental outcomes. Specifically, positive associations were found between sport and OPA participation and the development of social skills (i.e., social competence and social adjustment), which included successfully building relationships (e.g., making and maintaining friendships, gaining entry into a social group) successfully engaging with others (e.g., communicating, cooperation, sharing, helping others, solving problems, empathizing), and following pro-social conventions (e.g., complying with rules, trying not to repeat negative behaviours). Positive associations were found with psychological outcomes related to increased positive behaviours (e.g., responsibility, courage, respect, self- discipline, independence, etc.), and fewer emotional problems (e.g., feeling worried or anxious, withdrawn or depressed), conduct issues (e.g., obedience or fighting, interpersonal issues), or hyper-inattention problems (e.g., being restless or overactive) (Griffiths et al., 2010; Lobo & Winsler, 2006; Sterkowicz- Przybycień et al., 2014). Psychological outcomes also included the development of perceived competence, which included recognition of abilities (e.g., sport skills) in relation to others (Landers & Fine, 1996), and self-regulation (e.g., effortful, goal-directed, and self-disciplined behaviour; Piché et al., 2015). Lastly, the review suggested that preschooler sport and OPA participation could enhance cognitive-intellectual developmental outcomes related to mathematical and linguistic skills (e.g., reading, mathematics, listening to

instructions, vocabulary).

Collectively, many of the positive outcomes associated with sport and OPA participation in the preschooler years in this review echo those identified at the youth sport level. Namely, youth sport participation is commonly linked to the acquisition of life skills, referred to as 'skills that enable individuals to succeed in the different environments in which they live, such as school, home, and in their neighborhoods with their peer groups (Gould & Carson, 2008, p. 72). Further, life skills that are learned through sport (such as setting goals, communicating effectively, and teamwork) are often seen as transferable and applied to other areas of an athlete's life, which help them contribute positively to society (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002; Gould & Carson, 2008; Theokas, Danish, Hodge, Heke & Forneris, 2008). In the current review, many of the positive social, psychological, emotional, and cognitive-intellectual skills identified (e.g., the development of self-competence, the ability to cooperate with peers, or to exercise self-disciplined behaviour) are important skills that may ease the transition for young children from preschool or kindergarten into primary school grades, and may stand as examples of quality early learning experiences which teach young children developmental skills required for future success (Jorgensen's, 2016; Stirrup et al., 2015). It is interesting to note that while many of the life skills learned through sport and OPA during the preschool years are similar to those learned through sport in later years (e.g., social skills, emotional regulation), these life skills appear to present differently, and most often require different means of measurement at the preschooler age than in older childhood, highlighting a necessary area of further research.

Despite promising findings regarding sport and OPA's facilitation of positive developmental outcomes among preschoolers, researchers have questioned whether these

outcomes can be facilitated through other non-sport early childhood contexts, or through unstructured free play (Burdette & Whitaker, 2005; Piché et al., 2015). For example, Fraser-Thomas & Safai (2018) suggested that preschooler sport may not offer a unique context for young children to engage socially with others, as all of the participants in the study also attended childcare, where they had ample opportunity to socialize with other children without a parent present. Similarly, Piché and colleagues (2015) found and association between sport and OPA participation and self-regulation, hypothesizing this was because of the supervised nature of organized sport, which requires children to listen to an adult, and to follow rules and structure. However, in the same study, Piché and colleagues found children who participated in other structured extracurricular activities contexts (including community clubs, music, or religious activities) did not demonstrate increased self-regulation, suggesting that there may be something unique about sport and OPA that may be responsible for the development of self-regulation, such as the sense of belonging to a group, being part of a group with a common goal of winning, or the complex cognitive demands required of children to navigate the rules in team sports (Piché et al., 2015). Further, the element of regularity (at least one practice a week), combined with the familiarity of instructors, peers, and learning skills successively, may be responsible for this phenomenon; however, it is difficult to isolate what activity, or what combination of activities (i.e., sport, childcare, and/or community club involvement) may lead to the development of various interpersonal skills in young children, and more research is needed to better understand how sport and OPA participation facilitates the development of these skills among preschoolers, independent of other programs (Fraser-Thomas & Safai, 2018).

Moreover, this review revealed that preschooler sport and OPA participation is also associated with negative outcomes (as outlined in two studies), and highlighted some

inconclusive findings (as reflected in two studies). For instance, one study suggested that sport and OPA participation contributed to social maladjustment, which was reflected by quarrelling with friends, life disatisfaction, complaining, giving up, lack of motivation, and being disruptive during sport practice (Biber, 2016). While the study did not provide insight into the reasons for increased occurences of these behaviours, it has been cautioned that feelings of frustration or failure might emerge when children struggle to comprehend what they are being taught in sport, as young children may not be emotionally mature enough to follow rules or understand competition prior to six years (AAP, 2011; CPS, 2005; Tofler & Butterbaugh, 2005). Further, Patel, Pratt, and Greydanus (2002) suggest that children simply do not understand the concept of social comparison until age six, nor do they fully comprehend the competitive nature of sport until age nine, which could provide an explanation for these findings. The short attention spans of young children may further highlight why researchers saw an increase in disruptive and attention problems in this study (CPS, 2005). Interestingly, Metwaly (2015) found that social independence, attention problems, and antisocial/aggressive were not significantly different between those who engaged in an organized sport and OPA and those who did not, suggesting some inclusive findings, and emphasizing the importance of further research exploring potential negative outcomes of early sport and OPA participation.

Furthermore, Landers and Fine's (1996) study highlighted that sport environments which favour more skilled players, and male players, can influence one's perception of competence and negatively reinforce gender stereotypes. Landers and Fine (1996) suggested that while the organization under which the program operated emphasized the importance of teamwork and the development of basic physical skill development, the coaches promoted a culture of 'skill over effort'. In turn, players who were identified as less skilled were given less attention and feedback

from coaches and parents, which effectively deceased their sense of competence, and discouraged their continued involvement and efforts in t-ball. This finding raises concerns, as parents' perceptions of their children's sport ability are highly correlated with children's own self-beliefs (Fredricks, & Eccles, 2005). Consequently, it may be harmful to instill low competence beliefs in children during their first and earliest sporting and OPA experiences, as it may lead to early dropout or exit from sport (Cervelló, Escartí, & Guzmán, 2007). Additionally, Landers and Fine's (1996) study highlights that gender stereotypes in sport can be reinforced early in life, and are often perpetuated by coaches and parents. This is particularly troubling as gender stereotyping may negatively impact girls' take-up and continued involvement in sport, as female preschoolers may lose interest in sport prior to entering grade school (Hardin & Greer, 2009). The early internalization of male dominated or 'gender-appropriate' sports may provide further rationale for why participation trends of females in sports and in leadership and sport governance roles are lower than males (Clarke, 2008; Senne, 2016; Statistics Canada, 2011). However, it is important to note that Landers and Fine's study took place over two decades ago, and may no longer reflect the reality of current-day preschooler sport and OPA programming, or of misguided gender stereotypes in sport more broadly.

Finally, one study (Pollatou et al., 2008) found there were no clear differences between sexes, or between those who participated in sport and OPA and those who did not, with regard to spatial orientation abilities. Although some research purports the superiority of males in spatial orientational abilities (e.g., Harris, 1978; Maccoby & Jacklin, 1974), Pollatou and colleagues' study did not support this notion among the preschooler demographic, while sport and OPA participation also appeared to have no effect on the spatial orientation ability of the 4 and 5 year olds in this sample. These preliminary results suggest that spatial abilities may either be inherent

features, or not yet impacted by early sport and OPA participation or apparent when measured in very young children.

Quality Considerations

While the studies reveal primarily positive outcomes associated with early sport and OPA participation in additional to some negative and inconclusive findings, results must be considered with caution, as studies are limited in quantity (n=9), and some have questionable methodological design and quality. For example, when the studies were appraised for quality, six of the nine studies included in the review met half or less of the methodology quality components of the MMAT. In other words, many of these studies did not clearly depict how they recruited participants (e.g., Pollatou et al., 2008; Sterkowicz-Przybycień et al., 2014) or outlined procedures whereby participants were recruited in a way that did not minimize bias (e.g., Biber, 2016), while one study did not use an instrument that was known or validated (e.g. Sterkowicz-Przybycień et al., 2014). Further, in several studies, the methods of data analysis were not adequately described (e.g., Landers & Fine, 1996; Sterkowicz-Przybycień et al., 2014), and several did not clearly articulate negative or inconclusive findings that emerged in their results or discussion, despite being visible in quantitative tables (e.g. Biber, 2016; Metwaly, 2015). Additionally, it should also be noted that the quality measure used (i.e., MMAT) was limited to the extent that it only measured methodological quality, but not the quality of writing (Pluye et al., 2011). Beyond the quality markers in the MMAT, many of the studies in the review were limited in the quality and integrity of their writing, as some of the papers did not provide well-developed literature reviews, rationales, or discussion sections to complement and build their study findings, which made collapsing and reporting results challenging. Subsequently, additional research with stronger methodological design and rigor is necessary moving forward.

Future Considerations

To enhance the quality and transparency of future work in this area, a more concrete definition of what constitutes 'sport,' particularly among toddlers and preschoolers (aged 2-5) is needed. While an adapted definition of sport was used in the current study (with the removal of a competitive component, and broadening to include all OPA), it is acknowledged that additional relevant studies may exist, which use alternative terminology (e.g., describing sport as general physical activity or play).

Another consideration moving forward relates to the length of time necessary to measure outcomes of sport and OPA participation among preschoolers, toddlers, or infants. For example, Pollatou and colleagues (2008) cautioned that they might not have seen spatial orientation discrepancies in their study because it may have been too early to accurately measure these results, as some of the outcomes of sport and OPA participation may not have been visible given participation criteria of only six months of involvement. In the present review, it can be noted that only one of the studies was longitudinal in nature, and involved secondary analysis of large cohort data (Piché et al., 2015). Piché and colleagues' study stands as an exemplary study design which effectively examined the impact of early sport and OPA participation over time, capturing participation at two time points in development (when surveying or interviewing children may not otherwise be possible), and thus allowed researchers to compare outcomes with participants who did not engage early in sport or OPA.

Another important consideration moving forward relates to the involvement of young children in the data collection, as data was primarily gathered through behaviour informants (i.e., parents, teachers, or a combination of the two; n=6). This is likely due to the reality that researchers are met with numerous challenges when studying children of young ages, including

children's less developed psychological and cognitive capacities, which make the use of surveys, instruments, or self-report on their PA or sport habits challenging (Bagnoli, 2009; Timmons et al., 2007). Further, in interview settings, young children have short attention spans, and limited language abilities may hinder their effectiveness in communicating thoughts and ideas, which makes assessing their true perceptions and experiences of sport and OPA programs difficult (Bagnoli, 2009; Dwyer, Baur, & Hardy, 2008; Koller & San Juan, 2015; McEvilly, 2015). As such, it appears that much of what is known about developmental outcomes of toddler and preschooler sport and OPA is from the perspective of significant others, which may be skewed by social desirability or response bias (Alderson, 2005; Van de Mortel, 2008). In the present review, only one study involved observation of or verbal engagement with preschoolers directly through informal interviews; however, the techniques or methods used to do so were not described sufficiently to be replicated by other researchers (Landers & Fine, 1996). This finding reinforces that as in other research areas such as PA and physical education, researchers rarely seek young children's perspectives (McEvilly, 2015).

It is suggested that a greater understanding of the toddler/preschooler sport and OPA context could be gleaned through modified interviews or observational data collection techniques, which involve the active participation of young children within qualitative research (Bagnoli, 2009; McEvilly, 2015). For instance, Scott (2004) suggests that less structured interviews as opposed to general question-answer format interviews are appropriate with young children who have short attention spans, while other researchers purport that visual aids and graphic or arts-based expressive techniques (such as drawing) that are pervasively used in psychology research be integrated into interviews to help children elaborate on verbal contributions (Bagnoli, 2009; MacDougall, Schiller, & Darbyshire, 2004; Serpentino, 2011).

Further, MacPhail and Kinchin (2004) suggest there are numerous benefits to using drawing as a data collection method with young children, including that it is a fun and efficient way to collect information from participants, and that children who are unwilling to participate in interviews can have an opportunity to express their views on a subject. Subsequently, combining several types of data collection (e.g., observational and modified interviews) and gathering proxy-information from individuals who are not children's direct caregivers (i.e., such as teachers, daycare providers or coaches), may provide less biases, and enable triangulation when engaging in future research with this demographic.

Limitations

There were several limitations to the present review, which must be acknowledged. Firstly, only nine studies met the review's inclusion criteria, implying that researchers must be cautious in making generalizations about outcomes of sport and OPA participation among preschoolers. Secondly, while the search strategy was thoughtfully created in consultation with an expert research librarian, it is acknowledged that the chosen search string may have limited the findings that emerged through various search engines. Similarly, our chosen conceptualization of toddler and preschooler sport and OPA for this review may have limited the number of studies retained, as authors of reviewed studies often did not adequately describe 'sport' or 'OPA' and thus these studies may not have met inclusion criteria. For example, several studies described using interventions involving the assessment of FMS (e.g., dribbling a ball) that could perhaps have been considered, given that they included components of sport; however, they were not included because they failed to wholly meet the authors' conceptualization of sport and OPA, as they did not include elements of strategy, tactics, rules, coaching/instructing by an

adult leader, or regularity (Caldwell & Timmons, 2013; Canadian Heritage, 2013; Fraser-Thomas & Safai, 2018).

Additionally, the current study was restricted to empirical, peer reviewed articles, and therefore many grey area research papers were excluded that may have yielded interesting results. Similarly, due to the exploratory nature of the scoping review, studies of varied design were retained (i.e., quantitative, qualitative, and mixed-methods), which limited the ability to appraise quality and synthesize findings uniformly across studies. With regard to the screening protocol, while the eligibility screening tool was jointly created by the research team, and the research team engaged in extensive consultation and discussion surrounding all discrepancies at each step throughout the review process, the primary and secondary authors only screened half of the initial 4438 retained study records, inferring the possibility that titles may not have been screened for inclusion or exclusion uniformly during their initial assessment. Finally, researcher expectancy effects are plausible, as none of the authors were blind to the studies' initial hypotheses, nor the studies' authors, institutions, or journals, which are identified as a potential sources of bias in reporting study characteristics and quality.

Conclusion

Overall, findings from this scoping review offer preliminary evidence that early sport and OPA participation is primarily related to positive developmental outcomes (e.g., enhanced social skills, pro-social behaviours, self-regulation), while they also highlight some negative and inconclusive findings. This review also reinforces the notion that little is known about preschooler organized sport and OPA participation as a distinct form of PA, despite the pervasive availability of preschooler organized sport programming, and positive parental perceptions of early sport enrolment (Fraser-Thomas & Safai, 2018; Nonis, 2005). Additional

research with stronger quality, rigor, and methodological design is needed before conclusive findings or generalizations can be inferred. It is suggested that a greater understanding of this context could be gleaned through modified interview and observational data collection techniques that actively involve young children, in addition to the use of triangulation, and longitudinal study designs.

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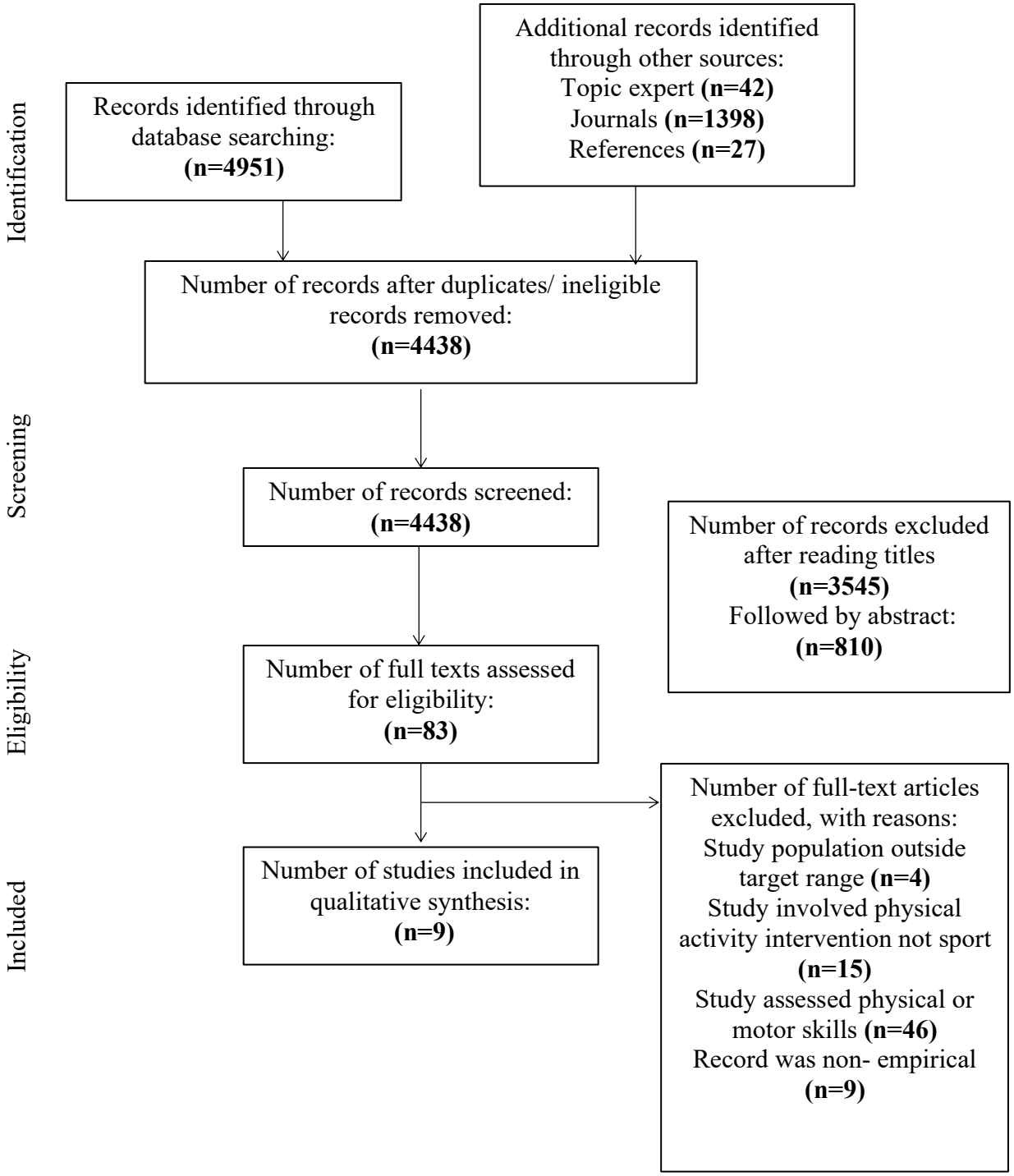

Figure 1. Modified PRISMA flow chart outlining records collected and final records eligible after screening process

Table 1. *Summary of Study Characteristics.*

Study	Study location	Aim(s)	Framework or study design(s)	Method of data collection/measures	Method of data analysis	Broad study outcomes	Narrow study outcomes	Study quality
Quantitative Research								
Biber (2016)	Turkey	Analyzing the effects of folk dance training on 5-6 year old pre-school children's social development*	Non-Randomized Experimental Design	The Social Adjustment and Skills Scale, (Ömeroğlu & Kandır, 2005) adapted for 5-6 year olds (Işık, 2007)**	T-Test	Social Development	Social skills; Social adjustment	2
Griffiths, Dowda, Dezateux, & Pate (2010)	United Kingdom	Investigating the association between participation in sports and screen-entertainment (as components of physical activity and sedentary behaviour), with emotional and behavioural problems	Secondary Cross-Sectional Analysis of Data	a) Nationally representative UK Millennium Cohort Study*** b) Strengths and Difficulties Questionnaire (Goodman, 1997)***	Linear Regression	Psychological and Emotional Development; Social Development	Mental health, Emotional development; Pro-social behaviour	4
Jorgensen (2016)	Australia	Exploring the potential of an early-years swim context to add capital to young children that may position them favourably for the transition to school*	Theory of Social Capital (Bourdieu, 2011)	Woodcock Johnson III (Woodcock, McGrew, & Mather, 2001)	T-Test	Cognitive and Intellectual Development	Linguistic and Cognitive development	2
Lobo & Winsler (2006)	United States	Examining the effects of an eight-week instructional program in creative dance/movement on the social competence of low-income preschool children	Randomized Experimental Design	Social Competence Behavior Evaluation-Preschool Edition (LaFreniere & Dumas, 1995)**, ***	MANOVA	Social Development; Psychological and Emotional Development	Social competence; Internalizing and externalizing behaviour	4

(Continued)

Table 1. *Continued*

Study	Study location	Aim(s)	Framework or study design	Method of data collection/measures	Method of data analysis	Broad study outcomes	Narrow study outcomes	Study quality
Metwaly (2015)	Egypt	Examining the impact of the use of a hydro gymnastics on social behavior among primary children*	Non-Randomized Experimental Design	Preschool and Kindergarten Behavior Scales- 2nd Edition (Merrell, 2002)**, ***	T-Test	Social Development	Social skills; Social behaviour	2
Piché Fitzpatrick, & Pagani (2015)	Canada	Examining whether kindergarten childhood participation in extracurricular activities (sports) predict classroom engagement (self-regulatory skills), in fourth-grade	Secondary Analysis using Prospective-Longitudinal Data	a) Quebec Longitudinal Study of Child Development*** b) 11-item measure of classroom engagement (Piché et al., 2015)**	Ordinary Least-Squared Regression	Psychological and Emotional Development	Self-regulation	3
Pollatou, Gerodimos, Zissi, Zervanou, & Karadimou (2008)	Greece	Studying the effect of gender and athletic occupation in the orientation ability of children age 4 to 5 years old.	Cross-Sectional Analysis of Data	Witeba-Test of Spatial Orientation (Temple, Williams, & Bateman, 1979)	2-way ANOVA	Cognitive and Intellectual Development	Spatial orientation	1
Qualitative Research								
Landers & Fine (1996)	United States	Describing how status and gender roles can become reinforced at the earliest stage of organized sport.	Phenomenology	a) Participant observation; field notes b) Informal participant interviews c) Formal interviews with coaches	Unable to Determine	Psychological and Emotional Development; Social Development	Perceived sport competence; Socialization	2
Mixed-Methods Research								
Sterkowicz-Przybycień, Klys, & Almansba (2014)	Poland/ Canada	Examining behaviour changes of pre-school children (4-6 years) who participate in judo classes	Cross-Sectional Analysis of Data	Mixed-methods questionnaire (Sterkowicz & Madejski, 1999)***	Evaluation Scale based on frequency of 'yes' answers	Psychological and Emotional Development; Social Development	Psychosocial behaviour traits	1

Note. Studies with one asterisk (*) also address physical outcomes which are not discussed as they are beyond the scope of the review
Note. Studies with two asterisks (**) identify instruments proxy reported by teachers; studies with three asterisks (***) identify instruments proxy reported by parents
Note. 1 = One methodological criteria met (25%); 2 = two methodological criteria met (50%); 3 = three methodological criteria met (75%); 4 = four (all) methodological criteria met (100%)

Table 2. *Summary of Preschooler Characteristics.*

	Sample (n)	Age (years/ months)	Sex	Race/ ethnicity	Sport (s) involvement	Sport frequency
Biber (2016)	40	5-6 years X=Not Reported	20 Males 20 Females	Not Reported	Folk Dancing	4x /week; 2 months; 32 hours total
Griffiths, Dowda, Dezateux, & Pate (2010)	13 470	5 years X=Not Reported	6883 Males 6587 Females	Caucasian: 88.9% Mixed: 3.1% Asian: 4.6% African-American: 2.3% Other: 1.0%	Participated in Sport Class Outside of the School Setting; Specific Sport Not Reported	0-5>x/week
Jorgensen (2016)	177	3-5 years X=Not Reported	82 Males 95 Females	Not Reported	Swimming	Not Reported
Landers & Fine (1996)	24	5-6 years X=Not Reported	18 Males 6 Females	Caucasian: 79.2% African American: 16.7% Asian: 0.42 %	T-ball	2 practices; 1 game/week
Lobo & Winsler (2006)	40	3.25-5.16 years X=4.16 years; 39-62 months	21 Males 19 Females	Hispanic: 67% African American: 16% Asian: 5% Arabic: 7% Caucasian/other: 5%	Dance	2x/week; 35 minute sessions; 8 weeks total
Metwaly (2015)	24	5-6 years X=Not Reported	Not Reported	Not Reported	Hydro-gymnastics	1hr session; 3 days/w; 10 weeks
Piché, Fitzpatrick, & Pagani (2015)	935	5- 6 years X=74 months	467 Males 468 Females	Not Reported	Specific Sport Not Reported	0 – almost every day
Pollatou, Gerodimos, Zissi, Zervanou, & Karadimou (2008)	400	4-5 years X=Not Reported	204 Males 196 Females	Not Reported	Ballet, Tennis, Karate, Dance, Soccer, Basketball, Track and Field	>2x per week; 6+ months
Sterkowicz-Przybycień, Katarzyna, Klys, & Almansba (2014)	46	4- 6 years X=Not reported	36 Males 10 Females	Not Reported	Judo	1-2x/ week; 35-35 minute sessions; 16 months

Chapter Three

Study Two

Early-years sport participation: A case study examining experiences and outcomes

Harlow, M., Fraser-Thomas, J., & Bassett-Gunter, R. (2019). Early-years sport participation: A case study examining experiences and outcomes.

Abstract

There is limited and conflicting evidence on the benefits of early-years (<6) sport participation, yet sport programs directly targeting this demographic are commonplace (Calero et al., 2018). Given known positive and negative outcomes associated with older children and youth's sport participation, there is a need to explore the unique outcomes and associated experiences of younger children's sport involvement, as well as the underlying mechanisms and processes which facilitate such development (Fraser-Thomas & Safai, 2018; Harlow et al., 2018). An exploratory study was undertaken to explore perceived outcomes and experiences of early-years sport participation from the perspective of parents (n=10), coaches (n=7) and children ages 3-5 years (n=10). Results from semi-structured interviews revealed a number of perceived outcomes and associated experiences of early-years sport participation, including: (a) physical activity and energy management, (b) sport skill acquisition and physical literacy, (c) learning to win and lose, (d) socialization and social skills, and (e) life skills and school readiness. Findings indicate alignment of some, but not all perceived experiences and outcomes between participant groups. Specifically, findings suggest consideration be given to children's age, developmental capacities, sport readiness, and concurrent attendance of other early-years programs (i.e., music, daycare, preschool, kindergarten) when appraising potential experiences and outcomes. Study strengths, limitations and emerging research directions are also discussed.

Keywords: Early-years, sport participation, case-study, developmental outcomes, school readiness

Early-years sport participation: A case study examining experiences and outcomes

Youth sport participation has been met with both praise and contention, and is commonly discussed in relation to participants' personal, social, and physical growth and development (Holt et al., 2017). From a positive standpoint, sport has long been promoted as a context which fosters important life and psychosocial skills, such as cooperation, discipline, well-being, and social interaction (Côté & Fraser-Thomas, 2016; Eime, Young, Harvey, Charity, & Payne, 2013). In other words, organized sport contexts are often described as favourable environments for young people to engage, that can be harnessed to build youth's assets and strengths; this notion is broadly referred to as positive youth development (PYD) through sport (Larson, 2000; Lerner, Brown, & Kier, 2005; Lerner & Castellino, 2002).

Historically, children have often started participating in sport during their formative years (i.e., from approximately 6 years of age) (Smoll & Smith, 2002). Over the past two decades, the start-age in sport has dropped, with children in toddlerhood (1-2 years) and preschool years (aged 3-5) (herein referred to as 'early-years') partaking in various forms of organized sport (American Academy of Pediatrics, AAP, 2001; Caldwell & Timmons, 2013; ParticipACTION, 2018). While researchers have examined the general health benefits associated with physical activity (PA) during the early-years (Timmons, Naylor, & Pfeiffer, 2007), less is known about sport as a distinct form of PA, or the benefits or outcomes associated with participation (see Harlow, Wolman, & Fraser-Thomas, 2018 for a review).

Sport During the Early-Years

The small albeit growing body of empirical work on early-years sport participation yields mixed results. In one unique study examining PYD outcomes associated with preschooler sport participation, parents and childcare providers believed sport was a viable platform for

children's psychosocial and life skill development (i.e., learning of interpersonal skills, confidence, competence, being a team player); however, there was little consensus over whether developmental outcomes were actually attained from participation, and what mechanisms and processes facilitated such development (Fraser-Thomas & Safai, 2018). Other researchers suggest that sport engagement at 5 years of age is associated with fewer emotional problems and conduct issues (Griffiths, Dowda, Dezateux, & Pate, 2010), fewer internalization and externalizing behaviour problems (Lobo & Winsler, 2006), enhanced self-regulatory skills (Howard, Vella, & Cliff, 2018; Piché, Fitzpatrick, & Pagani, 2015), and improved social skills and adjustment (Biber, 2016; Metwaly, 2015). However, researchers also found that early-years sport participation contributed to social maladjustment (Biber, 2016), decreased children's self-competency beliefs, and contributed to misaligned gender stereotypes (Landers & Fine, 1996). These mixed findings suggest there may be underlying contextual or demographic factors moderating the effects of early-years sport participation, and further research is necessary to understand the complex impact of sport participation during the early-years.

Although research regarding sport participation during the early-years continues to evolve and grow, study findings to date have primarily relied upon proxy-reporting by parents, and have not detailed the underlying mechanisms or processes which may be contributing to positive and negative outcomes. The prevailing methodology of proxy reporting therefore raises concerns regarding potential response-bias or overemphasis of PYD outcomes within existing research on early-years sport participation (Alderson, 2005; Harlow et al., 2018; Van de Mortel, 2008), in turn highlighting the need to examine these contexts from more diverse perspectives.

Social Influences in Sport

The Personal Asset Framework (PAF) was recently proposed by Côté, Turnidge, and Evans (2014) to outline the dynamic processes of development through sport. While a description of the entire model is beyond the scope of this paper, one of the three central tenants of the model is that youth development is shaped by interpersonal relationships with others in the sport climate (i.e., coaches, parents, siblings, and peers). Of relevance to the current study, the influential roles of parents and coaches are considered.

Parents can greatly support (or hinder) youths' involvement and experience in sport (Holt et al., 2017). Parents are responsible for children's initial exposure to sport (Dwyer, Baur, & Hardy, 2008; Welk, Wood, & Morss, 2003), and may positively impact PYD outcomes through reinforcing positive lessons that children learn within a given program (Neely & Holt, 2014), and through the provision of unconditional love, emotional support, encouragement and praise (Côté & Hay, 2002; Fraser-Thomas & Côté, 2009). Conversely, parents may negatively impact children's development through placing excessive pressure on children to succeed, or emphasizing performance-oriented outcomes (Côté & Hay, 2002; Gould, Lauer, Rolo, Jannes, & Pennisi, 2008; Sagar & Lavallee, 2010). While empirical research addressing parental roles and support within early-years sport settings is scarce, the AAP (2001) cautions that overzealous parenting (i.e., described above) could be particularly harmful for young children, and may result in lower self-esteem and internalized feelings of failure, at a particularly sensitive age (Fraser-Thomas & Beesley, 2015; McElroy & Kirkendall, 1980).

Finally, coach and/or leaders who foster strong relationships with youth can further create an environment which nurtures PYD (Holt et al., 2017), and a significant body literature is devoted to understanding the role of coaches in enhancing or impeding PYD outcomes (Bean & Forneris, 2016; Conroy and Coatsworth, 2006; Fraser-Thomas, Côté, & Deakin, 2005). For

instance, coaches need to foster meaningful relationships with their athletes and develop coaching strategies which prioritize the physical, psychological, and social development of athletes (Camiré, Forneris, Trudel, & Bernard, 2011). Further, coaches need to teach PYD outcomes and life-skills to athletes in an intentional manor, facilitate opportunities for athletes to practice them, and discuss how they may be used in non-sport settings. Despite these practical recommendations, the majority of youth sport programs are led by volunteers with little to no have formal training (McCallister, Blinde, & Kolenbrander, 2000; Trudel & Gilbert, 2006; Wiersma & Sherman, 2005) - a reality even more pervasive at the early-years sport level (AAP, 2001; Matthews & Erickson, 2018). In sum, more research is needed examining the unique roles and perspectives of parents and coaches comprising the PYD climate in toddler and preschooler sport, and their implications on young children's experiences and developmental outcomes.

The Current Study

Despite limited and conflicting evidence on the benefits of early-years sport participation, sport programs directly targeting the early-years demographic appear increasingly commonplace (e.g., Calero, Beesley, & Fraser-Thomas, 2018), reflecting a trend towards younger entry age in sport, particularly in western countries (AAP, 2019; De Knop, Engström, & Skirstad, 1996). Researchers have acknowledged this phenomenon, noting that early enrichment opportunities including sport programs are a 'booming' industry (Vincent & Ball, 2006), which parents are gravitating towards in an attempt to stimulate or prompt their young children's talents and abilities (Stirrup, Duncombe, & Sandford, 2015). Collectively, the aforementioned review underscores the need to examine early-years sport in greater depth, identifying specific gaps in understanding the mechanisms and processes which underlie children's developmental outcomes through early-years sport, as well as understanding the experiences of young children (Fraser-

Thomas & Safai, 2018; Harlow et al., 2018). As such, this case study was undertaken to explore the perceived outcomes and experiences of early-years sport participation from the perspectives of toddlers, preschoolers, parents, and coaches.

Methods

Design and Methodology

A multiple or collective case-study design was employed to understand the perspectives of toddlers, preschoolers, parents, and coaches pertaining to early-years sport (Stake, 2005). This methodology was deemed appropriate as it ensured that the case (early-years sport) was explored through a variety of lenses, allowing for multiple facets of the phenomenon to be revealed and understood (Baxter & Jack, 2008). Multiple case-studies are useful to predict similar results (a literal replication) or contrasting results (a theoretical replication) across cases (Yin, 2003), as well as allow for triangulation of study perspectives and findings (Baxter & Jack, 2008). The study was informed by a constructivist perspective, commonly used within qualitative research, as it seeks to understand, acknowledges multiple perspectives, and is suitable for exploratory studies (Creswell, 2014).

Procedure

Sampling and recruitment. This study was part of a larger qualitative study which sought to advance the understanding of early-years sport and organized physical activity participation, and entailed exploring the experience of sport participation through the perspectives of toddlers, preschoolers, parents, and coaches (outlined in the present study), as well as observing children in early-years sport contexts (see Chapter Four, Study Three). Following ethical approval through the affiliate university's research ethics board, a maximum variation purposeful sampling technique was used to recruit diverse participants from sport

programs within the Greater Toronto Area (Etikan, Musa, & Alkassim, 2016; Patton, 1990). This approach was chosen in an effort to recruit a heterogeneous sample of sport programs (e.g., community-based 'non-profit', private 'for-profit'), sport types (e.g., team, individual), and age of participants (i.e., 2-5 years), which offered variation and thus a greater opportunity for researchers to learn from (Stake, 2005). Therefore, sports that were deemed popular amongst this age demographic including swimming, gymnastics, dance, soccer, ice-hockey, and t-ball were initially contacted (Caldwell & Timmons, 2013), while a general web search yielded additional programs that fit the study scope and aims. Notably, recruitment took place in the summer of 2017, with data-collection not beginning until the fall. Therefore, all contacted programs had to offer indoor programming to participate. Programs were contacted through e-mail or telephone when possible, and if interested, were asked to provide contact information for head coaches / lead instructors of early-years sport classes. The lead researcher then visited each program and addressed parents as a group at the completion of their son or daughter's sport session, sharing study information including the purpose and what involvement would entail. Parents were also assured that participation was completely voluntary and would not impact their participation at the program in any manner. Contact information was obtained from interested parents, and informed consent was ascertained on behalf of parents and their young children prior to scheduling the first study visit (Appendix A). Coaches of each affiliated program were also invited to participate, and if interested – completed informed consent (Appendix B), while additional coaches were purposefully sampled independent of these programs (following the same protocol described above) to ensure a larger and more diverse sample.

Participants. In total, 27 individuals participated in the current study, representing seven different sports/programs, including soccer, multi-sport, gymnastics, hockey, dance, rugby, and t-ball. Specifically, ten parent-child dyad's and seven independent coaches participated.

Toddlers and preschoolers. Child participants ranged from 3-5 years of age at the start of the study (4x 3 year olds; 3x 4 year olds; 3x 5 year olds); nine participants were male children and one was female. All but one child had siblings, seven were oldest, and two were the youngest of their families. Children attended sport classes/practices/games in their primary sport (i.e., multi-sport, soccer, gymnastics, rugby, or hockey) between one and three days a week, and all but one child attended or previously attended daycare (n=3) or preschool (n=6) outside of the home. Notably, preschool was distinguished from daycare if parents specified the program had an educational element (i.e., preparatory for kindergarten), as opposed to primarily being for childcare purposes. Finally, three children were enrolled in junior, and three children were enrolled in senior kindergarten, given that children begin full-day kindergarten as early as three years of age in the region that the study took place, provided they turn four by December 31st of the first school year (Ministry of Education, 2018). Additional details are described in Table 1, and all children are represented by a letter between A and J.

Parents. Parents ranged from 30-36 years of age (M_{age} = 36.4; six female, four male), and all were in heterosexual marriages, from dual-income families. All parents had some form of postsecondary education (i.e., college or university), and families had between one and three children (M = 2.0). Three of the (male) parents were coaches of their child's respective sport team (i.e., hockey and rugby), herein described as 'dual-role' parents. Additional details are described in Table 2, and all parent cases are represented by a letter between A and J, which corresponds with their child of the same letter.

Coaches. Coaches ranged from 20-57 years of age (M_{age} = 37.8; three female, seven male), and each led multi-sport, soccer, dance, rugby, hockey, or t-ball programming. Coaches had between 2 months and 20 years of experience; five were paid coaches working full or part-time, and five coaches were volunteer. Three coaches were current dual-role parent/coaches (information included in Table 2), and two coaches were former parent/coaches. Coach qualifications ranged significantly; some coaches attended general coaching clinics, while others had extensive training related to working with young children in sport. All coaches are represented by a letter between A and J, and additional coach characteristics can be found in Table 3.

Data Collection

Semi-structured interviews. All participants completed semi-structured interviews, which took place at sport programming venues between December of 2017 and August of 2018. Child and parent participants were each interviewed at the end their sport program session, which ranged between December of 2017 and March of 2018. Independent coaches were interviewed at their convenience between April and August of 2018. Semi-structured interviews were chosen as a viable method of data collection as they afforded the researcher flexibility, and in-line with the study's chosen methodology, ensured that a rich contextual understanding of the phenomenon under study, as well as helped reveal the uniqueness or complexity of each case (DiCicco-Bloom & Crabtree, 2006). Each interview was recorded using an audio-recording device. Interviews with parents ranged between 16:04 to 46:06 minutes (M=32:23), and coach interviews ranged between 32:07 and 60:05 minutes (M=45:49). Given limitations in attention and at times verbal communication skills, toddler and preschooler interviews were significantly shorter, ranging from 2:09 and 11:05 minutes (M= 7:37) in length.

Interview guides. Three different interview guides were created for children, parents, and coaches, based loosely on seminal literature on PYD in sport among older children and youth (e.g., Côté & Fraser-Thomas, 2016; Côté et al., 2014).

Parent and coach interview guides. Both parent (Appendix C) and coach (Appendix E) interview guides began with an overview of demographic questions to build rapport (e.g., age, occupation, number of children in sport, or number of years coaching), before discussing parents' or coaches' previous or concurrent sport and PA habits (e.g., 'Did you want to start by telling me about your own experience in sport'), and ('To what extent is sport or PA currently a part of your life?'). The third section addressed children's participation in sport: 'What considerations did you have for enrolling your child at the age you did?', as well as 'Do you think there are any benefits of sport participation at this age?', and finally 'Did you have any reservations about sport participation at this age?' Various follow-up questions and probes were utilized to encourage participants to provide examples or share more details. When relevant, parents and coaches were also asked to provide examples of changes they saw in child participants over the course of a session (e.g., 'Can you describe changes you have seen in children from the beginning of the sport session to the end?'). Where appropriate (i.e. for the three dual-role parent-coaches and for independent coach interviews), a fourth section related to any challenges, experiences, training, and qualifications coaching early-years sport.

Interviews with children. Due to the young age of toddlers and preschoolers, the standard semi-structured interview format was somewhat altered to increase opportunities for young children to participate, while acknowledging that research with young children and adults should not be approached the same way (Alderson, 2005; Punch, 2002). While an interview guide was created (Appendix D), play-based interview techniques which typically involve the

use of toys, props, and pictures (Koller & San Juan, 2015) were utilized to draw out children's thoughts and perspectives (Bagnoli, 2009). In the present study, visuals were used as probes if children could not answer open-ended questions related to these topics (Koller & San Juan, 2015). Each interview began with general questions to build rapport with participants (e.g., name, age, activity). In an effort not to probe children, a series of broad questions were first asked, including: 'What were you just doing?' 'What is your favourite part of [sport]?' 'Is there anything you do not like about [sport]?' Notably, the researcher also attended three sport sessions prior to talking with each child participant (see Chapter Four, Study Three), which created opportunities to build rapport with children and appeared to increase their comfort level and willingness to talk.

Data Analysis

Interview files were uploaded into a transcription software program (ExpressScribe), which enabled the lead researcher to reduce the speed of recordings, and transcribe interviews verbatim. Typed interview transcripts yielded a total of 250 pages of data across the 27 interviews. Identifying information was removed from each transcript and stored separately, later contributing to Tables 1, 2 and 3. To enhance trustworthiness of findings, parent and coach transcripts underwent member-checking after they were anonymized, whereby each participant was e-mailed a copy of the transcript and encouraged to read over and discuss or clarify the interpretation of the interview, and contribute new or additional perspectives (Baxter & Jack, 2008). None of the participants asked for any of the data in the transcripts to be altered or changed. Once approved, the lead researcher read each of the transcripts at length to become familiarised with the data, before importing them into Nvivo – 12, a qualitative research management software. A hybrid inductive - deductive data analysis method was performed,

allowing for the raw interview data to be organized into interpretable and meaningful themes and categories (bottom-up) (Braun & Clarke, 2006; Scanlan, Ravizza, & Stein, 1989), while larger themes guided the study's purpose and interview guides and represented concepts and ideas that the researcher imparted on the data (top-down) (Braun & Clarke, 2006). Specifically, this process followed Braun and Clarke's (2006) six-stage process, including: (a) familiarizing oneself with the data, (b) generating initial codes, (c) searching for themes, (d) reviewing potential themes, (e) defining and naming themes, and (f) producing the report. In addition to member-checking, triangulation was used throughout the analysis to enhance the study's credibility and trustworthiness (Baxter & Jack, 2008). Together, imploring multiple perspectives (from parents, children, and coaches) enabled comparison of findings between sources, and enhanced the data quality through the processes of idea convergence and the confirmation of findings (Knafl & Breitmayer, 1989).

Results and Discussion

Overall, findings reflect vast experiences and perceived outcomes associated with the sport participation of 3-5 year old children, including: (a) PA and energy management, (b) sport skill acquisition and physical literacy, (c) learning to win and lose, (d) socialization and social skills, and finally (e) life skills and school readiness. Child, parent and coaches perceptions are shared related to each theme, illustrating both convergence and lack of alignment in experiences and perceived outcomes. Results are presented with accompanying discussion, so that connections can more readily be made between study findings and the extant PYD and early childhood literature. To the researchers' knowledge, this is the first study to include toddler, preschooler, and coach perceptions of early-years sport, offering a more comprehensive understanding of the early-years sport experience.

PA and Energy Management

A number of parents began by expressing how they felt early-years sport contexts offered experiences for their children to be physically active and to 'tire' them out. As Parent D explained: "So the big two pieces for me I think are…they're getting exercise and they're moving around is a big thing, and they're wasting energy because they have so much of it and I want to throw some of it away." Similarly, Parent J shared: "My kid is an active little monster, I wanted to introduce him to sport early…and we thought this would be the age to do it." Parent D also expressed that organized sport may offer an additional or alternative context for her son to be physically active, as she felt he was not getting enough activity in kindergarten: "…he does go out at school but they don't do much [PA] so…they need something else to get their energy out."

Several coaches echoed these parents' reflections, acknowledging that children are less active than in the past, and need more PA in their day-to-day lives. Coaches, in turn, felt that it was their responsibility to adapt their practices to enable more movement:

> What we found is a lot of kids are not going outside, they're not playing tag like we used to do or man-hunt, or going to the park to play with their friends anymore, and a lot of the only exercise they're getting is through us. So, what we've tried to do is adapt our classes as well, so we try to do like, you know rolling on the ground, tumbling, or other different movements. (Coach C)

Younger children in the study (i.e., aged 3-4 years) used general terminology to describe active elements of their sport program, including: "I go to gym", "I play", "I play cool things" "I run" or "I jump." However, older children (i.e., age 5) typically used more advanced terminology such as, "I do exercise by playing tag and I get faster in my muscles." Further, Coach J described

how physically engaging practices were, explaining: “We do a lot of base running and they’re running like crazy...so they’re active for the whole hour, there’s no standing around.” Another coach echoed: “…we use running to tire them out” (Coach I). Coach C also explained how he cycled through drills and activities quickly to maximize activity time: “The idea is you have no more than three kids in a line, that way they’re getting as many chances to participate as possible and being active.”

Collectively, parents’, coaches’, and children’s perceptions suggest that the children are generally quite active in their early-years sport settings. These findings are in line with research among older children and youth showing that organized sport participation contributes to a significant component of children’s daily energy expenditure (Katzmarzyk & Malina, 1998). However, while several children in the study participated in multiple sports, they did so at different times of the year (i.e., soccer in summer, hockey in fall). In other words, for the duration of the study, children participated only in their primary, with most participating only once a week for a duration of 40 minutes to one hour. Given that Canadian early-years guidelines recommend 180 minutes of general PA a day, including up to 60 minutes of moderate-to-vigorous PA by 5 years of age, parents should not rely on organized sports alone to ensure that young children meet the requisite PA levels for healthy development, and instead, should consider the integration of unstructured sport, or active play (Canadian Society for Exercise Physiology, 2012; Leek et al., 2011).

Sport Skill Acquisition and Physical Literacy

Relatedly, parents felt early sport exposure led to advanced sport skill acquisition, supported loosely by their belief that successful athletes often start sport early. Parent C explained: “I think a lot of people start at 3. Even pro players - they say they started at 3…4…5.

Maybe they weren't doing much, but it's something you know… putting their hockey stick in their hand and skating around with it – it helps." Parent J echoed this rationale, referencing friends' children who began sport earlier and, in turn, became more skilled than he had been:

> I can tell you that friends that I know that are 15 years older than me with their kids who are 18/19 now… they touched a rugby ball since they were very little, and they're significantly better than I was at that age. So there's got to be something to it. (Parent J)

Another parent explained that she chose an early-years multi-sport program particularly because she wanted her son to become familiarized with a variety of sports that he would later have to play in school physical education classes:

> He would be really upset if they were playing a game and just threw him in there. He would be like, "I don't want to go to gym! I don't want to do this!" because he [wouldn't] have an access point into the game. (Parent D)

This parent, along with other multi-sport parents, felt that early exposure to a variety of sports would help them (and their child) identify which sport their child most excelled in, improving their child's competence and chance for future sport success. Given the growing discourse surrounding the merit of multi-sport participation versus single-sport specialization among children and adolescents (e.g., LaPrade et al., 2016), the potential benefits and costs (e.g., expertise, prolonged participation, injury, burnout, dropout) of each trajectory beginning in early childhood warrant further investigation.

While several coaches shared that children's physical skills and abilities improved over the course of the season, descriptions were fairly general, encompassing changes in children's overall physical literacy. For instance, Coach B shared, "We see physical benefits from being

active, as well as increased ability and skill level – physical literacy for participants who began earlier than others." Coach F shared, "I would say [we saw improved] physical literacy skills and motor learning skills." While speaking about a class offered to 3 and 4 year-olds, a dance instructor provided an example of a fundamental movement skill (FMS) that most children mastered by the end of their first year:

> I can get most kids to skip and that's a huge thing… that's a big accomplishment for them because that's a hop on one leg, and transferring their body weight on that one leg requires strength and agility and coordination… skipping is a whole coordination thing. (Coach D)

Moreover, a t-ball coach shared that children acquired new skills, and the confidence to execute them, stating: "Not only do they change in their physical abilities, you notice that their confidence actually grows for some of the kids." (Coach G)

Coach G also acknowledged that in recent years, children's baseline skills entering her t-ball program appeared lower than in previous years, which she attributed to less PA at home, and consequently, she suggested coaches had more responsibility to teach skills:

> It's harder to coach… kids aren't as active anymore so it's a big deal for the coaches now teaching kids just how to catch... it's a skill that you actually have to teach them so that's a challenge now in the culture - it's really working on the physical dexterity of these kids at a young age and the fundamentals of how to catch.

This coach's perspective aligns with surmounting evidence that children are not engaging in sufficient levels of active free play (Active Healthy Kids Canada, 2012). Free play (i.e., freely chosen, spontaneous, self-directed activity; Bergen, 2009; Brockman, Fox, & Jago, 2011) is associated with the promotion of children's physical literacy, FMS and other critical areas of

development (Ginsburg, 2007; Gray, 2011; Hardy, King, Farrell, Macniven, & Howlett, 2010). Moreover, while coach exerts indicate that sport participation contributed to improvements in children's skills (physical), as well the confidence to do them (affective), these are only two of the many components that comprise children's physical literacy. Physical literacy is "the motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life" (International Physical Literacy Association, 2014, p.1). With reduced engagement in PA and free play in children's day-to-day lives, it is unclear whether coaches of early sport programs are effectively instilling the benefits of PA (knowledge and understanding), or the value of engagement in PA for life. Many parents appear to be enrolling children in organized sport programs in lieu of active free play, while experts recommend that parents "promote age-appropriate outdoor play" (ParticipACTION, 2018, p. 9); future research should more closely examine outcomes associated with these differing forms of PA.

Finally, the diversity of young children's physical skills given key developmental differences were discussed, as were the challenges associated with organized sport programming throughout the early years. Parent J commented on a rugby class for 2-5 year-olds: "I can certainly tell the difference… I mean even a year makes a big difference. So the 4 year-olds are significantly better than the 3 year-olds…the 2 year-olds are running around crying most of the time." Evidently, given gross developmental differences, particular consideration to age groupings during the early-years is necessary, as larger age ranges are likely to be problematic. Specifically, younger children may be asked to perform skills before they are ready, leading to frustration, feelings of failure, and reducing their desire to continue playing sport (AAP, 2001; Stryer, Toffler, & Lapchick, 1998*).* Developmental discrepancies are further reflected in

children's descriptions of sport skills learned in class. For instance, younger sport participants described the skills they learned using modified language: "I played cool things…I did the trunk" (Child B – age 3), and "Basketball... the elephant it's so funny" (Child C – age 3). By contrast, 4 and 5 year-olds in the study used more sport-specific terminology suggesting they learned "soccer kicking" and "passing." Further, one 4 year-old (Child A) was able to describe a drill-used to introduce passing: "I would stand over there and he would bounce it into the icing [using imagery] … Yes. I was throwing it and then he would catch it." Another 4 year-old (Child D**)** explained, "I learned how to dribble with the sides. And you use the under part of your foot to do a big kick!" Finally, 5 year-old made the connection between practice and skill acquisition explaining that he liked coming to class "because it's good…and it's good to practice" (Child G).

Learning to Win and Lose

Many parents also discussed the value of early organized sport, from the perspective of wanting their children to learn how to win and lose, which they felt would prepare them for challenges in school and in life. For instance, Parent D directly stated, "I want him to deal with when he's not first". Another parent explained her belief that a multi-sport class would help her son "deal with failure, just learning that we're just here to have fun and it's not important… whether we win or lose." Similarly, Parent B shared:

> I think it helps with honestly…learning to lose. Because a lot of kids, like they nowadays are not… they're so coddled … that they can't lose easily. They cry right? And I find sports at any… not necessarily competition but you need to learn to lose and take it in the right spirit.

Several coaches echoed parents' sentiments: "…the concept of rules, in addition the idea of winning and losing. For many young children this is their first experience with restrictions and

losing, and many of them don't understand quite how trivial it is" (Coach F). Relatedly, Coach I shared her philosophy on failure as a learning opportunity:

> When kids are crying it's a big lesson to them. You can't cry because you struck out, so it's a big learning curve for the young ones… The kids that get mad because they struck out - like you can't get mad… that's life! It's the reality! You're not going to hit every single time you're up… you're not going to catch every ball that comes your way and it's a big learning adjustment for a kid" (Coach I).

Some coaches explained how they felt responsible for intentionally teaching children how to win and lose, and even modelling failure:

> One thing that I like to do when we're practicing anything or even in a game situation is I like to - it's going to sound weird - but I like to set them up for failure - I should say - let me reword that- I'll demonstrate failure. And I'll demonstrate or I'll model how I deal with failing or what we can do if we fail because - guess what! - this happens all the time and it's a hard thing to do. And so if we miss, [I say], "I didn't score a goal that time at all." I [help them reframe to] say, "But you know what? I did get to kick the ball and I did get to pass to my friend!" (Coach A)

Relatedly, a soccer coach shared the importance of introducing winning and losing in a group context, rather than singling children out:

> I believe that kids should lose, but at the same time we want to give them as many opportunities to win as possible. So like, we try not to do elimination games. The reason behind that is if we play a game and five people get tagged… [we] will say, "Okay, everyone who did not get tagged you're a winner!" So people lose the game, but we can start a new round right away and more people have the opportunity to be a winner. So

> you're not taking away losing, but you're still keeping the enjoyment of winning and increasing those chances [of winning]. So you're not singling out one loser. You can have multiple winners, and it's not always the same winners over and over again - not just the fastest kid in the group. You know, this gives other kids a chance [to be winners and losers]. (Coach C)

However, not all coaches agreed with this approach. Specifically, two coaches argued that the concept of competition, and by extension, winning and losing, should not exist in early-years sport programming at all. One rugby coach explained that

> Around 7/8 years of age they begin to teach principles of competition and winning and losing. They do not teach these principles to the U5's [under 5 years of age] as it would be too complicated for most to understand…and require extensive modification. (Coach E)

Similarly, a dance teacher did not believe in sending her very young dancers to competition, explaining: "I mean, I'm sure they're cute. I saw them - like 5-6 year olds [competing]. They look adorable, but it's just not me. It's not my thing. I think 8 years-old is early enough."

It is interesting to note, however, that despite some coaches' hesitation to introduce winning, losing, and competition at a young age, introductions often seemed child-determined. For example, one parent shared that her 5 year-old son had an innate desire to win:

> On the way here he said, "I hope we win". He's like, "I want to make sure that we're on the winning team and that we win." And he's sensitive. If he's the last one there - if he's the last one across [in a race]… he talks about it at home. (Parent D)

This innate desire to win and understanding of competition was further reflected by children's statements, particularly those who were relatively older (i.e., 5 years) and playing on hockey

teams. Child F explained that he preferred hockey games to practices "because we get to score goals. In practices they don't count, but in games they do count." Interestingly, Child E shared his understanding of competition, and confusion over why his older sister was not perceivably better than him, saying: "I don't understand it, why isn't [Sibling E] faster than me when I'm faster than her? I don't understand it." Child E also outlined a time when he outperformed his dad: "We had a race to the blue line and my skate went past first." By contrast, discussions surrounding winning, losing, and competition with younger children were vague, depicting a limited understanding. Notably, children who completed a multi-sport class and received participation ribbons explained: "It's for [sport]," and "[we] get ribbons when [we] play" (Child A, 4 years). One 3 year-old appeared to have a sense of pride over his ribbon, explaining, "I could put [my ribbon] up on my wall." Lastly, when asked if he won or lost in a soccer scrimmage, Child D, a 4 year-old explained: "We were just practicing, we are going to get better."

Overall, study findings suggest that despite parents' expectation for early-years sport programming to teach their children about winning and losing, there was a lack of congruence between coaches regarding the appropriate age or way to introduce these concepts, and children displayed varying levels of understanding or innate competitiveness. While this may be in part due to the structures and philosophies underlying different sport programs (e.g., strictly skills-based programs versus those entailing scrimmages or games), children's varied understanding may be further understood when considering their age, developmental capacities, and subsequent 'sport readiness,' defined by the Canadian Paediatric Society (CPS; 2005) as an appraisal of a child's cognitive, social, and motor development to determine their ability to meet the demands of sport. According to Patel, Pratt, and Greydanus (2002), children do not have the

neurodevelopmental maturity necessary for social comparison (which enables children to gage their abilities in relation to others) in sport before 6 years of age; however, other researchers suggest that children's social comparison abilities and emotional responses to winning and losing *begin* to develop around 3 years of age, and grow significantly between the ages of 3 and 5 years (Passer & Wilson, 2002). In this study, 3 and 4 year-old children struggled to measure their performance against others (i.e., struggled to practice social comparison), and instead practiced more autonomous (individualistic or self-referenced) mastery tasks before 5-6 years of age, bringing into question whether coaches should intentionally teach these concepts to younger participants, considering their underdeveloped or varying cognitive maturity/readiness (Passer & Wilson, 2002). Further, these findings reiterate that parents should not assume that readiness for participation exists simply if children meet a particular program age-requirement, given that children's motor and psychosocial skills during the early-years mature at different rates (Aicinena, 1992; AAP, 2001).

Socialization and Social Skills

Parents also anticipated that early-years sport programming would foster their children's abilities to socialize with other children. As Parent D shared,

> I wanted him in programs where he was dropped off and I was not there. I don't think he will socialize with other kids when I'm there. He has to…I have to be removed for him to find some balance or he just wants to stay with me.

Parent B echoed this sentiment, stating: "I want them [coaches] to kind of teach him how to socialize and access the other kids, because I don't feel like he had that skill set, because he's so shy." Similarly, Parent C stated that her son "sticks to himself, which is why I want to get him out to these kinds of things… so that he kind of gets over that hump."

Many parents specifically emphasized the importance of team sports in helping children engage and work with others - social skills they believed their children would transfer to the classroom, and their future careers. Parent B believed that team sports would help initiate "…collaboration, cooperating with others." Interestingly, Parent A shared his own social struggles in team sports as a child, suggesting that he hoped his son's earlier start would be socially beneficial:

> Team sports are good because…well I wasn't very great at team sports because socially growing up I kind of struggled…so I think that at 3, to get them to socialize more and more so that they're comfortable - it's such an important skill in the real word…forming relationships is a big deal.

Many parents also suggested sport was complementary to daycare settings in fostering social skills. For instance, one parent shared:

> You're looking at the social aspect because they'll get to play with other kids. You know, you want them to be independent, you want them to develop all of those skills, right? So, definitely, like when I was signing them up for soccer and stuff, I definitely thought of the social elements and that it would help. Even daycare you know… people were like, "Why did you put them in daycare? Why didn't you just keep them in home?" Well first of all, because I had to go back to work... but even the daycare aspect I found that when they start public school or like you know - some sort of setting, they already have that social aspect right? - which you can't provide for them at home. (Parent F)

Similarly, Parent D shared, "I just I wanted more exposure to other people because he was in a small daycare, so I wanted him to have more of a structured experience with other kids around." Parent I also emphasized the critical role of gymnastics for socialization, given her daughter was

an only-child: “Yeah, and not having a sibling too, like she’s alone a lot of the time as a kid, but you know, you go to the [program], so she’s always been socialized.”

Interestingly, when parents were probed on whether they saw tangible changes in their children’s socialization patterns (e.g., whether they made friends), they often hesitated or were unable to provide concrete examples. Parent D said of her 4 year-old son, “to be honest…I think he engages more with the adults than the kids.” Similarly, Parent E said of her 5 year old son’s ability to make new friends in the program, “…no…no he doesn’t actually…no he doesn’t. That’s a good point, he doesn’t.” Yet, perceptions and experiences of children’s socialization also differed across participants. One dual-role parent-coach noted his 5 year-old son’s friendship circle expanded to include his hockey friends throughout the season:

> It happened about probably about half-way through this season. About half-way through the games probably just before Christmas, they really started kind of getting to know each other a little bit more. And I happened to get tickets to a [professional] game and I said, “Who do you want to invite?” And typically he would have invited his buddies from school, and he included his buddy [child]. So he was like, “Yeah, I’m going to bring [child] from hockey.” When he first said [child], I couldn’t even think of who it was. There was no [child] in his class…and then we totally realized, “Oh hang on…he’s starting to branch out!” (Parent F)

Another hockey parent-coach noticed tangible changes in children’s interactions with each other after they began games (in addition to practices):

> Now - because they are on the team, because they are on the bench, because they are learning to communicate more - and I think it has to do with the practices where they’re standing - they’re learning and they’re just talking to each other a little bit more. So

> they've both evolved into having friends that don't live by our house, that don't go to our school…they're like team friends. (Parent E)

The complexity of this theme is further demonstrated by children's experiences and perceptions of their social environment. In-line with parent-coaches' anecdotes, a few of the 5 year-old hockey players articulated new friendships, listing off the names of teammates they deemed their friends. However, others suggested they did not develop friendships at all. For instance, a 4-year old child in a multi-sport class explained in response to a question about making friends: "Nope…but I meet people every day. But different people…not the same people. They're different people" (Child D). In some situations, children were actually signed up for programs with existing friends, and suggested these friends were their motivation for coming to class: "I get to play with my friend [NAME]" (Child F). Moreover, younger children referenced their coaches as their friends. For instance, Child C explained, "I liked [my coaches] teaching me something." Similarly, Child E outlined his coach "teaches us good things." Child D suggested his coach was "kind of silly and sometimes he [says] 'touch your toes' or 'put your hands in the sky' so they're tricky alright." Finally, (Child J) explained that his favourite part of playing rugby was "coming with daddy and playing," with "daddy" being the head coach of the team.

In sum, while all parents felt the sport setting was a positive social environment and offered opportunities to develop beneficial social skills (especially for children that parents deemed 'shy'), few specific examples of when and how this was occurring were provided. These findings suggest that socialization through sport was likely not automatic, particularly at such a young age, and when these experiences did occur, the processes of change occurred over extended periods of time (i.e., half-way through a season). These findings are perhaps not

surprising, given the complex processes underlying human development. Specifically, Bronfenbrenner (1977) suggests that development occurs over time, through the process of individuals' inherent qualities (e.g., innate social tendencies) interacting with surrounding environments (both proximal and distal). Further, according to emergent life skills development in sport research with older children and youth, children's social skills (and other relevant life skills) may be developed more effectively through coach initiated (i.e., intentional) strategies that enable children to practice and discuss their experiences with such skills during sport programming (Bean & Forneris, 2016; Fraser-Thomas et al., 2005; Holt et al., 2017).

Finally, both children and parent-coaches of children who played organized hockey (which entailed games and practices each week, over a season) highlighted more social gains compared to participants in individual sports or skills-based programs who only attended once a week. In this instance, enhanced social gains may be reflective of hockey participants spending more time (i.e., duration) within their sport context, as supported by literature by Zarrett and colleagues (2008); however, it should also be acknowledged that the children who played hockey were the oldest participants in the sample. Research has demonstrated that children's first five years of life are critical for socio-emotional development (i.e., the ability to interact and form relationships with others, including family members, peers, and other caregivers) (Shonkoff & Phillips, 2000), suggesting different levels of developmental readiness for the socialization opportunities offered by sport across the sample.

Life Skills and School Readiness

Finally, building upon the theme of children's socialization and social skills, many parents felt that that structured early-years sport programming could teach their children

important life skills such as how to listen, take directions from a non-parent adults, and independently problem-solve, further building their school readiness. As Parent D expressed,

> The other piece is that learning piece… Do you take instruction from somebody else? Can you follow the rules? Can you sit? Can you listen?... All of that. And I think it's important because like when they go to school, they're going to have to do all of that stuff, so if they've already had some experience, it's great! It's just less of a shock.

Parent B echoed these thoughts, suggesting she enrolled her child in a multi-sport program "to ready him for school", and to "help with following instructions." While children shared few experiences and perceptions on this topic, one child explained his recognition of rewards for appropriate behaviours explaining that he got a sticker "for listening" (Child C).

Parents also recognized sport as a context which presented opportunities for conflict, requiring children to problem-solve. Parent D suggested she used these opportunities as teachable moments, to help prepare her child for situations that may arise in the school-yard under less supervision:

> Learning how to solve problems… it [sport] just helps with so many life skills. I want him to deal with it when he gets into a conflict with someone else. Like, I see them sometimes squabble over a water bottle [at sport], and I tell him, "What did you say?" or "What did you do next?" because I won't be there with him when that happens at school right? So I want to expose him to as many of those experiences as he can so that he develops skills from that… how to deal with them [conflicts].

Similarly, coaches suggested they used teachable moments to instill life-skills such as problem solving, which children could in turn transfer into classroom settings. As Coach A described,

> When it comes to problem solving you know, how can we deal with that? For instance, there's ways that we can deal with whatever the situation is, you know. "Why don't you try saying this?" So, giving them all sorts of strategies and different ways to say things and deal with things, and hopefully they take that in and are able to translate it into their every-day life.

Other coaches aimed to instill skills including patience and cooperation (e.g., through lining up and taking turns), and the use of pro-social language. As Coach E explained, "I think it [sport] helps with patience at this age too. I mean obviously they're not very patient but I think they get it… like when they are forced to line up." Coach A also described,

> One of our big things is pro-social language - so just being really positive in the way we talk. I think kids learn quite a bit from the coaches especially because we all model all of these behaviours and try to instill those behaviours in kids.

Coach A went on to describe how parents often witnessed their children utilizing these life-skills in other contexts, including school:

> Skills that they learn at [program] - obviously they can be used in other facets of their life, whether it be at preschool or at school. We see a lot of parents saying you know, "My child said this or said that in this situation at school, or this situation at home" and they [parent] directly saw or directly experienced it [use of life skill] themselves.

However, Coach A recognized that children were also enrolled in other programs, including school readiness programming (e.g., childcare, day-care, kindergarten), noting that it was difficult to discern exactly where children learned these attributes:

> Sometimes it's a little bit difficult because you only see a kid for an hour a week, so there's so much that's happening throughout the week that you don't know. Their

> preschool environment you know - all those kinds of things you aren't necessarily exposed to. (…) But I'll get parents (…) [ask their child], "Where did you learn that?" and they learned it from here.

This finding is particularly relevant in the current study, as all but one child attended preschool or daycare (concurrently or previously), which typically involved educational or school-preparatory components. Recent data suggests more than half (54%) of Canadian parents with children under 4, and nearly 60% of children in the United States under 5 use non-parental child care (Laughlin, 2013; Statistics Canada, 2014a), many of whom are using multiple, concurrent arrangements (Laughlin, 2013; Pilarz, 2017). Further, children in the present study were also involved in other organized sport programs and music classes (i.e., creative music, basketball, drums, piano; see Table 1), and full-day kindergarten (n=6). As such, it is impossible to isolate whether and through what programming contexts children may have been gaining specific competencies or outcomes. However, while findings may be difficult to discern, past research indicates that youth involved in sport alongside other youth development programming (e.g., after-school clubs, music, drama) experience more PYD gains than sport-only and less-engaged youth (Zarrett et al., 2008).

These findings, coupled with findings above regarding parents' eagerness for children to develop important life and social skills, highlight a pervasive desire and apparent expectation for 'school readiness' and life/career preparedness through early years sport participation. Given that full-day kindergarten was initially implemented in Ontario (the province of study) to better prepare young children (i.e., ages 4-5) for school (i.e., beginning in grade 1, approximately age 6), through the development of (i.e. focus upon) social and emotional skills, and self-regulation (Ontario Ministry of Education, 2016), these findings highlight a 'push' to foster these skills

even earlier through alternative contexts. Essentially, it appears that parents are hesitant to wait until kindergarten to begin developing children's social or life skills, while also inferring that daycare, preschool, and kindergarten environments are not adequately fostering them. Further, the desire for children to develop key social and life skills at increasingly earlier ages may not be in line with socio-emotional development milestones (e.g., ability to manage their feelings and impulses, which are deemed necessary for functioning in formal education settings; Raver & Knitzer, 2002).

Strengths, Limitations and Future Directions

This study explored the experiences and outcomes of early-years sport through diverse perspectives (i.e., toddlers, preschoolers, parents, and coaches) allowing for data triangulation. The study's case-study methodology yielded a contextual and comprehensive understanding of early-years sport immediately following participants' engagement and experience within programming (Stake, 2005). This study also uniquely contributes to the field by suggesting some of the underlying processes and mechanisms that coaches and parents use to foster their development through sport.

Despite the novelty of the research approach and study findings, limitations should be acknowledged, highlighting future research directions. Firstly, the sample was comprised of primarily male children, and may not be representative of or adequately capture female children's experiences in early-years sport, given known sex differences in sport interests and motivations among older children and youth (Deaner, Balish, & Lombardo, 2016). Further, given that all of the sport programs were co-ed, the overrepresentation of male participants in the sample appear to reflect a self-selection bias by parents, who may have had greater investment and/or interest in their young sons' sport involvement than their young daughters'. Together,

research examining how sport socialization and experiences vary by gender within the early-years demographic merit further consideration. Secondly, given nine out of ten study participants had (mostly younger) siblings, this study primarily captures the sport experiences and outcomes of first-born children, which may not be generalizable to later-born children. Future research during early-years sport, examining potential birth-order differences in relation to children's physical development (Krombholz, 2006), and expertise (Hopwood, Farrow, MacMahon, & Baker, 2015) are worthy of exploration, particularly in light of the rise in single-child homes in Canada (Statistics Canada, 2014b).

While arts-based interview methods were drawn-upon to help children share their thoughts (i.e., use of photographs), it is acknowledged that photograph probes may have caused children to discuss sport-related topics and themes that may not have been personally relevant to them, or that they may not have otherwise discussed. Notwithstanding this limitation, efforts should be made to continue to actively involving young children in research (Alderson, 2005), drawing upon additional diverse methodologies to encourage their participation (e.g., drawing, use of videos/technology, picture logs). Interviews with children were also very short in duration; future studies would benefit from interviews taking place at multiple time-points (i.e., at start and end of the program) to glean children's potential varied or changing perceptions of sport.

Moreover, it is important to note that some coaches in the study were dual-role parents-coaches (n=3), and half of the coaches (n=5) were paid, highlighting potential differences in training and investment, which may have influenced reporting. Given very high rates of volunteer coaching in Canada (Doherty, 2005), the programming delivered by paid coaches in this study may not represent 'typical' programming within community-based programs and

consequently, may yield more positive experiences and outcomes than typical programs. Furthermore, study participants represented diverse sport contexts including both team and individual sports, as well as private for-profit, club for-profit, and community-based not-for-profit programs, all of which are governed and regulated differently, highlighting a need for further exploration of additional sport program types, to more comprehensively understand early-years participation. Finally, while data were collected late in the season, researchers should aim to use longitudinal study approaches to enable the examination of children's evolving experiences and development in sport over time; this approach would also better allow underlying processes and mechanisms of experiences and outcomes, and potential comparisons between different organized sport contexts, and other organized educational and extra-curricular programming (e.g., daycare, preschool, kindergarten, or music classes).

Conclusion

Overall, the purpose of this study was to explore the perceived outcomes and experiences of early-years sport participation from the perspective of toddlers, preschoolers, parents, and coaches. Findings reflected alignment between some, but not all perceived outcomes and experiences associated with 3-5 year-old sport participation, including: (a) PA and energy management, (b) sport skill acquisition and physical literacy, (c) learning to win and lose, (d) socialization and social skills, and finally (e) life skills and school readiness. Findings indicate that consideration be given to children's age, developmental capacities, 'sport readiness', and concurrent attendance of other early-years programing (i.e., music, daycare, preschool, kindergarten) when appraising potential experiences and outcomes.

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Table 1. *Toddler and Preschooler Characteristics.*

CHILD	A	B	C	D	E	F	G	H	I	J
Age*	3	3	4	4	5	5	5	4	3	3
Sex	Male	Male	Male	Male	Male	Male	Male	Male	Female	Male
Birth Month	January	January	December	August	May	May	February	March	August	October
Primary Sport	Multi-Sport	Multi-Sport	Multi-Sport	Multi-Sport	Hockey	Hockey	Soccer	Soccer	Gymnastics	Rugby
Program Type	Private for-profit	Private for-profit	Private for-profit	Private for-profit	Community-based non-profit	Community-based non-profit	Private for-profit	Private for-profit	Community-based non-profit	Club-based non-profit
Mins/Week**	60	60	60	60	160	100	45	45	60	60
Sport or OPA Exposure	Second	Third	First	Third	Fifth	Fourth	Fifth	Fourth	Third	Fourth
Other Structured Activity***	Swimming	Gymnastics Swimming	Piano	Swimming, Multi-Sport Camp	Soccer, Swimming	Soccer, Swimming Music	Swimming, Multi-Sport, Basketball Drums	Swimming Skating, Creative Music	Cheerleading, Swimming	Gymnastics, Swimming, Mixed Martial Arts
Sibling	1	1	1	1	1	2	1	1	0	1
Birth Order	Oldest	Oldest	Youngest	Oldest	Youngest	Oldest	Oldest	Oldest	-	Oldest
Daycare, Preschool, or Kindergarten (K)	Daycare	Preschool	Preschool JR-K	Daycare JR- K	SR-K	Daycare SR-K	Preschool SR-K	Preschool JR-K	Preschool	Preschool

*At time of study
**In Primary Sport
***Concurrent or Past

Table 2. *Parent Characteristics.*

PARENT	A	B	C	D	E	F	G	H	I	J
Age	33	30	36	41	46	39	38	38	31	32
Sex	Male	Female	Female	Female	Male	Male	Female	Female	Female	Male
Marital Status	Married	Married	Married	Married	Married	Married	Married	Married	Married	Married
Education	Graduate	Undergraduate	College	College	College	Undergraduate	Undergraduate	Graduate	Undergraduate	College
Previous Sport(s)	School-based	School-based	School-based	Gymnastics	Hockey, Lacrosse, Baseball	Soccer, Hockey, Skiing, Baseball	School-based	Swimming	Cheerleading, Gymnastics	Rugby, Hockey
Previous Sport(s) Level	School-based	School-based	School-based	Provincial	Semi-Pro (Jr-A)	Recreational	School-based	Provincial	Competitive	Competitive
Past Sport Experience *	Negative	Positive	Positive	Neutral	Positive	Positive	Positive	Positive	Positive	Positive
Current or Sport	Tennis, Squash	-	-	Competitive Running	Hockey	Skiing, Hockey	Fitness	Fitness	Fitness	Rugby
Dual Role	-	-	-	-	Coach	Coach	-	-	-	Coach

*Participants were asked to classify their past sport experience as positive, negative, or neutral.

Table 3. *Coach Characteristics.*

COACH	A	B	C	D	E	F	G	H	I	J
Age	44	27	27	44	46	39	42	57	20	32
Sex	Male	Female	Male	Female	Male	Male	Female	Male	Male	Male
Sport	Multi-sport	Soccer	Soccer	Dance	Hockey	Hockey	T-Ball	T-Ball	Rugby	Rugby
Program Type	Private for-profit	Private for-profit	Private for-profit	Private for-profit	Community-based non-profit	Community-based non-profit	Community-based non-profit	Community-based non-profit	Club-based non-profit	Club-based non-profit
Experience Coaching*	20 years	3.5 years	10 years	6.5 years	1.5 years	6 months	8 years	6 years	6 months	2 months
Position	Full-time-Paid	Part-Time-Paid	Part-Time-Paid	Part-Time-Paid	Volunteer	Volunteer	Volunteer	Volunteer	Part-Time-Paid	Volunteer
Days/Week	6	2	1	2	3	2	1	1	1	1
Education	Undergrad	Undergrad	Graduate	Secondary School	College	Undergrad	College	Secondary School	Undergrad	College
Coaching Qualification	60+ hours Internal Training	3 months Internal training, First Responder	Certified Child and Youth Coach, First Responder	National Ballet School Teaching Certificate	Level 2 Certified, Respect in Sport: Anti-Harassment/ Bullying	Respect in Sport: Anti-Harassment/ Bullying	Coach Clinics	Coach Clinics	Level 1 Certified	Level 1 Certified
Sport Experience	Competitive Wheelchair Basketball, Squash	Recreational Boxing, Soccer, In-School	Competitive Soccer	Professional Dance	Competitive Junior A Hockey, Lacrosse	Recreational Hockey, Soccer, Skiing	School-Based, Women's Fastball	Unstructured, Pick-up Hockey	Varsity Rugby	Competitive Hockey, Rugby, Baseball
Dual Role	-	-	-	-	Current Parent	Current Parent	Former Parent	Former Parent	-	Current Parent

*Specifically with Toddler or Preschool Sport.

Chapter Four

Study Three

Children's Sport Under Six: Take-Up, Pathways and Patterns of Engagement

Harlow, M., & Fraser-Thomas, J. (2019). Children's sport under six: Take-Up, pathways and patterns of engagement.

Abstract

Evolving physical activity (PA) patterns of particularly young children suggest active play has been replaced by more organized forms of PA such as sport, which is taking place at markedly younger ages (AAP, 2019; Overman, 2014). Despite high-rates of sport participation among the early-years (<6) demographic (ParticipACTION, 2018), limited research captures children's sport experiences during this time. In this study, a greater understanding of early-years sport participation was sought, by exploring patterns of sport take-up, pathways, and general patterns of engagement. Data were collected through external program observations of five early-years sport programs (e.g., multi-sport, soccer, hockey, rugby, and gymnastics), as well as 10 semi-structured parent interviews (M_{age} = 36.4; six female, four male), who each had a child between 3-5 years of age enrolled in one of the aforementioned programs. Results offer novel insight into toddler and preschooler children's sport, organized physical activity (OPA), and unstructured sport habits, while also highlighting common features and engagement patterns within early-years sport programs (e.g., structure, movement/sport skill focus, play-based activities). Findings suggest existing life-span sport participation and development models (CS4L, 2016; Côté & Fraser-Thomas, 2016) do not reflect or align with delivery of and experiences within early-years sport programming, and future research is needed to determine what engagement patterns/program activities are optimal for toddler and preschooler development, to in turn contribute to refined or modified versions of models, which acknowledge that sport is taking place prior to six years of age.

Keywords: Early-years, sport participation, take-up, pathways, patterns, LTAD, DMSP.

Children's Sport Under Six: Take-Up, Pathways and Patterns of Engagement

In recent years, the physical activity (PA) patterns and behaviours of preschoolers, toddlers, and even infants ('early-years'; Ontario Ministry of Education, 2007) have come under scrutiny, given children's failure to meet recommended PA levels for healthy development (Colley et al., 2013; Goldfield, Harvey, Grattan, & Adamo, 2012). Researchers have also acknowledged reduced participation in childhood free-play (Active Healthy Kids Canada, 2012; Clements, 2004; ParticipACTION, 2018) - an umbrella term which denotes play that is child-initiated and unstructured, occurring inside or outside the home (Gray, 2011). Active play - one particular form of free-play involving unstructured PA (Canadian Sport for Life [CS4L], 2016), is speculated to have been replaced by more organized forms of PA, such as sport, which is taking place at markedly younger ages (American Academy of Pediatrics [AAP], 2001; Overman, 2014). Moreover, given trends toward younger start-age in sport (De Knop, Engström, & Skirstad, 1996), coupled with a lack of research examining children's sport experiences during this time, there is value in expanding understanding of sport take-up, common sport pathways, and general patterns of engagement during the early-years (<6), which set the tone for potential life-long sport involvement (Kirk, 2005).

Life-Span Sport Participation, Pathways, and Engagement Patterns

Côté and colleagues (Côté, Turnnidge, & Evans, 2014) argue the importance of considering individuals' engagement in specific activities, as these fundamental activities contribute to the quality of developing athletes' sport experiences. Youths' sport engagement activities can be understood through their various patterns of involvement, such as the amount, intensity, and timing of sport participation (Evans et al., 2017). Two prominent life-span sport participation and development models address these patterns: (a) the Developmental Model of

Sport Participation (DMSP; Côté & Fraser-Thomas, 2016), and (b) the Long-Term Athlete Development Model 2.1 (LTAD; CS4L, 2016).

Developmental Model of Sport Participation. The DMSP (Côté & Fraser-Thomas, 2016) is considered one of the most prominent conceptual models describing athlete development in sport (Bruner, Erickson, Wilson & Côté, 2010). The model acknowledges the developing person within his or her environment, alongside the processes and outcomes associated with three unique sport development trajectories or pathways: (1) recreational participation through sampling; (2) elite performance through sampling; and (3) elite performance through early specialization.

The first two pathways of the DMSP (Côté & Fraser-Thomas, 2016) involve the same foundational stages, whereby between the ages of 6-12, athletes commonly 'sample' or participate in a variety of different sports and activities, engaging primarily in deliberate play, described as activity which is inherently enjoyable, governed by flexible rules, standards, and expectations, and which is modified to meet children of varied ability levels (Côté, Baker, & Abernethy, 2007). From the sampling years, children may pursue recreational sport (a natural extension of the sampling years, where the focus remains fun, enjoyment, and maintaining one's health and PA), or they may pursue a competitive or elite performance trajectory – transitioning into specializing and later investment stages of the model. While these two pathways may yield different outcomes (i.e., recreational versus competitive sport), they offer similar psychosocial and physical health benefits, and have similar early-sport experiences (Côté & Fraser-Thomas, 2016). By contrast, the third sport pathway/trajectory referred to as elite performance through early-specialization entails "limiting participation to one sport that is practiced on a year-round basis, usually involving high amounts of deliberate practice and low amounts of deliberate play

from a young age" (Côté & Fraser-Thomas, 2016, p. 264). Compared to deliberate play, youth engage primarily in deliberate practice activities, which are effortful, not inherently enjoyable, yield no immediate rewards, but are associated with improved sport-specific performance over-time (Ericsson, Krampe, Tesch-Römer, 1993).

Regardless of whether one's intent is to pursue recreational or elite sport participation, researchers have highlighted a myriad of benefits associated with early sport sampling, as depicted in the first two pathways, including that it is more enjoyable, reduces the occurrence of injury and burnout, contributes to a broader base of fundamental movement skills (FMS), and may increase the longevity of an individual's sporting career (Côté, Horton, MacDonald, & Wilkes, 2009; Côté, Lidor, & Hackfort, 2009; Goodway & Robinson, 2015; Myer et al., 2016). Despite this model's seminal value, it does not describe sport take-up or engagement patterns prior to six years of age, or suggest how children may transition into later stages of involvement, despite the high prevalence of sport programs specifically targeting this demographic, and high reported rates of participation (Calero, Beesley, & Fraser-Thomas, 2016; ParticipACTION, 2018).

Long-Term Athlete Development Model. Secondly, the LTAD is a policy-based framework created by CS4L (2016), which offers guidance to coaches and sport organizations pertaining to what children, youth, and adults should learn at different life-stages in sport. The 2.1 version of the model is comprised of seven stages, of relevance to the current study is the first stage, entitled 'Active Start' (0-6 years). During this stage of the model, it is suggested children should engage in daily unstructured PA and active play, through which they begin learning general FMS, while also enjoying non-competitive, fun, and challenging activities. The model also stipulates that individuals must first be made aware of what sport opportunities exist

for them, and that their first involvement must be positive in order to ensure ongoing participation. Following Active Start, it is recommended that children enter the FUNdamentals stage, where they develop a firm grasp of FMS and begin learning fundamental sport-skills (FSS), which together contribute to children's physical literacy and the 'ABCs' of athleticism: agility, balance, coordination and speed. Children should also begin participating in a mix of structured and unstructured play at this stage, and be introduced to the simple rules of fair-play and ethics in sport. Following the FUNdamentals are 'Learn to Train,' 'Train to Train,' 'Train to Compete,' 'Train to Win,' and 'Active for Life' stages, which detail ongoing developmental trajectories for athletes at varying levels of competition, and/or lifelong engagement in a physically active lifestyle.

Aside from stating that children's first sport experiences should be positive, it remains unclear what children should be learning prior to six years of age, including when sport should be introduced, how often (i.e., amount), or the intensity of programming (i.e., appropriate level of 'challenge'). A further complication relates to the fact that sport during the early-years takes on varied forms. For instance, early-years sport programs may vary to the extent that they wholly meet the traditional definition of sport (Fraser-Thomas & Safai, 2018), and as a result, organized physical activity (OPA) was conceptualized in Chapter Two (Study One) to describe programs which take place outside of school hours, and are led by a coach or instructor, yet still entail rules, and some degree of effort and strategy (i.e., swimming) (Canadian Heritage, 2013; Statistics Canada, 2008). As such, more research is needed to understand what children are learning within early-years sport contexts, and what these contexts may look like, particularly in terms of their potential alignment with the earliest stage(s) of the LTAD (CS4L, 2016), in turn shedding light on the model's accuracy or usefulness as a guiding framework. Additionally, this

research may be used as a backdrop to appraise whether early-years sport programming is age-appropriate, or entails questionable engagement practices.

The Current Study

Overall, the aforementioned review underscores the importance of understanding early sporting experiences and pathways in shaping long-term participation and development in sport (Côté & Fraser-Thomas, 2016), and the extent to which different sport activities and patterns of engagement may influence such development (Côté et al., 2014; Evans et al., 2017). Recognizing that these concepts as well as the general experiences of early-years sport participants are not yet captured within existing life-span sport and development models, the current study sought a greater understanding of early-years sport participation, by exploring sport take-up, common pathways, and general patterns of engagement.

Methods

Research Design

The current study was part of a larger study that was guided by a constructivist epistemology, acknowledging that meaning is varied and multiple, and that both study participants and the researcher seek out and make subjective meanings of their experiences (Creswell, 2014; Crotty, 1998). Guided by this paradigm, this study used a collective (i.e., multiple) case-study research design, which sought to explore differences within and between cases (Yin, 2003). Furthermore, specific children from unique sport programs were chosen and explored in order to maximize what could be learned (Yin, 2003); contributing to what is unique about each child's sport experience (i.e., case), but also what is similar between cases, given that case-study research seeks to optimize the understanding of and between individual cases (Stake, 1995; 2005).

Procedure

Sampling and recruitment. As mentioned, the current study was part of a larger qualitative study which sought to advance the understanding of early-years sport and OPA participation, and entailed exploring the experience of sport participation through the perspectives of toddlers, preschoolers, parents, and coaches, as well as observing these children in early-years sport contexts. Data in the present study are a sub-set of findings (specifically related to program observations, and parent interviews) drawn from the larger study. Full details related to the ethics protocol, participant and program recruitment, as well as the sampling procedure can be found in Chapter Three, Study Two.

Contexts. Five early-years sport contexts were subject to program observations, all of which were located in South-Eastern Ontario; programs were purposely sampled and chosen in order to maximize what could be learned about early-years sport (Stake, 1995), a suitable method within case-study research, which also yielded meaningful, information-rich data (Guest, Bunce, & Johnson 2006). Specifically, multi-sport, soccer, gymnastics, rugby, and hockey classes/practices/games were observed over the course of one winter session (average length 4 months) between November of 2017 and March of 2018, with all programs being indoors. All observed programs included children between 2-5 years of age, with age-ranges within classes including: 3-4 and 4-5 year-olds (multi-sport), 4-5 year-olds (soccer), 4-5 year-olds (gymnastics), 2-5 year-olds (rugby), 4-5 year-olds (hockey). Notably, multi-sport was the only observed program with children between 3-5 years of age separated into two distinct classes. Multi-sport classes were also unique in that they cycled through nine different ball-sports over the course of one session, which varied week-to-week. Two programs were private for-profit organizations who specialized in programming geared towards the early-years demographic (i.e., multi-sport

program and soccer), while two programs were community-based non-profit (i.e., gymnastics and hockey), and one program was club-based non-profit; all non-profit programs were run through larger organizations, which offered a range of programming to participants beginning in early-childhood, and into emerging adulthood.

Participants. 10 parents (M_{age} = 36.4; 6 female, 4 male), with children enrolled in each of the aforementioned programs were recruited for participation in the study. Parents had toddlers or preschoolers enrolled in the multi-sport (n=4, age 3-4), hockey (n=2, age 5), soccer (n=2, ages 4 and 5), gymnastics (n=1, age 3), and rugby (n=1, age 3) programs at the time of data collection, which were deemed their children's "primary" sports. Three of the (male) parents were coaches of their child's respective sport team (i.e., hockey, rugby). Parents ranged in their own previous and current sport experiences, some having only completed in-school athletics, and others with semi-professional sport experience. Additional parent and child details gleaned through parent interviews can be found in Tables 1 and 2.

Data Collection

The case-study research approach lends itself to the use of multiple data sources - a strategy which enhances data credibility, and triangulation of findings (Patton, 2002; Yin, 2003). As such, two data-sources were drawn-upon in the current study - semi-structured interviews with parents, and direct program observation.

Semi-structured interviews. Parents engaged in semi-structured interviews with the lead researcher, towards the end of the observed sport program session (Appendix C). Interviews were used in an effort to lead open, and direct discussions, in the hopes of eliciting detailed narratives and stories; predetermined open-ended questions, allowed for additional topics or questions to emerge from the dialogue between interviewer and interviewee (DiCicco-Bloom &

Crabtree, 2006). Giving consideration to the larger exploratory study, interviews were organized into three main sections: (1) demographic questions to build rapport (e.g., age, occupation, number and birth-order of children in sport); (2) parents' previous or concurrent sport and PA habits; (3) considerations for children's early-involvement in their primary sport (including sport take-up, engagement patterns, and concurrent activities). When relevant, parents were also asked to share their experiences as parent-coaches, as well as experiences navigating sport with siblings who varied with respect to birth-order and gender. Parent interviews ranged between 16:04 to 46:06 minutes (M= 32:23), and were audio-recorded.

Program observations. In-person program observations were also carried out by the lead researcher on site of each sport program, enabling a deeper understanding of each case in a real-world setting, and permitting the researcher to see beyond what was learned though semi-structured interviews alone (Patton, 2002). In total, 18 program observations were conducted during scheduled practice or games across the five programs (with two different aged-classes for multi-sport); these occurred roughly at the beginning, middle, and end of each 4-month session. Overall, program observations lasted between 40 minutes and one-hour in duration, followed by informal discussions with coaches prior to and after sessions.

Field notes. Program observation data were systematically recorded in the form of field notes, which were loosely guided by the 3Ps (i.e., participation, performance, personal development; Côté & Hancock, 2014) of sport, as part of the larger project's exploratory aim (Appendix F). Each observation was also loosely guided by a timeline, in an effort to note general program elements or transitions, structure (i.e., general flow of activities/games), and composition (e.g., deliberate play, deliberate practice), while also allowing for "detailed descriptions of people's activities, behaviours, actions, and the full-range of interpersonal

interactions and organizational processes that are part of observable human experience" (Patton, 2002, p. 4). In total, field notes yielded 30 pages of single-spaced hand-written notes.

Data Analysis

Semi-structured interviews. All audio-recorded interviews were uploaded into a transcription software program (ExpressScribe), which enabled the lead researcher to reduce the speed of recordings and transcribe interviews verbatim. Typed interview transcripts yielded a total of 109 pages of data across the 10 parent interviews; identifying information was kept separately and generalized to inform the demographic data in Tables 1 and 2.

After transcripts were anonymized, member-checking were used, whereby interview transcripts were returned to the participations to review for accuracy, at which point they were also encouraged to expand or clarify on any of their responses (Baxter & Jack, 2008; Patton, 2002). None of the study participants asked for transcripts to be changed or altered. The lead researcher then read each of the transcripts at length to become familiarised with the data, before importing them into Nvivo – 12, a qualitative research management software. As part of the larger qualitative study (see Chapter Three, Study Two), a hybrid inductive - deductive data analysis method was performed, allowing for the raw interview data to be organized into interpretable and meaningful themes and categories (bottom-up), while larger themes guided by the study's purpose (i.e., related to sport take-up and patterns of engagement) represented concepts and ideas that the researcher imparted on the data (top-down) (Braun & Clarke, 2006). Specifically, this process followed Braun and Clarke's (2006) six-stage process, including: (a) familiarizing oneself with the data, (b) generating initial codes, (c) searching for themes, (d) reviewing potential themes, (e) defining and naming themes, and (f) producing the report.

Observations. Following analysis of interview transcripts, field notes were analyzed using a conventional content analysis - described as a flexible method of analyzing and interpreting meaning from text data (Cavanagh, 1997; Hsieh & Shannon, 2005). A conventional (i.e., bottom-up), as opposed to directed or top-down content analysis was deemed fitting, given that very limited research exists about the phenomenon under study (early-years sport settings), and the study's overall purpose was exploratory. In other words, the hope was to gain a richer understanding of early-years sport settings to support or supplement interview findings, and for themes and codes to emerge from the field notes themselves (Hsieh & Shannon, 2005). This process was guided by a five-step process summarized by Hsieh and Shannon (2005), entailing: (1) reading all data (i.e., field-notes) repeatedly to achieve immersion and obtain a sense of the whole; (2) examining field-notes one-by-one to derive initial codes, and highlighting key words from text that appear to capture key thoughts or concepts; (3) making note of first impressions, thoughts, and initial analysis, which give way to generating initial codes; (4) sorting codes into larger categories or themes based on how they are related and linked; and finally, (5) guided by the relationships between categories, combining or collapsing categories within larger or smaller subcategories, before creating definitions or labels for each category. Additionally, if/when observations yielded additional themes that did not logically fit into existing categories (which emerged from interview analysis), the theme was kept as an additional theme in its own right (Tesch, 1990).

Trustworthiness. In addition to the member-checking (Patton, 2002), various techniques were used to enhance the trustworthiness of study findings. Firstly, the primary researcher used reflexivity at all stages of the research process (e.g., larger study conceptualization, data collection, and data analysis), acknowledging the researcher's position and potential influence on

study observations and findings (Paterson, Bottorff, & Hewat, 2003). This approach encourages self-examination (Anderson, 1991), and specifically, acknowledgement of the "values, assumptions, prejudice, and influence of the researcher" (Hand, 2003, p. 18). This process is often carried out through the practice of 'bracketing,' or identifying the researcher's ideas and assumptions, in an effort not to impose his or her understanding and constructions on the data (Crotty, 1996). Further, reflexive practices also attempt to limit the researcher's impact during program observations, given that a researcher's presence may contribute to reactive behaviours on behalf of participants (i.e., children, coaches, or parents) who may act differently if they are aware they are being watched (Paterson et al., 2003). In an effort to reduce participant reactivity, program leaders were reminded that the study was exploratory, with the sole aim of understanding early-years sport contexts in greater detail, and not to evaluate the quality of programs. Additionally, the lead researcher spent extensive time in each context, becoming familiarized with children, coaches, and their families. This 'prolonged engagement' enhanced the rapport between researcher and participants, while also allowing for more effective probing questions to be asked during interviews. Notably, while efforts were made to enhance trustworthiness, the guiding research epistemology (constructivism) acknowledges that both researchers and study participants make meanings out of their experiences (i.e., interpretation of data), and that objectivity is not possible to achieve (Crotty, 1996).

Results

Children's sport take-up, engagement patterns and pathways are presented in four distinct phases, capturing children's: (1) sport and OPA involvement preceding primary sport; (2) primary sport involvement; (3) unstructured sport outside primary sport; and (4) disengagement considerations. Parent interview data informed all four themes, while observational data

informed only the second theme, concerning children's primary sport involvement. Parent names are replaced by codes to maintain the anonymity of participants.

Sport and OPA Involvement Preceding Primary Sport

Figure 1 illustrates children's entry/take-up and involvement in OPA/sports prior to and leading into their primary sport (in bold) represented by codes A-J, aligning with demographics in Table 2.

Child	0-years	1-year	2-years	3-years	4-years	5-years
	A		Swimming	**Multi-Sport**		
	B		Swimming, Gymnastics	**Multi-Sport**		
	C				**Multi-Sport**	
	D			Multi-Sport Camp, Swimming	**Multi-Sport**	
	E			Swimming, Soccer	Hockey, Soccer	**Hockey**
	F			Swimming, Soccer	Soccer	**Hockey**
	G		Swimming	Basketball, Multi-Sport, Soccer	**Soccer**	
	H	Swimming		Learn-to-Skate, Soccer	**Soccer**	
	I		Swimming, Cheerleading	**Gymnastics**		
	J	Swimming	MMA, Gymnastics	**Rugby**		

BOLDED: Primary sport subject to observations

Figure 1. Profiles of toddler/preschooler sport and OPA take-up/participation

Prior to partaking in their primary sport at the time of data collection, children followed differing sport or OPA pathways/trajectories; however, there were many similarities. Specifically, all but one child participated in OPA swimming lessons in their first year of involvement (some beginning as early as infancy), with one child also completing an OPA learn-to-skate program. In addition to swimming and skating, children attended multi-sport (n=2), gymnastics (n=2), soccer (n=2), and cheerleading, basketball, and mixed-martial-arts (MMA), (n=1 each) prior to involvement in their primary sport. Aside from concurrent participation in

OPA (swimming, skating), children were not engaged in more than one sport program at the time of study. When children participated in multiple sports in the same year, activities took place in sessions at different times of year (i.e., spring/summer/fall). Children's sport and OPA patterns preceding their primary sport were influenced by four key themes: (1) children's emerging interests and aptitudes; (2) parents' past sport experiences and intentions; (3) others' recommendations; and (4) siblings and family dynamics/structure.

Children's emerging interests and aptitudes. Parents claimed to enroll children in sports they showed an aptitude or interest towards during active-play at home: "In terms of like, what sport we chose, it just ended up being soccer, because it was something that we noticed at home" (Parent G). Similarly, Parent H noted her son's initial gravitation towards soccer: "For some reason, he was really fascinated with soccer, like - soccer balls in general. And he would, you know, we would have them at home and we noticed that he was like, wanting to play." However, children's perceived interests did not always result in successful first experiences in sport. For instance, Parent G thought her son had an interest in basketball, but his time in the sport was short-lived, explaining, "for some reason [he] did not take to it." Similarly, Parent H admitted her son's first experience in a soccer program was met with resistance: "It didn't go great the first while, but then [friend's child] was like part of it too, so we were like, 'Well - we'll stick with it, try it with [friend's child].'"

Other parents intentionally introduced elements of sports at home prior to enrolling their children in programming, in order to appraise their interest level:

> Yeah so like, so for example, since I know his personality - I probably wouldn't enroll him in a skating course right off the bat. Like, I might try to just do a skate rental and try

> to show him first just with us and see how he likes it. And if he wants to continue participating, then I would [enroll him]. (Parent B)

Further, other parents opted to enroll their children in multi-sport programming in an effort to expose them to a variety of ball-sports, and help identify what sport they liked most:

> For his age, I think that multi-sport is really good, because it helps us to recognize what he really likes. And I mean, he has mentioned he really likes soccer. So, I wanted to give him the opportunity to like, experience all these sports, and then maybe he'll be able to tell us like in a few months, "Look, I really like this one, or want to do that again." (Parent B)

Parents' past sport experiences and intentions. While some parents' enrollment decisions appeared to be driven by children's interests (above), other parents appeared to have underlying intentions or motivations based on their own past sport experiences. These parent intentions ranged from being general (e.g., "My husband is really into sports - so we're hoping to continue that with our children," Parent B) to more strategic or intentional: "…that's kind of what my train of thought was, I was like, we'll get her tumbling, and then we'll integrate her [into cheer]….it's just something that I know" (Parent I - a former gymnast and cheerleader).

Interestingly, two parents intentionally enrolled their children in sports that differed from their own. Parent D enrolled her son in a multi-sport program, as felt that her past experience as a gymnast did not adequately prepare her for school sports:

> I started [gymnastics] very young, and I did like it, but I just never… it wasn't something that transpired into, like - we never did it at school. I feel like those skills didn't translate. So, when I was asked to do a sport, it was like: "Oh here, play volleyball, play basketball"…but I didn't have that skill-set.

Similarly, Parent J was conscious that his dad wanted him to play baseball because it was his favourite sport: “I felt pressure from my dad, you know, as I said with baseball. I probably would have gone further in baseball” [if not for his dad’s enthusiasm/pressure]. In turn, he consciously tried not to pressure his own son to play any specific sport, enrolling him in several (e.g., gymnastics, rugby, MMA).

Further, one parent implied that you cannot ‘push’ children towards any one sport, as their inherent personalities ultimately influence what sport (if any) they pursue:

> It’s interesting, because before I had children, I would have said that you can mold your child to be a certain way… and that is absolutely not true. So, obviously we had our daughter first, and my wife played hockey, I played hockey, we were a hockey family, we loved it. We enjoyed the sport [and] we hoped that she would like hockey, but she showed no interest in sport what-so-ever. She was very creative and artsy. (Parent E)

Others’ recommendations. A third means by which parents were drawn to particular sports or programs, was through others’ recommendations – relying on friends and/or colleagues’ experiences. Parent A shared, “One of my colleagues sent their kids, so that’s kind of what drew me in.” Similarly, Parent C said, “She loved it when she came. She felt the coaches were great, and I felt it too.” Another parent explained:

> We asked a lot around to parents who had kids a little bit older than ours, and what leagues they were in. (…) If they had a good experience in the soccer league or baseball league or hockey league, and from that, we kind of came up with, you know, where we’re at now with him. (Parent F)

Siblings and family dynamics/structure. Finally, siblings and family dynamics/structure emerged as a key factor influencing children’s sport involvement. Even

though most (n=7) of the children involved in the study were the oldest child in the family, parents nonetheless discussed siblings as a key factor influencing decisions regarding children's sport involvement. Most often, this was discussed in terms of older siblings influencing parents' decisions and experiences regarding their second/subsequent children's sport involvement. As Parent F explained, "We've had a lot of good experience so far with everything he's [first born] been involved with structured-wise, so our daughters - if they want to follow those [pathways] and play hockey or soccer - they'd go to the same programs." Several parents described how it was easier to navigate sport with younger (later-born) children, because they knew about existing programming, how to sign children up, and could re-use equipment: "It's probably a little bit easier the second time around, because it's… you have some of the gear. We know the routine from the city programs, we see how the leagues are structured" (Parent F). While parents made considerable efforts to determine what sports their first-born children liked, younger siblings often took-up the same sports as their older siblings, as they often watched older siblings practice, and were eager to try:

> For her, we joined her up because [SIBLING] was already in it. Well, she would see him play, and then we saw interest like, you know, that she wanted to play soccer - we saw her liking it. And because she had you know, an interest for it - we decided to sign her up, and she actually does a great job, so it worked out. (Parent G)

Relatedly, Parent H explained: "[SIBLING] was littler, because she just came along with [Child H]." This parent, who had children close in age, also described looking for programs that offered classes for her children on the same day, or consecutively, in an effort to reduce travel time and chauffeuring. In turn, this meant they could also spend more time together as a family:

> We liked how they [ORGANIZATION] had so many offerings of times. Then, when [SIBLING] got big enough, she could go immediately after, so it was like, really convenient. And actually for the first little while, it was spread out further, but that was in the summer and we didn't care. So, we'd go down there, we'd bring our own soccer balls, we'd have our own nets, and we'd have frisbees, and baseball bats and stuff. We'd go down at like 10 in the morning and then I think [SIBLING] would have hers, and then there was space, and then [child] had his. So, in between time we all just played, we had a picnic. (Parent H)

Finally, most parents suggested they did not differ in their approach depending on their child's sex. For example, Parent C explained: "I'd give them [daughter and son] the same opportunities. Because she goes for dance, he's asked. So, I said, 'We'll see…maybe hip hop or whatever, but yeah. It's whatever interests them, right?'" Similarly, Parent B outlined, "Exactly the same. Like, we want our [daughter] - I think she'd be more interested in sports at an earlier age than my son, just seeing her personality… but no - both of them can do it all". However, other parents tended to have a more protective approach with their daughters, outlining preferences for what sports or leagues they joined: "I mean, I know I'd [let her] try everything, but I know I'd rather her not do rugby or hockey, to be honest with you" (Parent J). Similarly, Parent E shared:

> Well, it's interesting because [male child]'s league right now is co-ed, so you saw that we have a girl on our team [name], but - [female sibling] plays on an all-girl league. So, we chose that league for a reason, because she didn't have a lot of skill when she went into it, and we didn't want her to be intimidated by the boys.

Primary Sport Involvement

At the time of data collection, children were 3 (n=4), 4 (n=3), and 5 (n=3) years of age, enrolled in one primary sport each, including: multi-sport (n=4), hockey (n=2), soccer (n=2), gymnastics (n=1), and rugby (n=1). As can be seen in Figure 1, these primary sport programs represented the first (n=1), second (n=1), third (n=3), fourth (n=3), and fifth (n=2) sport or OPA programs or exposure for these children. Children's engagement patterns within each primary sport varied, depending on their integration (or lack thereof) of FMS, FSS, deliberate play, active play, and competition. Given many similarities, observed findings relating to the five primary sports are collapsed into three distinct thematic contexts: (1) ball-sports [multi-sport, rugby, and soccer]; (2) gymnastics; and (3) hockey.

Ball-sports. Although the multi-sport program focused on a different sport each class (e.g., basketball, tennis, soccer, and floor hockey), practice formats largely mirrored those observed in the soccer and rugby programs. These programs were 45-minutes (soccer), and one hour (rugby, multi-sport) in duration, which children attended once a week. As previously noted, all programs occurred indoors during the winter season, in community, church, or club owned gyms, halls, or domes.

After an initial group greeting, children completed coach-led stretching, followed by an endurance-based warm-up, which drew upon a number of general FMS including balancing, skipping, jumping, hopping, and running (forwards/backwards). In each class, children learned two sport-specific skills (i.e., FSS), which were introduced by a lead coach, often indirectly through the use of animals or other storylines (See Chapter Five, Study Four), before children worked on them independently around the program space. Observed FSS across ball-sport programs included: shooting, stick handling, dribbling (hand and foot), kicking, weaving, and passing; these were often integrated into a final circuit activity, which included both FSS of that

class. Generally, these activities exemplified instances of deliberate play (i.e., sport activities which are set up by and monitored by instructors, regulated by flexible rules, and adapted to meet the needs of participants; Côté et al., 2007); children engaged in these activities for approximately 15-minutes each class (i.e., five minutes for each of the two drills/activities, and five minutes for a final integrated circuit/activity). Considering program lengths, this equated to about one-third (soccer), and one-quarter (multi-sport/rugby) of overall session time, while the remaining time was spent warming-up, stretching, transitioning between skills, listening to instructions, debriefing, and taking water breaks. Notably, children in the rugby program also engaged in active play at the start and completion of practices with their families, whereby parents would throw rugby balls or simply run around the field freely with children; this was not observed in multi-sport or soccer classes.

Finally, scrimmages or simulated games were only observed in place of the final integrative drill or activity in one program (i.e., multi-sport) with the upper year group (i.e., 4/5 year-olds) during one observation. Otherwise, they were not featured in rugby or soccer sessions, and between-child 'competition' only overtly appeared when children engaged in running that was sometimes utilized in warm-up, or circuits/relays used within the final drill/activity.

Gymnastics. Each gymnastics practice was one-hour in duration, and took place once a week at a gymnastics club/facility. At the start of each practice, children briefly met with the lead coach before completing an endurance-based warm-up, drawing upon general FMS including: running (forward and backwards), skipping, and crawling. Children completed coach-led stretching, before moving to trampoline, which children took turns jumping on for approximately 10 minutes. Children then cycled-through three of four different apparatuses: floor, bars, beam, or vault. On each apparatus, children engaged in deliberate play, completing circuits which

utilized FSS, including: front rolls, back rolls, tuck jumps, and star jumps (floor); walking and jumping (beam), swinging and hanging (bar), and jumping on a mini-trampoline (vault). Children remained on each apparatus for approximately 10 minutes, contributing to roughly 30 minutes (or half) of total practice time; however, children waited in lines a significant portion of this time, as only one child completed a circuit or apparatus at a time. Finally, there were no discernable instances of competition within practices (which may be reflective of the nature of individual sport), however, there were brief instances of active-play at the end of practice, where children freely engaged in skipping or jump rope, before debriefing their practice with the coach, and receiving a sticker.

Hockey. Hockey was the only sport that involved a two-day/week commitment, with practices and games held on consecutive days (i.e., Saturdays and Sundays). Additionally, one of the two hockey participants also played in the 'select' division, which involved a second practice (i.e., third day of commitment) each week. Practices were one-hour in duration, while games were 40-minutes. Notably, hockey practices and games required, on average, an additional 20-minutes in change rooms putting on and taking off equipment, which required significant parental assistance. Given significant differences in their layout, each are presented differently.

Practices. The observed hockey program was unique, given that children shared the practice space (i.e., rink) with three other teams. At the start of each practice, children from four different teams spent the first ten minutes engaging in active-play – freely skating around the rink, shooting pucks, and having informal interaction with fellow children and coaches. All children met as a group at center-ice, before engaging in an endurance/skating warm-up, which entailed a lap of the rink, before breaking into their four distinct teams, and working on FSS in four separate quadrants of the rink. Within their separate teams, children engaged in four drills

(i.e., each team did the same four drills), which were first demonstrated by coaches, and exemplified FSS including: skating forwards and backwards, weaving around pylons, passing, shooting, stick-handling, and taking slap shots. Children worked on each drill for approximately 10-minutes, equating to roughly 40-minutes (i.e., two-thirds) of the one-hour practice engaged in deliberate play. Between drills three and four, all four teams engaged in a race across the entire length of the ice, exemplifying one of the only 'competitive' elements of the observed practice. As practice concluded, all four teams met at centre ice with the lead coach, where they debriefed the practice, before briefly engaging in active-play (similar to warm-up) and leaving the ice. Finally, while select practices were not observed, they were described by Parent E (a parent-coach) as being similar in structure/layout to house league practices, however, children were held to higher expectations:

> His select team is a little bit different like, we treat them different. We treat them very different than the house league kids. We push them a little harder. We try to teach them a little bit more structure…we teach them how to be, you know, good teammates, you know, like things like keeping the dressing room clean. Making sure their boots are lined and their coats are hung up.

Games. Children were observed playing five-versus-five, half-ice games during a 40-minute session. At the start of the session, children engaged in active-play (skating around, shooting pucks) for approximately 10 minutes, while the remaining 30 minutes (i.e., three-quarters of the session) was spent in a game, whereby children engaged in deliberate-play, as coaches cycled children on and off the ice for approximately two-minute shifts. Games were unique in that there were no goalies, formal periods, face-offs, periods, or off-side calls. While there was no official 'score keeping,' children all celebrated if/when goals were scored, and

showed visible displays of disappointment when the opposing team scored. Parent G described how the environment was designed to foster fun:

> There's no off-sides, there's no icing, there's no face-offs, there's no, you know, nothing like it… just let the kids like, play. And, you know, it's still a structured game where you know, we're scoring and we're competing against each other, but there's no pressure.

Unstructured Sport Outside Primary Sport

Parents also described children's unstructured sport and PA engagement outside of their primary sport participation, often engaged in as a family. Notably, these activities differed from swimming and skating (OPA's), given that they did not take place at set times, and were not led by an instructor; instead, they were participated in at random in children's houses, backyards, gyms, or neighborhood parks. For example, Parent J described playing unstructured basketball, soccer, ball hockey, wrestling, as well as baseball with his children:

> Yeah, we do hockey, we shoot the ball around stuff like that. But just kind of, we do a little passing, we do baseball, we have a ton of balls and a ton of sticks and he runs around like a maniac. We wrestle a lot...he likes to wrestle big time.

General PA such as running and walking was also described. Parent I explained: "She has her little scooter and I have my bike. We ride bikes. We go to the park a lot. A lot of walks, a lot of bike riding." Parent F also explained using a private fitness/gym facility in the community:

> We're members at the [gym], so you know, we'll go and play in the open gym.
>
> What else do we do at [club]…we play soccer sometimes, climb on the structures.
>
> And we run around the track.

Additionally, Parent D described creatively engaging in PA at home with her son, in an effort to balance more sedentary behaviour (i.e., screen-time):

> So, we have screen time, then after screen time I go: "Okay, we're going to have our obstacle course! We're going to run up and down the stairs twice! We're going to set the pylons up." "We're going to touch our head three times!" Just to give him some daily activity to do each day, right? And then we do our stretches. I'll get him to do yoga poses, we'll put that on or do that just dance thing where they have follow the movements.

Interestingly, none of the aforementioned examples reflected instances of child-initiated unstructured sport or PA, apart from two instances: "My son, he has a basketball net in the basement. So he, you know, he'll go down there, he'll shoot the basketball...kick the ball (Parent A). Parent I also described, "We have an ottoman [footstool] in our living room and she's like, doing back rolls off of it, terrifying. She jumps off the stairs, she's on the fifth stair I think now, she'll jump off the fifth stair down."

Disengagement from Sport Considerations

Lastly, while the first theme demonstrated parents' initial efforts sampling different sports to find the right 'fit' for their child, parents shared their experiences navigating children's disinterest in past sports (where relevant), and were challenged to consider how they would approach hypothetical future disengagement from sport. While there appeared to be a number of factors to consider, parents were generally of two different camps. Some parents believed that children should be pushed to continue playing sports – at least until a certain age:

> At this age, this is a good time because they don't know - they can't think for themselves, so it's up to the parent to think for them. (…) I mean, if he want[ed] to discontinue that would be, I mean, I guess I would just stop bringing him there. But not at this age…if he

> said at five, "I don't want to do it now," you know, a lot of people's talents come out because their parents have pushed early on in. You can't push them at 12. (Parent A)

Similarly, Parent D shared that if her son wanted to quit:

> I would still give a push, like, we were raised that we had to try it up until a certain age, and I haven't really thought about what age that would be. I would certainly make sure that I exhausted all the different types of sports and given him enough, I guess, exposure to different things. I don't think I would ever stop trying though, like - if he didn't like indoor sports, I think I would go to outdoor…or skiing or trampoline, until I found something that I thought he liked that he was good at.

Other parents admitted that they were not always in agreement with their spouse on the best approach. Parent G admitted: "I'm not very strict when it comes to that stuff [quitting], but my husband, he would tell you a different story because with him…he would push for it [for him] to continue." However, other parents claimed that it was important to be mindful of whether their child was enjoying sport, and 'checking' their own intentions: "There's always that possibility that the child doesn't like it for themselves, or maybe they're overwhelmed with like, if their parents are putting them in a lot of activities. So, there's always that concern so…it's a fine line" (Parent B). Finally, Parent E bluntly shared: "If they want to quit, we let them quit."

Discussion

Overall, this study contributes to a greater understanding of early-years sport participation, by identifying sport take-up, pathways, and patterns of engagement among 3-5 year-old children participating in a range of sport programs. Collectively, findings suggest that existing life-span sport participation and development models (CS4L, 2016; Côté & Fraser-Thomas, 2016) do not reflect or align with the delivery of and experiences within early-years

sport programming; future research is needed to determine what engagement patterns/program activities are optimal for toddler and preschooler development, to in turn contribute to refined or modified versions of models, which acknowledge that sport is taking place prior to six years of age. The subsequent discussion explores these concepts in greater detail through the following subsections: (a) parents' influence on early sport choices, (b) initiation through OPA, (c) sport sampling and multi-sport programming, (d) programs' sport-specific skills, competition, and play-based activities (e) unstructured sport, (f) parents' influence on continued involvement, and finally (g) study limitations and future research directions.

Parents' Influence on Early Sport Choices

While the DMSP (Côté & Fraser-Thomas, 2016) describes children's initiation into organized sport commonly taking place at approximately age six, and the LTAD (CS4L, 2016) discusses organized sport upon transition into the FUNdamentals stage after age six, findings of this study reveal extensive involvement prior to age six. Further, past recommendations suggest organized sport involvement originate at least in part through children's interest (AAP, 2001), yet findings of this study suggest initiation was almost entirely driven by parents' experiences and intentions, with some differences based on children's birth order and sex.

Parents detailed going to great lengths to find a sport that was a good fit for their child, some implying they would exhaust all options (e.g., indoor, outdoor, summer or winter sports) to find the 'right' sport. This urgency may be due in part to increasing societal pressures to involve children in structured activities, viewed as beneficial to development, and reflecting a parenting ideal (Pynn et al., 2018); early sport involvement has also been popularized through partially misconstrued concepts from the literature, suggesting earlier involvement leads to greater likelihood of sport success (Ericsson et al., 1993; Gladwell, 2008). While some parents claimed

to enroll their children in sports in which they 'showed an interest,' children could only take interest in sports they were exposed to. For example, parents commonly cited their child taking an active interest in soccer at home, yet soccer is one of the more accessible low-cost sports for families to promote at a very young age (i.e., purchasing a soccer ball) (Canadian Youth Sport Report, 2014). Other parents admitted to wanting their child to play the same sports as them, and in some instance, parents were motivated by their past negative experiences, wanting to give their children different sport exposure/experiences than their own. While parents' underlying intentions may have sometimes benefited children (i.e., when they aimed to rectify their own negative sport experiences), intentions may have also negatively impacted children, whereby parents may have been living vicariously through their child's sport participation (Hellstedt, 1987; Overman, 2014).

Findings also revealed interesting birth-order differences in children's sport initiation. While most (n=7) children involved in the study were the oldest in the family, parents nonetheless discussed siblings as key influencers in their decisions regarding children's sport involvement. In particular, parents suggested they were more intentional with first-born children, exposing them to many unstructured sports at home, sampling various sports, and taking recommendations from friends. In contrast, parents admitted considering their second-child's individual aptitudes or interests less, often enrolling them in the same program as their older siblings. Reasons for this appeared two-fold: (a) parents often chose programs for their later-born children out of convenience (i.e., programs ran concurrently, or one child after another) in an effort to reduce driving, and/or (b) parents perceived younger children wanted to try their older siblings' sports. In turn, second-born children were depicted as starting sport even earlier. This is consistent with past work inferring later-born children might develop stronger FMS and FSS

skills at an earlier age, through mimicking the sport behaviours of their older siblings (Hopwood, Farrow, MacMahon & Baker, 2015; Krombholz, 2006). Findings linking birth order to differences in sport initiation and experiences should be considered within broader societal trends of family size and composition in Canada, which indicate a decline in the average number of children per family, and an increase in families with one-child (Bohnert, Milan, & Lathe, 2014).

Finally, some parents alluded to approaching sport initiation differently based on their child's sex. For example, one parent (father) enrolled his (5-year old) daughter in a female-only as opposed to a co-ed league, citing her ability was better suited to the female-only program. Past research has cautioned that while sex differences in children's attitudes towards sport are quite strong and emerge at a young age, they are more of a consequence of gender-role socialization than of natural 'aptitudinal' differences (Eccles & Harold, 1991). This phenomenon may also provide insight into why another parent (father) shared his preference that his daughter not want to play hockey or rugby. Together, it might be inferred that parents should be mindful about making enrollment decisions in early-years sport based on their child's aptitudes, or misaligned assumptions about the gender-appropriateness of certain sports (Wiley, Shaw, & Havitz, 2000).

Initiation Through Organized Physical Activity

While various parental intentions were underlying children's early sport involvement, one activity was consistently discussed with respect to early-years sport pathways. Almost all children in the sample (n=9) began by participating in swimming lessons, a form of OPA rather than organized sport. This finding suggests parents may feel OPA is an ideal gateway into sport, given it shares many of the same components (e.g., occurs outside of school hours, is led by a coach or instructor, entails rules and some degree of effort and strategy (Canadian Heritage,

2013), yet does not entail "two or more persons engaged for the purpose of competition" (p. 13). Interestingly, swimming before five years of age has been associated with enhanced cognitive development and measures of school readiness (Jorgensen, 2016); however, parents may simply be enrolling young children in swimming at an early age because they value it as a critical survival skill, serving a protective function against drowning (Brenner, Saluja, & Smith, 2003). Attention to OPA as a unique form of PA serving as a transition from active play to organized sport, may be of relevance in future conceptualizations of sport development models (DMSP; Côté & Fraser-Thomas, 2016; LTAD; CS4L, 2016).

Sport Sampling and Multi-Sport Programming

Following their initial OPA involvement in swimming, and prior to engaging in their primary sport, children commonly sampled gymnastics and soccer, and one child each tried MMA, cheerleading, basketball, and multi-sport. In other words, children were already engaging in their second (n=1), third (n=3), fourth (n=3), and even fifth (n=2) sport/OPA experience at 3-5 years of age, reaffirming current depictions (i.e., CS4L, 2016; Côté & Fraser-Thomas, 2016) of sport entry at age six may no longer capture the reality of children's typical sport pathways, while also emphasizing trends of extensive sport sampling prior to age six. Furthermore, the popularity of multi-sport programming (n=5) appeared promising in light of research and recommendations outlining the benefits of sampling prior to specialization (i.e., more well-rounded motor skill development and long-term sport involvement) (Côté et al., 2009; Côté & Fraser-Thomas, 2016; Myer et al., 2016). However, many parents' attraction towards multi-sport classes or sampling appeared motivated by the possibility of identifying what sport their child excelled in, implying varied sport programming was being used as a catalyst into their child's 'optimal' sports. Ultimately, it appeared that parents were not choosing sampling and multi-sport

programs to safe-guard against the risks of early-specialization (Myer et al., 2016), but rather, as an alternative pathway toward early specialization. This concern was further reflected through children's consecutive program enrolment (i.e., spring, summer, fall, winter), meaning children were participating in sport year-round.

Programs' Sport-Specific Skills, Competition, and Play-Based Activities

Findings regarding children's activities within sport programs were particularly interesting when interpreted through the lens of sport development models (CS4L, 2016; Côté & Fraser-Thomas). Specifically, early-years programs captured a blend of elements from the Active Start and FUNdamentals stages of the LTAD (CS4L, 2016). Children were introduced to similar FMS (i.e., running [forwards and backwards], jumping, hopping) across all sport programs, while also learning specific FSS (stick handling, somersaulting, passing, weaving). FSS were taught creatively within ball-sport programs (i.e., multi-sport, soccer, and rugby) through the use of animals or storylines and more explicitly within gymnastics and hockey. Regardless of delivery, findings raise questions regarding whether FSS should be taught at all within early years programming, given the LTAD indicates FSS should not be introduced until the FUNdamentals stage (i.e., after age six). Similarly, all sport programs except gymnastics yielded some form of competition during practices (e.g., races, team circuits, relays). Hockey was unique in that it offered 40-minute stand-alone games (modified with no goalies, face-offs, off-sides or periods); however, by nature of their design (i.e., five versus five, with the sole objective of scoring), these games created highly competitive environments. In contrast, the LTAD suggests children should participate in challenging – but non-competitive activities during the Active Play (age 0-6) stage, and graduate towards competition only during the next FUNdamentals stage, while also learning about fair-play and ethics in sport.

Findings also offered insight into types of activities children engaged in, within early-years sport contexts. Sessions were made up of approximately one-quarter (i.e., multi-sport, rugby) to three-quarters (i.e., hockey games) deliberate play (i.e., inherently enjoyable, governed by flexible rules, standards, and expectations, modified to meet varied ability levels; Côté et al., 2007). Notably, community-based programs (i.e., hockey, gymnastics) offered more deliberate play opportunities than club-based programs (i.e., rugby) or private sport organizations (i.e., multi-sport, soccer). The observed lack of deliberate practice (i.e., practice that is effortful, not inherently enjoyable, yielding no immediate rewards, associated with improved sport-specific performance over-time; Ericsson et al., 1993) was viewed positively, given concerns of early deliberate practice being linked to dropout/burnout (Côté & Fraser-Thomas, 2016). Further, small amounts of active play at the start of sessions, in between drills, and at the end of practices were evident in less structured programs (i.e., hockey, gymnastics, rugby). While past research indicates sport participation contributes to a significant portion of youths' daily energy expenditure (e.g., Katzmarzyk & Malina, 1998), findings of this study suggest children may be less active in early-years sport programs, due to time lost managing children's behaviours, giving instruction, and transition between drills or activities, which appears to vary by sport and program type. Overall, findings reinforce the danger of relying on sport to wholly contribute to children's PA levels (Leek et al., 2011), as children may be more active during unstructured sport or active play than within organized programs.

Unstructured Sport

Outside of children's primary sport engagement, parents described instances of unstructured sport participation at home, at the gym, or in neighborhood spaces, however, examples were almost entirely supervised. In the two instances that parents described children

engaging in child-directed unstructured sport, activities took place indoors. Children's lack of unsupervised outdoor play in the current study is synonymous with greater societal trends indicating parents' preoccupation with children's safety in playgrounds and streets have resulted in fewer children participating in active, independent, free, and 'risky' outdoor-play (Giles, Bauer, & Darroch, 2019). These trends prompted a position statement on risky outdoor play (Position Statement on Active Outdoor Play, 2015), urging parents to let children play more freely outdoors and engage in more risk-taking. However, current study findings, alongside a recent study which found parents fear negative judgement from their peers when children play unsupervised (Pynn et al., 2018), suggest that these trends may remain, and are layered and complex. Regardless, future conceptualizations of sport development models (i.e., DMSP; Côté & Fraser-Thomas, 2016; LTAD, CS4L, 2016) should (continue to) emphasize prioritization of unstructured sport and active outdoor-play during the early-years.

Parents' Influences on Continued Involvement

Finally, parents reflected on their ongoing roles in the promotion of sport throughout their children's development. Parents held differing beliefs about how to address children's disinterest, and whether to force/require continued participation. These findings mirror past work by Fraser-Thomas and Safai (2018), showing parents struggle in deciding the appropriate amount of "push" to give preschooler-aged children in sport. Some parents indicated children were incapable of 'knowing' what they want during the early-years, suggesting it was up to parents to know for them, while one parent claimed she 'did not care' if her son left sport, however, disclaimed that her spouse may have a different opinion. Further, instead of discussing other unstructured sports or even active play experiences that children could focus on instead of organized sport, parents appeared to think structured sport was superior, echoing findings by

Watchman and Spencer-Cavaliere (2017) among parents of children in middle-childhood (i.e., 8-10 years). These excerpts reflect parents' general uncertainty over the best way to support their toddlers' or preschoolers' sport involvement. While the DMSP provides extensive details regarding ideal parental involvement/support at each corresponding stage of the model (Côté & Fraser-Thomas, 2016; Fraser-Thomas, Strachan, & Jeffery-Tosoni, 2013), future research may help clarify these roles during early-years sport.

Study Limitations and Future Research Directions

Despite the novelty of the current study's design and unique findings with regard to sport take-up, pathways, and patterns of engagement within early-years sport, findings should be considered in light of the given sample's demographics. All parents in the sample were married, belonged to dual-income homes, and all had college, undergraduate, or graduate-level education (Table 1). These liberties may have afforded parents the opportunity to not only offer their children an early-years sport opportunity, but the chance to sample *several.* Research has consistently shown the highest levels of sport participation are associated with "two parent families, at least one of whom was well-educated, with both parents employed, and high levels of parental assistance, engagement and support" (Eime, Harvey, Craike, Symons, & Payne, 2013, p.1) - a reality apparent in the current studies sample. Sample demographics may also shed light on children's attendance in mostly (more costly) private and club-based programming (Overman, 2014), as opposed to community-based programs, and two children's engagement in hockey, recently cited as the second most expensive youth sport in Canada (second only to water skiing and more expensive than equestrian) (Canadian Youth Sport Report, 2014). Overall, it is important to note that the sport engagement pathways of children in the current study may not

emulate the reality among single-parent or lower-income families, who may have fewer resources (e.g., financial or time) to invest in their children's sport (White & McTeer, 2012).

Additionally, while a mix of mothers and fathers (i.e., six female, four male) spoke about their child's early-sport experiences, the study involved primarily male children (n=9) (although some had female siblings). In retrospect, given that the majority of observed programs involved team sports (i.e., multi-sport, hockey, rugby, soccer) with only one program involving an individual sport (i.e., gymnastics), this gender-spread may not be surprising, as research suggests more females are pursuing individual sports including swimming, dance, and gymnastics (Canadian Youth Sport Report, 2014). As such, children's early-years sport pathways may not have been wholly captured, and future research should aim to explore early years programming in an array of team and individual sports, as well better capture female children's experiences.

Furthermore, while findings were discussed in light of existing life-span sport participation and development models (LTAD; CS4L, 2016; DMSP; Côté & Fraser-Thomas, 2016), the overall study was also exploratory, and thus observations were not intentionally conducted with this end-goal in mind. Additionally, it is acknowledged that the DMSP was originally designed around a sample of elite athletes (Côté, 1999), which may explain why it did not adequately describe children's recreational sport experiences prior to six years of age. Nevertheless, future studies may yield more practical findings if researchers' observations of early-years sports contexts are guided by the actual LTAD stages and/or principles of the DMSP. For example, estimations of children's time spent in various activity forms (e.g., deliberate, active play) could be more rigorous by integrating accelerometers or direct observation tools. Moving forward, it may also be important to appraise the quality and interpersonal elements of early-years sport contexts through the use of recent observational sport quality appraisal tools

(i.e., Program Quality Assessment in Youth Sport; Bean, Camiré, Fraser-Thomas, & Forneris, 2018).

Conclusion

Overall, this study contributes to a greater understanding of early-years sport participation, by identifying sport take-up, pathways, and patterns of engagement among 3-5 year-old children participating in a range of sport programs. Collectively, findings suggest that existing life-span sport participation and development models (CS4L, 2016; Côté & Fraser-Thomas, 2016) do not reflect or align with the delivery of and experiences within early-years sport programming, and future research is needed to determine what engagement patterns/program activities are optimal for toddler and preschooler development, to in turn contribute to refined or modified versions of these models, which acknowledge that sport is taking place prior to six years of age.

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Table 1. *Parent Characteristics.*

PARENT	A	B	C	D	E	F	G	H	I	J
Age	33	30	36	41	46	39	38	38	31	32
Sex	Male	Female	Female	Female	Male	Male	Female	Female	Female	Male
Marital Status	Married	Married	Married	Married	Married	Married	Married	Married	Married	Married
Education	Graduate	Undergraduate	College	College	College	Undergraduate	Undergraduate	Graduate	Undergraduate	College
Previous Sport(s)	School-based	School-based	School-based	Gymnastics	Hockey, Lacrosse, Baseball	Soccer, Hockey, Skiing, Baseball	School-based	Swimming	Cheerleading, Gymnastics	Rugby, Hockey, Baseball
Previous Sport(s) Level	School-based	School-based	School-based	Provincial	Semi-Pro (Jr-A)	Recreational	School-based	Provincial	Competitive	Competitive
Past Sport Experience *	Negative	Positive	Positive	Neutral	Positive	Positive	Positive	Positive	Positive	Positive
Current or Sport	Tennis, Squash	-	-	Competitive Running	Hockey	Skiing, Hockey	Fitness	Fitness	Fitness	Rugby
Dual Role	-	-	-	-	Coach	Coach	-	-	-	Coach

*Participants were asked to classify their past sport experience as positive, negative, or neutral.

Table 2. *Toddler and Preschooler Characteristics.*

CHILD	A	B	C	D	E	F	G	H	I	J
Age*	3	3	4	4	5	5	5	4	3	3
Sex	Male	Male	Male	Male	Male	Male	Male	Male	Female	Male
Birth Month	January	January	December	August	May	May	February	March	August	October
Primary Sport	Multi-Sport	Multi-Sport	Multi-Sport	Multi-Sport	Hockey	Hockey	Soccer	Soccer	Gymnastics	Rugby
Program Type	Private for-profit	Private for-profit	Private for-profit	Private for-profit	Community-based non-profit	Community-based non-profit	Private for-profit	Private for-profit	Community-based non-profit	Club-based non-profit
Mins/Week**	60	60	60	60	160	100	45	45	60	60
Sport or OPA Exposure	Second	Third	First	Third	Fifth	Fourth	Fifth	Fourth	Third	Fourth
Other Structured Activity***	Swimming	Gymnastics Swimming	Piano	Swimming, Multi-Sport Camp	Soccer, Swimming	Soccer, Swimming Music	Swimming, Multi-Sport, Basketball Drums	Swimming Skating, Creative Music	Cheerleading, Swimming	Gymnastics, Swimming, Mixed Martial Arts
Sibling	1	1	1	1	1	2	1	1	0	1
Birth Order	Oldest	Oldest	Youngest	Oldest	Youngest	Oldest	Oldest	Oldest	-	Oldest
Daycare, Preschool, or Kindergarten (K)	Daycare	Preschool	Preschool JR-K	Daycare JR- K	SR-K	Daycare SR-K	Preschool SR-K	Preschool JR-K	Preschool	Preschool

*At time of study
**In Primary Sport
***Concurrent or Past

Chapter Five

Study Four

Coaches' Experiences in Early-Years Sport: Examining Challenges and Strategies

Harlow, M., & Fraser-Thomas, J. (2019). Coaches' experiences in early-years sport: Examining challenges and strategies.

Abstract

Coaches are seminal figures within the youth sport arena, and play a significant role in promoting youths' development (Côté et al., 2010; Holt et al., 2017). Coaches are considered most effective in their roles when they modify their approach and practices to suit the age and context in which they are coaching (Côté & Gilbert, 2009); however, little is known about coaches' roles or experiences within early-years (<6 years) sport contexts. A multiple case-study examining coaches' experiences within early-years sport settings focused on challenges-faced and strategies drawn-upon for effective coaching. Semi-structured interviews with 10 sport coaches (M_{age} = 37.8; 3 female, 7 male) leading multi-sport, soccer, dance, rugby, hockey, and t-ball programming to children 2-5 years contributed novel insights. Coaches identified key challenges related to children's resistance to participate, and their varied ability levels; however, these were mitigated by creative practices focused on age-appropriate delivery (e.g., flexibility, classroom management, use of stories/imagination). Concerningly, most strategies were offered by coaches from private and club-based programs; volunteer coaches within community-based programs struggled with limited access to resources and training and minimal experience, leading to issues around retention. Coaches also discussed broader societal-level challenges related to parental expectations and pressures. Study findings highlight early-years sport as a unique context, in which interpersonal and intrapersonal knowledge and skills are most critical (Côté & Gilbert, 2009). Identified best practices may support early-years sport coaches in their day-to-day roles, while highlighting the importance of sufficiently preparing all early-years sport coaches to deliver effective age-appropriate programming.

Keywords: Early-years, sport, coaching effectiveness, age-appropriate, strategies, challenges.

Coaches' Experiences in Early-Years Sport: Examining Challenges and Strategies

Youth sport has been identified as a favourable environment in which to promote a range of youth outcomes, including enhancing participants' physical, psychological, and social development (Côté & Fraser-Thomas, 2016; Eime, Young, Harvey, Charity, & Payne, 2013). Researchers have cautioned, however, that the benefits of sport participation are not transmitted through mere participation alone (Danish, Forneris, Hodge, & Heke, 2004; Hodge & Danish, 1999), and that individual experiences in sport vary greatly, contributing to both positive and negative outcomes (Fraser-Thomas & Côté, 2009). While children's development in sport is shaped by several dynamic factors and relationships (Côté, Turnnidge, & Evans, 2014), coaches play one of the most influential roles in promoting youths' healthy development through sport (Côté, Bruner, Erickson, Strachan, & Fraser-Thomas, 2010; Holt et al., 2017).

According to Côté and Gilbert (2009), effective or model sport coaches offer "the consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character in specific coaching contexts" (p. 316). Professional knowledge includes sport-specific pedagogical knowledge, often learned through coach education, clinics, and workshops (Trudel & Gilbert, 2006). Interpersonal knowledge, on the other hand, refers to coaches' ability to communicate and interact effectively with athletes. Finally, intrapersonal knowledge refers to coaches' openness towards on-going learning, introspection, and self-reflection (Côté & Gilbert, 2009). Integral to this definition are several underlying postulates, including that coaches must alter the application of these three distinct forms of knowledge to suit the coaching context that they are in, and with children, adolescents or adults, who vary with respect to age, needs, developmental abilities, and goals (Côté & Gilbert, 2009). Researchers have recognized a trend towards younger start-age and

participation in sport – particularly in western nations (American Academy of Pediatrics, AAP, 2019; De Knop, Engström, & Skirstad, 1996; ParticipACTION, 2018), which has given rise to a novel coaching context featuring toddler and preschool-aged children. However, no research to date has considered how coaches should alter their application of knowledge (i.e., professional, interpersonal, or intrapersonal) to meet the needs and broad maturation rates of children during the early-years (i.e., <6 years), or coaches' roles and experiences in these contexts more generally (AAP, 2001; Brady, 2004; Tierney & Nelson, 2009).

Effective Coaching Skills and Practices

Acknowledging that coaching takes place in a variety of contexts, levels, and environments (Stafford, 2011), Crisfield, Cabral, and Carpenter (1999) identified that the minimum criteria or skills necessary to coach include: (1) communicating effectively with participants to identify their needs, interests, and goals; (2) planning and organizing sessions and programs to meet the needs of participants and guide development; and finally, (3) analyzing and evaluating performance. Supporting and extending upon these criteria, Camiré, Forneris, Trudel, and Bernard (2011) suggest that coaches should: (1) have a carefully developed coaching philosophy; (2) develop meaningful relationships with youth athletes; (3) intentionally plan developmental strategies into coaching practice; (4) make athletes practice life-skills, and; (5) teach athletes how life-skills can be transferred to non-sport settings. Notably, however, these strategies are informed by feedback from 'exceptional' sport coaches, designed for use in sport programs with adolescent-aged populations.

In focusing specifically on sport among young children in recreational contexts, some differences emerge, with researchers suggesting that coaches should: (1) adopt an inclusive focus as opposed to an exclusive selection policy based on performance; (2) organize a mastery-

oriented motivational climate; (3) set up safe opportunities for athletes to have fun and engage playfully in low-organization games; (4) teach and assess the development of fundamental movements by focusing on the child first, and; (5) promote the social aspect of sport and sampling (i.e., taking part in a number of sports) (Côté & Gilbert, 2009). While these coaching skills, practices, and strategies are informative, they are not contextualized or based on coaches' experiences with children in their early-years, and thus, research explicitly exploring these coaching contexts is warranted.

Considerations for Early-Years Sport

Early childhood is recognized as a critically important time for children's overall growth and development (Tierney & Nelson, 2009; Young, 2002), and early-years sport coaches have a precarious job of managing children's first sport experiences, as well as ensuring that programs are developmentally appropriate (AAP, 2001). Moreover, community-based sport programs are primarily led by volunteer coaches, many of whom are not expected to have formal (i.e., professional) training (Trudel & Gilbert, 2006), or interpersonal training (i.e., communication, enhancing children's development in sport), and who are often parents of a participating child, fulfilling roles out of obligation or necessity (McCallister, Blinde, & Kolenbrander, 2000; Wiersma & Sherman, 2005). In past research, volunteer coaches have articulated the need for more direction in how to communicate and work with children (e.g., using language and terminology that children can understand and relate to), deliver age-specific skills, tactics, and strategies, and in teaching athletes' psychosocial skills such as self-confidence and teamwork (Wiersma & Sherman, 2005) - coaching roles which may be even more critical in early-years sport settings and set the stage for later involvement (Kirk, 2005). Importantly, researchers have cautioned that if young children's physical and cognitive capacities are not taken into

consideration when designing early-years sport curriculums, they may be asked to perform or develop skills before they are developmentally ready, which may lead to frustration, reduced enjoyment, loss of self-esteem, and premature withdrawal from sport (AAP, 2001; DiFiori et al., 2014; Kirk, 2005; Stryer, Toffler, & Lapchick, 1998).

The Present Study

With early-years sport programs appearing increasingly commonplace (e.g., Calero, Beesley, & Fraser-Thomas, 2018), and potential variability in coaches' background, training, and experiences in emergent early-years sport roles, there is a significant need for research in this area. A recent needs-assessment summarized the challenges faced by coaches leading programming for young children (<8 years), as well as how these challenges impacted coaches' confidence in their roles (Matthews & Erickson, 2018); however, these insights were not specific to early-years contexts, where children are comparably younger (i.e., <6 years) and may present their own unique challenges and considerations. Further, data were collected through an online survey, which may not have fully captured the complexity of coach experiences. Therefore, the purpose of this study was to gain understanding of coaches' experiences in early-years sport contexts, with a specific focus on examining challenges-faced and strategies drawn-upon for effective coaching. Enhanced knowledge of coaching in early-years sport contexts is essential to understanding specific coach training needs, and will help support existing early-years sport coaches in their day-to-day roles.

Methods

Research Design

In the current study, a multiple or collective case-study design was employed to enable the in-depth exploration of early-years sport from the perspective of multiple coaches (i.e.,

cases), and to allow the researcher to analyze findings within each sport setting/program (via one coach), and across settings (between coaches) (Baxter & Jack, 2008; Yin, 2003). A constructivist approach was adopted to address the study's purpose, as well as guide the larger qualitative study, described as a perspective which views truth and knowledge as relative, and whereby meaning is constructed by human beings as they engage with the world they are interpreting (Crotty, 1998). In other words, meanings are viewed as "varied and multiple, leading the researcher to look for the complexity of views, rather than narrowing meanings into a few categories or ideas" (Creswell, 2014, p. 37).

Procedure

Sampling and recruitment. As mentioned, this study was part of a larger qualitative study which sought to advance the understanding of early-years sport and organized physical activity participation, and entailed exploring the experience of sport participation from the perspectives of toddlers, preschoolers, parents, and coaches, as well as observing these children in early-years sport contexts. Data in the present study are a sub-set of findings (specifically related to coaches) drawn from the larger study. Full details related to participant recruitment and the sampling procedure can be found in Chapter Three, Study Two.

Participants. In total, participants included 10 early-years sport coaches (M_{age} = 37.8; 3 female, 7 male) who led multi-sport, soccer, dance, rugby, hockey, and t-ball programs with children between 2-5 years of age in South-Eastern Ontario. Teams/classes were grouped by varying ages (i.e,. 3-4, and 4-5 year-olds in multi-sport; 4-5 year-olds in soccer; 3-5 year-olds in dance; 2-5 year-olds in rugby; 4-5 year-olds in hockey; and 3-5 year-olds in t-ball). Coaches had between two months and 20 years of experience working with young children in sport, and coached early-years programs in the current study between one and six days a week. Five

coaches were paid, working full or part-time in their roles, and five coaches were volunteer; all coaches belonged to community-based 'non-profit,' club-based 'non-profit,' and private 'for-profit' organizations. Nine coaches had completed some post-secondary education. Coach qualifications ranged significantly; generally, community-based had attended coaching skills clinics and/or completed online tutorials (e.g., Respect in Sport [RiS]; Respect Group Inc, 2004), while those belonging to private and club-based organizations had a range of training related to working with young children in sport. Finally, three of the coaches were dual-role parent/coaches, and two coaches were former parent/coaches. Additional coach details can be in Table 1.

Data Collection

Semi-structured interviews. Each participant engaged in a semi-structured interview at their convenience between April and August of 2018. Semi-structured interviews were chosen in-line with the case-study methodology and guiding constructivist perspective, to ensure a rich contextual understanding of the phenomenon under study, and reveal the uniqueness or complexity of each coach's experience (DiCicco-Bloom & Crabtree, 2006). Each interview was recorded using an audio-recording device, and interviews ranged between 32:07 and 60:05 minutes (M= 45:49).

Interview guide. The interview guide was guided loosely by youth sport coaching literature (e.g., coaching effectiveness, model coaches), and seminal positive youth development (PYD) research (e.g., Côté & Fraser-Thomas, 2016; Côté & Gilbert, 2009; Trudel & Gilbert, 2006) (Appendix D). Each interview began with an overview of demographic questions to build rapport (e.g., age, occupation, number of years coaching), before discussing coaches' own previous and/or concurrent sport and PA habits. The third section addressed coaches' overall

coaching experience, before discussing their roles and experiences as early-years sport coaches specifically, followed by any relevant coach training and qualifications. The final section focused on any challenges or strategies that coaches felt were unique to the early-years context that they had been met with or adopted during their time coaching.

Data Analysis

Interview files were uploaded into a transcription software program (ExpressScribe), which enabled the lead researcher to reduce the speed of recordings and transcribe interviews verbatim. Typed interview transcripts yielded a total of 115 single- spaced pages of data across the 10 interviews. Identifying information was removed from each transcript and demographic information was stored separately. To enhance trustworthiness of findings, coach transcripts underwent member-checking, whereby each participant was e-mailed a copy of the transcript and encouraged to read and clarify the interpretation of the interview, and contribute new or additional insights (Curtin & Fossey, 2007). None of the participants asked for the transcripts to be altered or changed. Once approved, the lead researcher read and re-read each of the transcripts at length to become familiarised with the data, before importing it into Nvivo – 12, a qualitative research management software. As part of the larger qualitative study (see Chapter Three, Study Two), an inductive-deductive data analysis was performed, allowing for patterns to emerge naturally from the data without being restricted to pre-existing themes or codes (bottom-up), while simultaneously allowing larger themes (i.e., related to coaching and PYD literature) guided the study's purpose and interview guides, to represent concepts and ideas the researcher imparts on the data (top-down) (Braun & Clarke, 2006). Specifically, this process was guided by Braun and Clarke's (2006) six-stage process, including: (a) familiarizing oneself with the data, (b)

generating initial codes, (c) searching for themes, (d) reviewing potential themes, (e) defining and naming themes, and (f) producing the report.

Results

Study participants shared an array of challenges and strategies/best practices associated with coaching early-years sport contexts, which are presented in two separate sections. Coach names were replaced with codes (A-J) to protect their anonymity.

Coaching Challenges

Participants reported several challenges associated with coaching early-years sport, which are summarized by five higher-order themes: (1) children's (lack of) engagement, (2) limited coach resources/training, (3) children's varied ability levels, (4) coach turnover, and (5) parental pressure. Themes are presented alongside accompanied sub-themes in Table 1.

Table 1. Coaching challenges

Main theme	Sub- theme
Children's (Lack-of) Engagement	Hesitancy to participate Time of day considerations Limited attention-spans
Limited Coach Resources/ Training	Lack of age-appropriate resources Learning through trial-and-error
Children's Varied Ability Levels	Differing baseline fundamentals Differing sport skill levels Safety concerns
Coach Turnover	Volunteerism Revolving-door coaches
Parental Pressure	Wanting 'more' 'Authentic' sport environment Performance- orientated

Children's (lack of) engagement. Subthemes highlighting children's (lack of) engagement include: (a) hesitancy to participate, (b) time of day considerations, and (c) limited attention spans.

Hesitancy to participate. Coaches identified one of the biggest challenges associated with coaching early-years sport to be working with children who were hesitant to participate or join in during classes, and who appeared fearful of leaving their parents' side: "The challenging part is when kids come in and they are not willing to participate. They're on the side… not even wanting to come near the coach or [they] get upset" (Coach B). Children were commonly described as "clingy" (Coach J) and challenging to engage:

> In the U6 [under six years of age] program, the hardest thing is often there's a lot of kids, and it's their first time in sport, and they maybe rely on their parents a little bit too much, or they have a hard time… crying… Once they start playing [they] have fun… but Mom and Dad can't be too far - they can't be out of eyesight. (Coach C)

Time of day considerations. Even when children were willing to participate, coaches suggested it often took a long time for children to fully engage, given: "Some of these kids - they wake up from naps before they come to practice you know - they don't even join in the practice until 20 minutes in" (Coach C). Given practices often ran into or through children's scheduled nap or bed times, coaches questioned the appropriate time of day that practices should take place:

> I got a lot of comments, especially for the 4 and 5 year-olds. I guess if you're doing it on the weekend it's different, but a lot of them have bedtimes at 7:00, so if we're doing 6:30 to 7:30, there's no way we could go any later. (Coach H)

Coach J echoed these concerns, explaining how a failure to nap would affect his son's behaviour and ability to follow direction during the 60-minute session:

> You know the time itself, the 3 o-clock – [it] is not a great time for the kids. I feel that…unless they're really napping properly - my kid tends not to - so some days he's great if he takes a nap, and today he's going to be a nightmare.

Limited attention spans. Coaches also shared that children's limited attention spans negatively impacted their engagement in sport, giving coaches a small window of time to teach or introduce a concept before children would grow bored or disinterested. Coach I highlighted: "They're so young, and it's so hard for them to pay attention and get engaged. You get like, a couple minutes if you're lucky, and then you have to switch it up." Coach D explained: "Keeping them - I guess - entertained… they get bored very easily, so as teachers you have to be prepared." Children's limited attention spans were further challenged by the outdoor environment, where surroundings offered more distractions:

> There's definitely a big difference between outdoor and indoor. Indoor it's more controlled. Outdoors…everything is going on, you know. There's a play set, there's the beaches, you know. And there's more like open [space]. So, they get distracted very easily. Versus indoor - it's more controlled, and their parents are here, so they'll tell them [to pay attention] like right away. And it's easier to get them to pay attention. (Coach B)

Coaches shared opposing opinions and preferences with regard to parents' involvement and presence at practices. Some suggested parents were helpful in re-directing children if/when they became off-task, while others noted that parent conversations on the sidelines created additional noise or distractions: "Parents - they like to talk with other parents as well, and sometimes when they talk really loud it can be hard to instruct at times" (Coach B).

Limited coach resources/training. Coaches access to resources and training varied, resulting in: (a) lack of age-appropriate resources, and (b) learning through trial and error.

Lack of age-appropriate resources. Many coaches suggested that designing early-years sport program curricula was difficult, because they were not always provided resources from

parent organizations, and if they were, these were rarely in-line with children's actual ability levels. Coach H explained:

> The [organization] lessons they sent me were too elevated...they have all the drills, and they put together a lesson plan, and in the second week you're teaching them how to pitch, and it's like really? They don't even know how to hold the ball yet! Like - it advanced too quickly.

As a result, this Coach (H) went to great lengths to modify both lessons, and the equipment:

> We're just trying to get them to swing a bat, throw a ball. A lot of times they don't even hit off a tee. I made up a bunch of broom handles with little wiffle balls on string. They hit that just to try to get their swing going. Even the throwing - very seldom do they actually throw to each other.

Learning through trial-and-error. Many coaches described learning what was age-appropriate through trial-and-error, however, one coach deemed it to be particularly challenging, as she was never personally coached or played organized sport growing up: "It's a big difference when you grow up being coached and you can translate that, versus knowing the sport, loving the sport, and just kind of adapting on your own" (Coach G).

Children's varied ability levels. Coaches were challenged by children's varied ability levels, particularly in relation to: (a) differing baseline fundamentals, (b) differing sport skill levels, and (c) resultant safety concerns.

Differing baseline fundamentals. One of the more experienced coaches described many children's exceptionally poor baseline fundamental skills (i.e., lower than in the past), which she felt required coaches to break-down and teach even the most basic movement skills:

> The physical dexterity isn't there yet. I don't remember my child not being able to catch like [that]. (…) To have to remember what that's like as a 5 year-old… to me it's insane that they don't automatically come out [at age five] properly running. Running is a good example - you think everyone knows how to run, but they look like little chickens with wings flying around and they don't know how to run. (Coach G)

Differing sport skill levels. Coaches were also challenged by children's significant differences in sport skills upon entry into early-years sport. As Coach E explained, even among 4-5 year-olds, certain children dominated and controlled the puck during scrimmages, creating a noticeable divide:

> The problem here is that you'll end up with kids (…) there's kids that will never catch the puck. So, if we consider [CHILD]'s team - already on his team we have seven players - three of our players score 95% of our goals.

Coach G was also taken aback by differences in skills, between boys and girls, which she felt were reinforced by the actions of some coaches:

> You can definitely see that the guys… the boys are stronger even at age 4 and 5 than the girls. And you can see some coaches would, you know, put the girl in up to bat later, or she was only in the outfield [and have less opportunity to develop her skills] … so you do notice that.

Resultant safety concerns. Coaches suggested differences in fundamental and sport skills presented increased safety concerns, potentially turning young children off sport completely. Coach C explained: "We were seeing [that] if we have a young boy who's never played sports before, he's shy, and he's five years old… and you're getting hit by a kid who can crack a ball… [so] you're not coming back."

Coach turnover. Coach turnover was exemplified through challenges involving (a) volunteerism, and (b) revolving-door coaches.

Volunteerism. Coaches emphasized that community-based programs were often supported by parent volunteers, many of whom moved on as their children graduated to older levels, leading to continuous turnover. According to Coach F, "there's always a struggle to find volunteers… especially qualified volunteers. In the older levels you find some more non-parent volunteers, but at this level - it's all volunteers." Similarly, Coach H described his efforts and need to recruit volunteers: "I send out an e-mail because at that age-level you need a lot of coaching, because you have the pitching machine, both bases, someone in the dug-out to make sure the next girl is ready…" Coach G stressed: "None of us get paid for all the hours we spend doing this."

Revolving-door coaches. Coaches from private 'for-profit' organizations also acknowledged higher coach turnover in community-based programs (than in their own programs), resulting in children having to adapt to new coaches when they enrolled in consecutive sessions. As Coach B explained:

> I noticed a lot of coaches in other community centers, they always change. They always change…because a lot of coaches leave. But at [ORGANIZATION], a lot of us have been here for over two years…three years or more. It's great for the kids as well, because kids like to see you know, the same coach. If the company keeps changing coaches, the kid is like, "Oh, it's a new coach again…a new coach again." It's like starting all over. So having the same consistent coach is definitely really important if you teach kids.

Parental pressure. A final challenge for coaches resulted from them facing parental pressure within early-years sport contexts, demonstrated through parents: (a) wanting 'more', (b) seeking 'authentic' sport environments, and (c) being performance-oriented.

Wanting 'more.' Coaches articulated facing pressure from parents wanting 'more' - through requests for more/longer sessions/classes, or for children to move up a level. Coach C explained:

> I guess the biggest thing would be having parents want more and more, and wanting a lot too soon. (…) The U6's [six years and under] only train once a week for an hour. Like - that's sufficient. Even like U7's [seven years and under], they still train twice a week, an hour each time, no more than that. And there's lots of parents you know, who are like, "Is there a place where we can do more soccer? Can we get more games? Can we move up an age-group?"

Coach C went on to share his thoughts about some underlying reasons for this issue: "We have a lot of former athletes [who were] child soccer players who used to play soccer at a high level themselves, and they want to push their kids very early" (Coach C). Relatedly, Coach G described her experience with parents seeking more opportunities for their children based on (perceived) superior skills: "I think a lot of, especially parent-coaches… they tend to think their child is a superstar, or even parents on the bench, they think that their child is a superstar." Coach G went on to share her philosophy and reasons for not giving in to parents' pressures:

> We're all about equal play, equal opportunity. One kid wouldn't get to play first base every single time he wanted because he was the only kid that could catch. He still had to get rotated out; he still had to play in the outfield. And that's where you hear the parents

> say, “Oh, well why wasn't my kid first?” And it's like, “because this is community level and every kid gets an opportunity to play every position.”

‘Authentic’ sport environment. Coaches also discussed parents’ concern that the environment or layout of sessions did not mirror ‘authentic’ sporting environments; parents worried this would limit their children’s development and progression. According to Coach E:

> I think the biggest push back we get right now is - this is the first year for half-ice hockey. And it’s very different for a lot of people - it’s not very traditional, and you know a lot of people are like, “I want to see my kids on ice like this [full ice].”

Coach A described his rationale for, and defense of skills-based sessions in soccer:

> We get their way of thinking - in that some parents think they [their children] should be having a full-on game. I’m like, “Well, your child is 3, and he doesn’t necessarily understand that he needs to dribble down the field to score.” I said, “He’s still learning how to kick the ball, so you can’t expect them to not have this skill, and then want to do a bigger skill.”

Coach B described a similar parent conversation: “We did have a parent that gave us feedback like, ‘Why aren’t they playing matches the whole time?... I thought it was like…kids were going to play matches from the beginning to the end.’”

Performance-oriented. Coaches also discussed parents’ focus on performance-oriented outcomes (such as keeping score or winning). As Coach H noted,

> The kids can be competitive, but the energy is coming from the parents - parents’ yelling and screaming - it's surprising you know. At that age, a girl picks up the ball, she doesn't know what to do with it. Coaches, parents are all yelling “throw it to first!” Everybody's yelling, she's in a daze, there's so much yelling - she can't figure out what's going on!

Further, Coach E shared an anecdote of a hockey mother who approached a team convenor, requesting that her daughter be moved to a different team, recounting her say:

> "Listen like…I want my daughter on a different team. This isn't fair, she's not having fun." The little girl came off and they had just lost seven - nothing, and [the] convenor says [to the girl], he's like, "Did you have fun?" She's like, "Yeah I had a great time." He's like, "Did you win?"… [She replied], "Mom, did we win?"

Coaching Strategies and Best Practices

Alongside identifying common challenges, coaches reported several strategies or best practices for early-years sport, falling into five higher-order themes: (1) maintaining children's engagement, (2) classroom management, (3), age-appropriate program delivery, (4) ideal coach personality traits/characteristics, and (5) actively seeking knowledge. Themes are presented alongside accompanying sub-themes in Table 2.

Table 2. Coaching Strategies and Best Practices

Main theme	Sub-theme
Maintaining Children's Engagement	Flexible/adaptable
	Coach-child ratios
Classroom Management	Spatial boundaries, rules, and routines
	Ask questions
	Behaviour management strategies
Age-Appropriate Program Delivery	Story/imagination
	Modelling skills – physical
	Modelling skills – life/social
Ideal Coach Personality Traits/ Characteristics	Animated/funny
	Passionate about working with children
	Patient
Actively Seeking Knowledge	Seeking online resources
	Learning by trial-and-error

Maintaining children's engagement. Coaches suggested children's engagement could be maintained by (a) being flexible/adaptable, and (b) having appropriate coach-child ratios.

Flexible/adaptable. Coaches discussed the importance of coming to early-years sport sessions with a practice plan, but acknowledged:

> There is no 'one size fits all' approach. Have a general idea of what you want to teach, but know how to adapt your plan when needed (…) Being flexible, and able to adapt/ think on [your] feet… given that you don't know what children will be like at any given session. (Coach I)

Coach A shared an important criterion used to appraise new coaches within his organization: "How quickly they adapt to being put on the spot." This concept was elaborated by Coach D:

> As teachers you have to be prepared. As teachers we do lesson plans, so every day we say, "Okay, this month or this term I'm going to work on this." And you can get a plan monthly, weekly, daily, but you come to class and sometimes what you had prepared doesn't work, and that happens. So, you have to be equipped to change your, you know, 'theme' for that class or your lesson plan for that class and keep them occupied.

Coach F also outlined his strategy to get a read on the group prior to each session:

> So, we start each practice with like a team meeting, and we let them know like, you know, we ask them how their week was, what kind of things they're going through, you know, how they're feeling that day. It gives us a chance to see if some kids are a little more timid, some kids are more into it, and we can kind of judge if there happens to be a kid who maybe isn't in the greatest of moods that day.

Coach-child ratios. Coaches also emphasized: "I guess the important thing is ratio at this level. It's crucial to have one to six - sometimes even better - if we have a group of eight, we'll have two coaches in there, just because you can't have one coach with eight U6s [six years and under]" (Coach C). This coach went on to explain how appropriate ratios allowed coaches to

proactively design practices so they could work closely alongside children, keep them focused and engaged, and minimize problems:

> We instruct in a way where we kind of minimize the problems that come up. So, making only two kids in a line, or making sure everyone has a ball, and constantly keeping their attention and keeping them engaged. Whereas, if you have four kids in a line, and one kid's not paying attention, he doesn't know when his turn is, next – one [the other] player starts hitting this player.

Classroom management. Further, coaches discussed maintaining classroom management by: (a) establishing spatial boundaries, rules, and routines, (b) asking questions, and (c) drawing upon behaviour management strategies.

Establish spatial boundaries, rules, and routines. Coaches discussed the importance of establishing physical boundaries for activities in the first sessions, and reinforcing these often through clear rules: "We want all kids to know this is the line you go to…sit there, make sure you listen [while] there. And you should not cross on this side of that line. So, we have boundaries." Coach B elaborated:

> Number one is we must have a whistle. And we do put like, cones on one end to another. And we tell the kids when we go out there for the first two weeks, because some kids might be missing right, but we want all kids to know *this* is the line you go to.

Coach C also emphasized the importance of keeping children separate from equipment when giving instructions or introducing a skill or activity, as well as knowing where to stand when addressing them:

> Never stand facing to the sun with anyone younger than U8 [eight years and under]. You can't face the sun because anytime they put their hands up to their eyes, you've lost them.

> They're not paying attention, and they're always bouncing balls… so every time you call them over, you have to say, "Okay! Leave your ball where it is, and run over."

Ask questions. Several coaches described a teaching and management strategy used to check for children's understanding of directions: "Ask them simple questions like, 'Where should you go?' 'Should you do this?' They'll say 'yes, or no'… and that's when we know that they're listening" (Coach B). Similarly, Coach A explained:

> And so when we're going over skills, I say "we're doing hockey"… I demonstrate taking a hockey shot, and if I want to score it has to be, you know, "Where does the ball have to go?" [And the children respond], "It's got to go there [the net]".

Behaviour management. In instances where children were misbehaving or failed to listen, coaches suggested various strategies, which included drawing upon parents: "Give them a warning, a second warning, a third warning [then say], 'You have to sit with your parents for a minute or 30 seconds.' And then we bring them back to play" (Coach B). Coaches also described refocusing children's attention by giving them a "special" role:

> If the child is misbehaving, what I personally do is I make that child - I give her more responsibility. So, instead of actually singling her out and saying "Oh you're being naughty, you know… time-out, you sit here." I say, you know, "Why don't you be my assistant? Why don't you come help me out? Because these guys need help… why don't you come help me out?" And she's like, okay you've got my attention now. (Coach D)

Coach B built upon this idea, emphasizing the importance of gaining children's trust:

> There's a lot of successful stories that I've experienced with those kids, where eventually they will participate and listen to you. It's more about building relationships and trust

> with the kid. Once they trust you, they feel safe and happy…you know they're having fun, they will eventually listen.

Age-appropriate program delivery. Coaches shared strategies for delivering modified, age-appropriate programming, including: (a) using story/imagination, (b) modelling physical skills, and (c) modelling life/social skills.

Story/imagination. Many coaches shared the importance of using child-friendly terminology and introducing sport-elements indirectly through the use of stories that stimulated children's imaginations. For instance, Coach D shared,

> You can't say, "Okay kids, we're going to skip now." You have to kind of, you know, find creative ways - fun ways… maybe like game mentality… otherwise… they're kids… and they'll get bored. They get bored very easily.

Coach C shared: "We keep all of our game techniques like 'Spider-Man tag'… You know, you have fun names for everything… 'Pokemon-catcher' right? And we always design them to make them child-friendly." Further, Coach D described how a dance routine could be taught using imagination - impersonating an animal:

> For example, the bunny hop dance - so they learned that this dance starts at this side of the room, so they have to get used to always going to that spot. And then they get to work with props, so each bunny has its own basket. And what do the bunnies eat?…They eat carrots. So, they learn about - this is where we start the dance - the dance starts from here and goes to here [pointing]. And then we've learned about hopping, so they're strengthening their thighs and their coordination, and they're learning to hop with something in their hands, and using their imagination with how they pick the carrots and then placing them in their baskets, and then we learn to count sometimes.

Introducing sport skills using animals was also discussed by Coach C, who explained:

> From a physical literacy perspective… One - it helps kids identify different types of animals, and two - I think it enables you to do lots of different types of movement and think outside of the box. Because something like a bear crawl… they're working on like, you know, supporting their core, they're using their hands, their legs, using different parts of their bodies to move.

Coaches also suggested using "celebration dates like Easter and Christmas," and "mak[ing] games to do with themes" (Coach B). Coach A described that when children's imagination were tapped-in to:

> They [children] don't necessarily realize they're actually, say, stick handling in hockey. I'm actually saving Dory's family, and we're taking them to the coral reef, and we have to watch out for the jellyfish. And so, you put it in some kind of imaginary [way]. So, anyone can tell a story, but it's about how well you can sell the story to the kids right?

Relatedly, Coach C emphasized creativity as a unique skill, noting that seasoned athletes who transitioned to coaching often relied heavily on technical sport terminology or jargon: "We have some coaches that we bring in [who] have a great soccer resume, and they're very technical… but the thing is, at this age they don't understand things like [that]."

Modelling skills – physical. Coaches also discussed the importance of modelling sport-skills to children. For instance, when introducing a new fundamental soccer concept, Coach C detailed how he walked children through a drill, demonstrating the right and wrong way to do it:

> So…one basic skill that we teach at that age is the 'throw and catch.' And the main points you are getting across without them knowing is, you ask them after, "Okay, what do we have to keep our eyes on?...We have to keep our eyes on the ball, or it's going to bonk us

> on the head." And then you say, "If I throw the ball a little bit in front of me, and I stand still, am I going to be able to catch it?" And they say, "No!" "Okay…so what do we have to do?" And then you kind of tease it out and they say, "Oh, you have to run to it."

Modelling skills – life/social. Coaches also described explicit instances of teaching life or social skills. For example, when introducing the concept of scoring in floor hockey, Coach A demonstrated taking a shot and missing the net, which he tied into the life skill of persistence:

> I'll miss the first couple times. They'll be like, "Ohhhh, you missed!" I'm like, "Oh, that's okay!" You know I say, "Hockey players miss all the time! They don't score every single time. What can I do?" They're like…"Try again?" So you always set them up to try again.

Another coach shared how she modelled and introduced sportsmanship after a scrimmage:

> We like to teach them to high-five the other teammate, and after a match we would have like, one team line up one after the other in a straight line, and then the other team will do the same. They'll line up behind the coach in a straight line…we would put out our right hand, I would say, "Put out your right hand! Okay, make sure you say good game to the other teammates okay? This is called sportsmanship." (Coach B)

Relatedly, Coach E described his approach to teaching sportspersonship, by encouraging top players to consider their teammates' successes, rather than solely their own personal accomplishments:

> One of the things we do when we're winning by a lot, we try to get somebody else a goal. So, what we do is on the bench, we'll pick a player and say to our players that are maybe a little more skilled, "Your job is not to score - your job is to ensure that this player gets a

goal." It's a little difficult to arrange because they're just at this age they don't really understand, but the good thing is they're also at the age where they'll go ahead and do it.

Ideal coach personality traits/characteristics. Coaches described three unique personality traits or characteristics that ideal coaches should emulate; being (a) animated/funny, (b) passionate about working with children, and (c) patient.

Animated/funny. Many coaches felt it was critical for early-years sport coaches to be animated and fun(ny). Coach J described: "I try to be as animated as possible with them. I have my assistant coaches run the drills, and I'm more of the circus clown." Coach B reiterated, "I would say, definitely, if they recognize you and know that you're funny, and you are nice to them and [they] know that you're also having fun with them as well…that is really important to them I think." Relatedly, Coach A shared: "They like how silly you are – those are the things that totally stand out for them." Other coaches emphasized the importance of jokes: "They definitely love jokes so…using themes and fun ideas like that – incorporating jokes just makes it more fun and exciting for kids" (Coach B).

Passionate about working with children. Coaches also emphasized that it was important for coaches to be passionate about working with young children, while also being knowledgeable. As Coach A explained: "I think that's really important when working with kids – if someone really wants to be there and they have that genuine love for working with children." Coach D explained that if she was looking to hire a new instructor, "I would look for passion. They have to be passionate, they have to like what they're doing."

Patient. Patience was also emphasized as a key trait/characteristic among coaches, particularly given the challenging nature of working with young children. Coach I detailed:

> More than anything it's mentally exhausting. You're managing so many people at once, and more than that, it's hard not to treat them like a crowd. Children like being individuals so much more and standing out, and when trying to manage a group of them it's not so easy. You have to account for that and at times it can get to you.

Other coaches similarly outlined, "They [coaches] have to be inspiring and they have to be patient" (Coach D), and "patience is huge" (Coach G). Several coaches provided anecdotes outlining how patience was needed – simply to get children to participate. Coach D described:

> There was another kid, it took us about… I think close to two months, like six weeks I would say, and after six weeks she was on her own… you have to be patient. Even the mom was like, "Should I pull her out? This is not working." And I said, "Just give her a chance," because I could see the improvement. (…) So about six weeks and then she did it all on her own. She was following the teacher. Mom was out here - didn't have to go in anymore. So you have to sometimes be patient and wait for the child to be ready.

Actively seeking knowledge. Finally, coaches discussed their best practices to acquire coaching knowledge and improve their comfort levels in the early-years context, including: (a) seeking online resources, and (b) learning through trial-and-error.

Seeking online resources. Several coaches described "doing research" - seeking out and using resources that they found online from other organizations' websites, or instructional videos: "There's resources. There's YouTube, you can Google it, and you can find out through videos how to coach, and all these little drills that you can do" (Coach G). Similarly, Coach J shared:

> I did a lot of research online because there are some programs overseas for rugby – Specifically, [NAME] is a big program that they offer for U3 [under 3 years], U7 [under 7 years], so I just go online and try to pick and choose stuff to steal, to borrow, to use.

Coach A also emphasized the importance of making sure "it's relevant to them at the time - right? So doing your homework, going on YouTube or you know, Netflix. And then just being able to then make up some sort of story that can translate into what skills they're doing."

Learning through trial-and-error. Coaches also described picking-up strategies by observing past sport programs, and collaborating with fellow coaches/peers – but suggested this occurred gradually over extended periods of time. As Coach C detailed:

> It's a lot of like little tricks that you learn and pick up, and I've acquired them from a bunch of different places over the years… and different programs [I've] been a part of, or coached, and played, and working with a bunch of different coaches.

Similarly, Coach J outlined,

> Because I put my kid in a [different] program for a year, I saw what worked and what didn't. And I kind of just stole the things that I liked… the yelling, the running, tire them out…working on their kicking, getting them engaged as much as possible. (Coach J)

Discussion

Overall, study findings contribute to a greater understanding of coaches' experiences within early-years sport settings, highlighting an array of challenges-faced and strategies utilized by coaches across diverse early-years coaching contexts. In line with Côté and Gilbert's (2009) definition of effective coaching, findings unequivocally highlight the early-years as a unique sport context, requiring coaches to alter the application and delivery of their knowledge. More specifically, study findings indicate that both interpersonal (ability to interact and communicate

effectively with young children), and intrapersonal (ability to self-reflect and enthusiasm for on-going learning and adapting) knowledge and skills were seen as critical in early-years sport contexts, while professional (i.e., sport-specific) knowledge was largely not discussed. In considering the study's collective findings, the discussion is divided into four sections: (a) programming-level challenges and solutions, (b) organizational-level challenges within community sport, (c) societal-level challenges to meet parental expectations, and (d) strengths, limitations, and future directions.

Programming-Level Challenges and Solutions

Fundamental to the success of any early-years program, was children's participation and engagement in activities; however, coaches found this to be among their most significant challenges, as many children refused to participate, and if/when they did, they were overtired and unfocused, failed to listen, and had limited attention spans. Further, coaches felt challenged by the wide range in children's fundamental movement abilities and sport specific skills, potentially leading to safety concerns within programs. These findings reinforce past concerns regarding early-years sport, emphasizing the importance of considering children's developmental readiness and creating safe opportunities for children to play, or putting children at risk of having negative experiences (e.g., frustration, reduced enjoyment, loss of self-esteem) and/or outcomes (i.e., premature withdrawal from sport) (AAP, 2001; Côté & Gilbert, 2009; DiFiori et al., 2014; Kirk, 2005; Stryer et al., 1998). Although these challenges could appear insurmountable, coaches shared numerous creative strategies and best practices which they perceived to facilitate more positive experiences and outcomes for children, related to program delivery, management, having the "right" personality, pedagogy, and class structure.

Central to the successful delivery of early-years programming, coaches discussed the importance of approaching each session with a plan, while also being flexible and prepared to adapt lessons depending on children's enthusiasm or interest. One coach even spoke of beginning each session with a group discussion, in order to get a read of the class and glean their energy and enthusiasm. Notably, effectively communicating with participants to identify their specific needs, and modifying session plans with children's interests in mind, are two of the three baseline criteria of effective coaches (Crisfield et al., 1999).

Coaches highlighted classroom management procedures as particularly critical in the early-years context. At the start of new sport sessions, coaches established clear rules and physical boundaries (e.g., sitting on an established line, listening while the coach is talking or when a whistle is blown). When teaching new concepts, coaches highlighted a variety of strategies to maximize activity time and focus (e.g., separating children from sporting equipment, keeping line-ups short). Further, coaches discussed the creative ways in which they approached disruptive behaviour or children who lacked focus - by increasing their responsibility and making them coach 'helpers'. These findings are in line with two key program features proposed to optimize youth development: providing age-appropriate clear and consistent rules and expectations (i.e., setting limits, being clear about behavioral expectations), and ensuring children's physical and psychological safety (Eccles & Gootman, 2002).

Coaches' creative approaches appeared to be facilitated by their personalities; they emphasized the importance of passion and patience when working with young children, and their ability to be fun and animated – characteristics that superseded sport-specific knowledge, or any professional-level coaching expertise or sport experience. Further, these findings reinforce past suggestions that coaches should aim to work with athletes in contexts for which their

skills/knowledge align; while a successful sporting career may be a significant prerequisite when coaching at the professional or elite sport level, it does not appear to be a requirement when coaching young children (Lyle, 2002; Stafford, 2011).

Coaches' creativity was particularly evident in their pedagogical approaches which appeared quite distinct to the early-years context. Specifically, coaches suggested avoiding the use of sports terminology, introducing sport elements instead through the use of storytelling or themes, tapping into children's imaginations (e.g., through animals, pop-culture references/superheroes). To ensure that stories and themes were relevant to children, coaches alluded to researching relevant/topical themes on social media. Essentially, these coaches appeared to able to successfully navigate through challenges related to utilizing age-specific language and terminology, highlighted as a challenge by volunteer coaches in previous studies (Wiersma & Sherman, 2005). Additionally, when introducing new sport skills, coaches described modelling skills correctly and incorrectly prior to asking children to try them, then following-up with questions to verify children's understanding (i.e., "Where does the ball have to go?"). This method appeared insightful considering "young children have limited experience, storage processes and frames of reference to be able to understand or perform skills perfectly during the early stages of learning" (Walsh, 2011, p. 92). In other words, modeling skills in various manners and implementing questions may be critical to children's learning within early-years sport contexts, given that children have limited past experiences or reference points to draw from. Coaches also described creative pedagogical approaches widely practiced and promoted in sport settings with older children and youth - modelling life-skills (e.g., persistence, sportsmanship) through intentional or explicit means (e.g., Bean & Forneris, 2016, Camiré et al., 2011; Gould & Carson, 2008).

Finally, coaches discussed structural elements of programs worthy of consideration, including the time of day that sessions take place (i.e., avoiding early afternoon nap time and evening bedtime), and features of the surrounding areas (i.e., distractions within the outdoor environment). Consideration to optimal parent location was also highlighted (e.g., in the room, visible through a parent viewing window), as were policies regarding parents' potential involvement and expectations on the sidelines, given their presence was seen to both facilitate and hinder children's participation and engagement. Coaches also encouraged small coach-child class ratios, to ensure that coaches could work closely alongside children and form a trusting relationship, thus increasing their likelihood of remaining engaged. Collectively, these findings suggest that program setting features to optimize children's development such as appropriate structure, consideration to physical and psychological safety, and supportive relationships (Eccles & Gootman, 2002) require very specific attention within the early-years context.

Organizational-Level Challenges Within Community-Based Sports

All coaches shared program delivery-level challenges related to children's participation and engagement, which were inflated by young children's particularly diverse skill and ability levels; yet the majority of strategies and best practices proposed by coaches to surmount these challenges were offered by coaches from private and club-based programs (i.e., Coaches A, B, C, D, I, J), with less contribution from volunteer coaches in community-based coaches (Coaches E, F, G, H). While the purpose of this study was not to examine differences in experiences between coaches within different types of organizations – the differences were so evident within the data, they could not be ignored. As such, this section briefly highlights organizational-level challenges related to volunteer coaches' limited training and experience, and subsequent cyclical retention issues within community-based sports.

Table 3 highlights each coach's level of experience (i.e., in months or years), their qualifications/training, the type of sport organization they worked for (i.e., community-based, club, private) and coaching position type (i.e., paid part/full-time, volunteer). While varied, coach profiles emerged suggesting those working (i.e., being paid) within private 'for profit' and club 'non-for-profit' organizations typically had more experience, and more age- and sport-specific training, compared to coaches volunteering within community 'not-for-profit' programs. For instance, community-based volunteer coaches in this study were not required to complete any sport-specific coach education or training (e.g., the National Coaching Certification Program in Canada; NCCP), or any specific training to prepare them to work with very young children, but were often required to complete an online certificate related to anti-bullying, abuse, harassment and discrimination in sport ([RiS], Respect Group Inc, 2004). In contrast, coaches in private and club-based organizations tended to have considerable training in child development, sport-specific certifications, and first aid training (i.e., through post-secondary education, internal training, and NCCP). While all types of training are likely of some value (Nirmal, 2010; Smith, Holman, McEwen, & Tamminen, 2015; Respect Group Inc, 2004), volunteer coaches' time constraints must be considered and balanced with their abilities to deliver physical and psychologically safe, relevant, and applicable programming within this unique context (Eccles & Goodman, 2002). As such, future research should examine the effectiveness of various types of coach training, specifically within the context of early-years sport.

Moreover, consistent with past research on coach development (Erickson, Bruner, MacDonald, & Côté, 2008; Gilbert, & Trudel, 2005; Lemyre, Trudel, & Durand-Bush, 2007) many of the more experienced coaches described successfully gaining knowledge through trial-and-error, seeking resources online, and drawing from previous experiences and interactions

with other coaches; however, this knowledge was gained through extensive experiences over time. In contrast, community-based volunteer coaches highlighted lack of experience over time at the root of their challenges, expressing frustration regarding their lack training and access to resources, and general lack of preparedness to be successful within their positions, describing the lengths they went to in order to adapt lessons and equipment to make them more age-appropriate. Such challenges and behaviours have been linked to burnout (Engelberg-Moston, Stipis, Kippin, Spillman, & Burbidge; Wiersma & Sherman, 2005); volunteer coaches in this study appeared to be at risk of burnout, commenting on the high rate of coach turnover, and the cyclical need to recruit and invest in new coaches – a pervasive problem in community-based sport (Cuskelly, Taylor, Hoye, & Darcy, 2006; Rundle-Thiele & Auld, 2009).

The issue of early-years community-based sport programs being supported almost entirely by volunteer coaches (i.e., mostly parents, with limited experience) is problematic - as it suggests these children may not receive the same level of coaching, or that they may not be engaged in developmentally appropriate programming. Instead, findings suggest that effective coaching (Côté & Gilbert, 2009) may be reserved for those who can afford private, or club-based programming. This finding aligns with Overman's (2014) concern that "the traditional practice of providing youngsters with age-appropriate sports activities has become less a community enterprise than a service provided by the private sector at increasingly prohibitive cost" (p. 64).

Societal-Level Challenges to Meet Parent Expectations

A final set of challenges (for which coaches were unable to offer simple strategies or solutions) related to parents' expectations for their young children's sport environment, and associated pressures placed on coaches. Coaches across organizations felt pressured to offer additional opportunities for children to practice sport (i.e., more days per-week), move-up an

age-group or level, or abandon age-modified practice environments that did not emulate 'real' sports (e.g., half-ice hockey games, skills-based classes). Alarmingly, parents appeared to be permeating their children's sport experiences with a misplaced performance-oriented focus (i.e., counting number of points, focusing on winning), which in turn had the potential to shape children's understanding of competition before they were cognitively prepared to comprehend its complexities (Passer & Wilson, 2002). Parents' expectations appeared to be informed and motivated by a larger societal obsession with success and performance (Miller, 2012), with early-years sport offering a context ripe for parents to focus on their child's skills and abilities, contributing to inflated differences among young children at such varied levels of development. While 'sporty' families may be advantageous to children's early skill development and in easing children into sport (Wheeler, 2012), findings of this study echo past work (Wiersma & Sherman, 2005), suggesting parents' heightened expectations for their child's success, and/or desired favouritism from coaches may be challenging for coaches to navigate, while also less than optimal for children's experiences.

While there has been tremendous growth within early-years sport in western nations (e.g., AAP, 2019; Calero et al., 2018; ParticipACTION, 2018), findings of this study caution that programming may be expanding more quickly than prudent, driven in part by demands by parents, rather than clear understanding of children's positive experiences and overall healthy development. While societal-level paradigm shifts in parenting philosophies and approaches are unlikely in the short-term, findings highlight the importance of focusing on parent education and codes of ethics similar to those used within older youth sports (e.g., Wiersma & Sherman, 2005), which make program philosophies more transparent, and outline expectations of parents on the

side lines; these could also be broadened to include education around the risks of pushing children into a sport pathway of early specialization.

Study Strengths, Limitations, and Future Directions

This study responded to calls to better understand coaches' roles and experiences in early-years sport (AAP, 2001; Brady, 2004; Tierney & Nelson, 2009), yielding novel insights, which have the potential to inform coaches' practices, and guide future research needs. To our knowledge, this was the first study to look exclusively at coaches' experiences within the early-years (<6), and provide an in-depth qualitative exploration of diverse coaches' experiences in varied sport and organization types. The multiple (i.e., collective) case-study design allowed for the examination of similarities and differences across each case (i.e., between coaches, from different programs), which contributed to robust, and reliable findings (Baxter & Jack, 2008; Yin, 2003).

While the diversity within the sample allowed for broad understanding of coaches' experiences, the boundaries of the cases under study must be considered (i.e., experiences of 10 coaches in South-Eastern Ontario), as should differences according to organizational context (i.e., private, club-based, community-based), in particular, resulting in substantively different experiences according to pay, program philosophies, training requirements, and levels of experience. Coaches were also from diverse sport types (i.e., multi-sport, soccer, dance, rugby, hockey, and t-ball), and thus, the challenges and strategies identified by coaches within each sport may be unique to each of these individual sport-types. It is also acknowledged that three of the coaches in the sample were parent-coaches, which may have inflated their responses or willingness to share challenges, strategies, or thoughts; however, parent-coaches offer a typical representation of community-based sports (Brown, 1998). Finally, study interviews only took

place on one occasion; more insights may have been gleaned from collecting data at both the start and completion of a season, in order to capture coach strategies as they evolved over the course of the season.

The study's strengths and limitations offer a lens through which to consider future research and practical directions. Foremost, the study brings to light how little research has been conducted in the early-years sport context (see Harlow et al., 2018 for review), despite rapid growth in provision of programs and participation over the past two decades (AAP, 2019; Calero et al., 2018; ParticipACTION, 2018). As such, future work should draw upon diverse design and methodological approaches (e.g., longitudinal, journals, photo-elicitation) to better comprehend the early-years context, children's experiences and outcomes within this context, and the unique influence of key social agents in this setting (i.e., coaches, parents, siblings). For example, findings highlighting misplaced parental expectations and pressures lend value to conducting intervention research aimed at shaping parental values, expectations, and beliefs around sport, particularly among relatively 'newer' parents (i.e., of younger children).

Findings showing substantively different coaches' experiences based on organization type (i.e., private, club, community-based) draw attention to a two-tiered system, which could be moderated at least in part through enhancing community-based coaches' interpersonal and intrapersonal knowledge (Côté & Gilbert, 2009) specific to early-years settings. Past research identifying coaches' preferred formats for continuing education suggest appreciation of online training (Vargas-Tonsing, 2007), recurrent opportunities (i.e., not one-time, beginning of year training clinics), as well as 'hands-on' workshops and mentorship (Wiersma & Sherman, 2005). Given volunteer coaches already face many challenges related to time and financial support for training (e.g., NCCP) (Turnnidge, Côté, & Hancock, 2014; Wiersma & Sherman, 2005),

research-informed supplemental workshops (e.g., Falcão, Bloom, & Gilbert, 2012), and online coach education training tools (e.g., Project SCORE; Strachan, MacDonald, Côté , 2016; Santos et al., 2019) have become increasingly popular in recent years, to support coaches in optimizing children's positive development and life-skill acquisition. Inspired by these alternative contributions, there is a unique opportunity and need to draw-upon findings from this study, to use as a springboard for early-years sport training focused on age-appropriate delivery, so all community-based volunteer coaches may feel prepared in their working within their programs.

Conclusion

Overall, study findings highlight early-years sport as a unique context, emphasizing the distinct ways in which coaches may modify their integration of professional, interpersonal, and intrapersonal knowledge (Côté & Gilbert, 2009). Findings contribute to a greater understanding of coaches' roles and experiences within early-years sport settings, highlighting an array of strategies and challenges faced by coaches across diverse coaching contexts. Programming-level challenges were rooted in children's (lack of) participation and engagement, and children's varied ability levels, but coaches offered an array of strategies and best practices focused on age-appropriateness, in turn successfully navigating these issues. Organizational-level challenges related to volunteer coaches' limited access to resources and training, their minimal coaching experience, and subsequently, retention-issues appeared exclusive to coaches in community-based sports. Finally, societal-level challenges involved parental expectations and pressures; coaches should manage such expectations whenever possible, to assure programming remains aligned with children's optimal development. Together, identified coach strategies may support early-years sport coaches in their day-to-day roles, while highlighting the need for additional

coach training to ensure that all early-years sport contexts are age-appropriate, regardless of their program type.

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Table 3. *Coach Characteristics.*

COACH	A	B	C	D	E	F	G	H	I	J
Age	44	27	27	44	46	39	42	57	20	32
Sex	Male	Female	Male	Female	Male	Male	Female	Male	Male	Male
Sport	Multi-sport	Soccer	Soccer	Dance	Hockey	Hockey	T-Ball	T-Ball	Rugby	Rugby
Program Type	Private for-profit	Private for-profit	Private for-profit	Private for-profit	Community-based non-profit	Community-based non-profit	Community-based non-profit	Community-based non-profit	Club-based non-profit	Club-based non-profit
Experience Coaching*	20 years	3.5 years	10 years	6.5 years	1.5 years	6 months	8 years	6 years	6 months	2 months
Position	Full-time-Paid	Part-Time-Paid	Part-Time-Paid	Part-Time-Paid	Volunteer	Volunteer	Volunteer	Volunteer	Part-Time-Paid	Volunteer
Days/Week	6	2	1	2	3	2	1	1	1	1
Education	Undergrad	Undergrad	Graduate	Secondary School	College	Undergrad	College	Secondary School	Undergrad	College
Coaching Qualification	60+ hours Internal Training	3 months Internal training, First Responder	Certified Child and Youth Coach, First Responder	National Ballet School Teaching Certificate	Level 2 Certified, Respect in Sport: Anti-Harassment/ Bullying	Respect in Sport: Anti-Harassment/ Bullying	Coach Clinics	Coach Clinics	Level 1 Certified	Level 1 Certified
Sport Experience	Competitive Wheelchair Basketball, Squash	Recreational Boxing, Soccer, In-School	Competitive Soccer	Professional Dance	Competitive Junior A Hockey, Lacrosse	Recreational Hockey, Soccer, Skiing	School-Based, Women's Fastball	Unstructured, Pick-up Hockey	Varsity Rugby	Competitive Hockey, Rugby, Baseball
Dual Role	-	-	-	-	Current Parent	Current Parent	Former Parent	Former Parent	-	Current Parent

*Specifically with Toddler or Preschool Sport

Chapter Six

General Discussion

General Discussion

Collectively, this study significantly advanced the understanding of early-years sport and organized physical activity (OPA) participation, through conducting a rigorous scoping review, and three qualitative research studies. The general discussion begins broadly, outlining research findings that permeate across manuscripts, and which have societal-level implications, followed-by those at the organizational level, and finally at an early-years developmental level. A summary of study strengths and key contributions follows, in addition to a section on study limitations, and future research directions to overcome these limitations. Finally, a dissertation conclusion is presented.

Societal-Level Findings and Implications

From a broad lens, this dissertation shed light on the many sport, OPA, and other structured programming that toddlers and preschoolers are engaging in before six years of age (i.e., music, daycare, preschool, and kindergarten). At the time of data collection, children participated in their primary sport (i.e., multi-sport, soccer, hockey, gymnastics, or rugby) between one and three days a week, while parents reported that children had completed two (n=1), three (n=3), four (n=3), and even five (n=2) sport or OPA programs/sessions in the past, including a variation of swimming, skating, multi-sport, gymnastics, soccer, cheerleading, basketball, and mixed-martial-arts. Study findings revealed that children were engaged in these programs on a year-round basis - reflecting both breadth (variety of activities) and intensity (quantity of time participating) of sport and OPA participation during the early-years (Rose-Krasnor, Busseri, Willoughby, & Chalmers, 2006). Outside of sport and OPA, all but one child attended or previously attended daycare (n=3) or preschool (n=6), and children also attended music classes (i.e., creative music, basketball, drums, piano), and full-day kindergarten (n=6).

The commonality across these programs is that they all are structured, require formal attendance, and have an adult leader (Mota & Esculcas, 2002).

Parents detailed going to great lengths to find the sport and OPA programs that they deemed most fitting for their children, and displayed reluctance when considering their child's exit or lack of engagement in sport (Study 3). These concerns were partly imbedded in parents' belief that sport is necessary in developing 'school readiness' (e.g., social skills, following directions), while also indicating that daycare, preschool, and kindergarten environments were not adequately fostering them (Study 2). Essentially, the urgency parents appear to have towards finding optimal sport programming for children during the early-years, coupled with their overall gravitation towards structured programming are noteworthy, but not atypical, in light of research suggesting "contemporary parents are increasingly expected to put children into structured and supervised activities," based on parents' beliefs that children could always benefit from having more skills (Pynn et al., 2018, p. 5). These beliefs are compounded by parents' assumptions that organized sport participation is the best way to acquire them, overall enhancing young children's development and capital (Stirrup, Duncombe, & Sandford, 2015; Watchman & Spencer-Cavaliere, 2017).

On the one hand, children's concurrent enrollment in various early-childhood programming may be advantageous, as past research suggests that participation in a mix of organized activities "offers youth exposure to a greater variety of adults, peers, skills, and experiences, which may enhance development" (Linver, Roth & Brooks-Gunn, 2009, p. 356). Other studies have found support for the amount of time youth spend in sports (intensity), and participation continuity over-time (duration) and enhanced youth development (Zarrett et al., 2009). However, while giving children a variety of early-structured experiences may be well-intentioned, they may also come at a cost. One such cost is the potential risk of 'over-scheduling'

children, whereby participation in structured activities can be perceived as excessive, and lead to internalization of pressure from parents to do well in such programs (Mahoney, Harris, & Eccles, 2006). These external pressures, coupled with their time commitment, may lead to poor psychosocial adjustment for youth and negatively impact their relationship with parents (Mahoney et al., 2006). While there is only mixed support for this phenomenon among youth sport participants (e.g., Fredricks, 2012; Mahoney et al., 2006), it may be worthy to investigate the potential implications of over-scheduling among children who are even younger (i.e., not yet six years of age).

While placing emphasis on sport, OPA, and other structured youth programming (i.e., music and preschool), parents do not appear to be prioritizing unstructured sport or active-play (Study 3), which was inferred by coaches in Studies 2 and 4 as being partly responsible for children's lower and differing baseline skills entering early-years sport programs. While parents detailed some instances of unstructured sport participation and PA (e.g., co-attendance of a private gym, playing hockey, soccer, or biking with parents in children's yards or neighborhood parks), these instances were almost always supervised, and did not appear to be child-initiated (Study 3). Though parents were not probed on why they supervised their children's unstructured sport or PA engagement, past research has attributed an overall decrease in unsupervised free-play to parental fears over children's safety (Burdette & Whitaker, 2005; Clements, 2004). Recent studies have explored the ways in which families may enhance children's engagement in active play, and have suggested that a sense of community and 'safety in numbers' (i.e., encouraging children to play with other children as opposed to independently) may facilitate children's increased involvement in active free-play moving forward (Holt, Lee, Millar, & Spence, 2013). Further, while it is acknowledged that children in the study are still quite young

(i.e., 3-5 years), and it is unknown whether parents will continue these practices as their children grow and mature, researchers have cautioned that overprotective parenting practices that restrict opportunities to engage in free-play are creating a "generation of children who are potentially ill-equipped to deal with the everyday risks of living"; referred to as the 'bubble-wrap' generation (Malone, 2007, p. 513). Essentially, while parents appear to be focused on building-up children's competencies through structured program enrollment (sport, music, preschool and otherwise), they may also indirectly be limiting children's development of creativity, exploration, and imagination that they may otherwise get through free-play (Ginsburg, 2007). Finally, while all parents perceived that early-years sport was a useful outlet for children's excess energy (Study 2), a snapshot into children's engagement patterns and layout of early-years sport programs in Study 3 highlighted that children's PA engagement may vary significantly between program and sport types (i.e., children engaged in deliberate play for one-quarter [i.e., multi-sport, rugby] to three-quarters [i.e., hockey games] of practices) (Côté, Baker, & Abernethy, 2007), in turn, reiterating that parents should not rely on sport or OPA programs alone to contribute to children's PA attainment (Leek et al., 2011), and in part, explaining why children's PA attainment during the early-years demographic may be so low (Colley et al., 2013).

Finally, Study 2 shed light on the reality that early-sport participation may also be driven by parents' desire for their children to become physically literate and gain sport-specific skills, which in part, is due to the popularized, wide-spread, and partially misconstrued concepts from the literature, suggesting earlier involvement leads to greater likelihood of sport success (Ericsson, Krampe, & Tesch-Römer, 1993; Gladwell, 2005). According to Study 2 findings, early-years sport participation may enhance children's sport-skills and overall physical literacy, however, parents and coaches, in turn, may have to be even more conscious/vigilant of

monitoring for signs of burnout or overuse injuries, in light of the risks surrounding early-start age, which may give way to early-specialization pathways (Coakley, 1992; La Prade et al., 2016). These concerns may be plausible, given that some parents in the study already appear to be concerned with, or focused on performance-oriented outcomes such as keeping score or winning during early-years sport (Study 4), which may have far-reaching long-term consequences considering these children's ages (American Academy of Pediatrics, 2001).

Organizational-Level Findings and Implications

In illuminating patterns of early-years sport take-up, pathways, and patterns of engagement within each of the five distinct early-years sport programs (multi-sport, soccer, hockey, gymnastics and rugby), Study 3 established that existing life-span sport participation and development models (Developmental Model of Sport Participation [DMSP], Côté & Fraser-Thomas, 2016; Long-Term Athlete Development Model [LTAD], Canadian Sport for Life, 2016), which describe children's initiation into organized sport taking place at or approximately after age six, do not reflect or align with the reality, delivery of, or experiences within early-years sport programming. Instead, findings revealed extensive involvement in sport and OPA prior to age six, and a blend of elements from the Active Start and FUNdamentals stages of the LTAD. Specifically, children were introduced to similar fundamental movement skills (i.e., running [forwards and backwards], jumping, hopping) across all sport programs, yet also learned specific fundamental sport-skills (FSS) (stick handling, somersaulting, passing, weaving), despite the LTAD specifying these skills should not be introduced until the FUNdamentals stage. Further, all programs, except gymnastics, yielded some form of competition during practices, despite the LTAD indicating that children should participate in challenging – but non-competitive activities during the Active Play (age 0-6) stage, and graduate towards competition

only during the subsequent FUNdamentals stage. Given the discrepancy between what is happening in early-years sport programs and what is outlined in current sport participation and development models, research is needed to determine what engagement patterns/program activities are optimal for toddler and preschooler development, in turn contributing to refined or modified versions of these models, while also shedding light on the potential need for new models which adequately describe and guide early-years sport participation. Future conceptualizations of these models should (continue to) emphasize prioritization of unstructured sport and active-play during the early-years, but also consider including the utility of OPA serving as a transition from active play to organized sport, as well as provide more clarity on when FSS and competition should take place during Active Start (i.e., before six years of age) (Study 3).

While the purpose of Study 4 was not to identify and compare differences in experiences, challenges, or strategies of coaches from different types of organizations–differences between coaches belonging to private 'for profit,' club 'not-for-profit,' and community-based 'not- for-profit' organizations became evident. All coaches identified key coaching challenges related to children's resistance to participate in sport, and their varied ability levels; however, these were addressed by creative program delivery practices focused on age-appropriate delivery (e.g., flexibility, classroom management, use of stories/imagination). Importantly, these strategies were mostly offered by coaches from private and club-based programs who had more experience, and more age- and sport- specific training. Volunteer coaches, by contrast, struggled with having limited access to resources and training, and had significantly less experience coaching early-years sport to draw from, leading to issues around coach retention, and mirroring past research involving volunteer youth sport coaches (Wiersma & Sherman, 2005). Overall,

findings suggested substantively different coaches' experiences based on organization type (i.e., private, club, community-based) indicating the existence of a two-tiered system, which could be moderated at least in part through enhancing community-based coaches' interpersonal and intrapersonal coaching knowledge (Côté & Gilbert, 2009), and offering them supplemental coach training.

Early-Childhood Considerations, Findings, and Implications

Finally, the role that early sport participation may play on children's overall development during the early-years remains a topical and debated question (e.g., AAP, 2001; 2019). According to Study 1, sport participation between 2-5 years of age may be associated with enhanced social skills (e.g., being able to successfully build relationships, engaging with others, and follow pro-social conventions), psychological outcomes (e.g., fewer emotional problems, enhanced self-regulation, competence), and cognitive development (mathematical and linguistic skills reading, mathematics, listening to instructions) (Harlow, Wolman, Fraser-Thomas, 2018). Conversely, sport and OPA participation may also contribute to social maladjustment (Biber, 2016), negative perceived competence, and reinforce misaligned gender stereotypes (Landers & Fine, 1996), while also yield no discernable changes in children's social independence, attention problems, antisocial/aggressive behaviours (Metwaly, 2015) or spatial orientation abilities (Pollatou, Gerodimos, Zissi, Zervanou, & Karadimou, 2008). Collectively, results reaffirmed the scarcity of existing research involving the toddler and preschooler demographic in sport at the time of this study (N=9), which were also limited by study quality, and potential bias or influence by parent/ teacher proxy-reporting.

Study 2 further explored the perceived outcomes and experiences of early-years sport, but drew-upon more diverse perspectives (i.e., toddlers, preschoolers, parents, and coaches), and

employed modified age-appropriate interview techniques (Alderson, 2005; Bagnoli, 2009). The triangulating of parent perspectives with coaches and children may also have contributed to an altogether more accurate depiction of children's sport outcomes than Study 1 provided alone. Overall, Study 2 revealed alignment between some, but not all perceived outcomes and experiences associated with 3-5 year-old sport participation, suggesting early-years sport may foster PA and energy management, sport skill acquisition and physical literacy, learning to win and lose, socialization and social skills, and finally, life skills and school readiness - for some, but not all toddler and preschooler participants. Children's understanding or acquisition of these outcomes varied by children's age and developmental capacities, suggesting there are considerably large differences in children's physical and cognitive abilities when they are in the same programs between 3, 4, and 5 years of age.

Further, this study revealed that children's variation in the adoption of the aforementioned skills, and parents' desire for children to develop key life and social skills (i.e., learning to win and lose, socialization) prior to grade school, and thus at increasingly earlier ages, may not be in line with children's actual socio-emotional development milestones/abilities (Raver & Knitzer, 2002). Yet again – research surrounding this is mixed. For example, Patel, Pratt, and Greydanus (2002) suggest children do not have the maturity necessary for social comparison (which enables children to gage their abilities in relation to others) in sport before six years of age; however, other researchers suggest that children's social comparison abilities and emotional responses to winning and losing begin to develop around 3 years of age, and grow significantly between the ages of 3 and 5 years (Passer & Wilson, 2002). This research may in part explain why 3 and 4 year-old children in Study 2 struggled to comprehend competition or measure their performance against others (i.e., struggled to practice social comparison), and

instead appeared to practice more autonomous (individualistic or self-referenced) mastery tasks before 6 years of age (Passer & Wilson, 2002). Relatedly, Bronfenbrenner (1977) suggests that development occurs over time, through the process of individuals' inherent qualities (e.g., innate social tendencies) interacting with surrounding environments (both proximal and distal). In considering this, the question of whether it is actually possible to measure outcomes of sport and OPA participation among toddlers and preschoolers arises, with past research suggesting that outcomes of sport may simply need to be measured over longer lengths of time (Pollatou et al., 2008). Finally, there remains little consensus over whether developmental outcomes were actually attained from participation (Fraser-Thomas & Safai, 2018), due to children's concurrent attendance in many other structured programs during the course of their early-years, making it difficult to capture what program or what combination of programs may be responsible for developing (or not developing) these skills or attributes.

Finally, Studies 2 and 3 highlighted that the acquisition of developmental outcomes and children's subsequent experiences in sport may also be moderated by children's parents and siblings. For instance, while some parents claimed to enroll their children in sports in which they 'showed an interest,' children could only take interest in sports they were given the equipment for or exposed to (Study 3), which were sometimes sports that parents played themselves, and was sometimes driven by parents desires for children to play in sports in which they themselves missed out. Furthermore, findings also revealed interesting birth-order and sex differences impacting children's initiation into sport, including that siblings were a key factor influencing decisions regarding children's sport involvement. For instance, parents often chose programs for their later-born children out of convenience (i.e., programs ran concurrently, or one child after another), and parents perceived younger children wanted to try their older siblings' sports. In

turn, second-born children were depicted as starting sport even earlier, which on one hand may contribute to later-born children developing stronger FMS and FSS skills at an earlier age and mimicking the sport behaviours of their older siblings (Hopwood, Farrow, MacMahon & Baker, 2015; Krombholz, 2006). Some parents also alluded to approaching sport enrollment differently for their daughters compared to their sons, inferring that parents should be mindful about making enrollment decisions in early-years sport based on their child's aptitudes, or assumptions about the gender-appropriateness of certain sports (Wiley, Shaw, & Havitz, 2000). Overall, Study 3 findings revealed parents' general uncertainty over the best way to support their toddlers' or preschoolers' sport involvement. In turn, future conceptualizations of the DMSP which provide extensive details regarding ideal parental involvement/support at each corresponding stage of the model (Côté & Fraser-Thomas, 2016; Fraser-Thomas, Strachan, & Jeffery-Tosoni, 2013), may be useful in clarifying these roles during early-years sport.

Study Strengths and Key Contributions

A number of key study strengths and novel research contributions arise from these Studies. Firstly, Study 1 is the only review to date which explicitly looks at sport and OPA focused on the under six year-old demographic, providing a synthesis of knowledge related to the developmental outcomes of sport participation between 2-5 years of age, and a foundation for future research by bringing a vast range of literature together into one single source (Graham & Tetroe, 2009; Holt et al., 2017). Secondly**,** Study 2 explored the perceived experiences and outcomes of early-years sport through diverse perspectives (i.e., toddlers, preschoolers, parents, and coaches) allowing for data triangulation, and uncovering some of the underlying processes and mechanisms that coaches and parents use to foster toddler and preschoolers development through sport.

Building-upon future research directions of Study 1, this study also employed creative engagement and modified interview techniques, to gain the perspectives of very young children in this research area for the first time. This study also compared and contrasted parents' perceived outcomes and experiences of early-years sport participation with coaches' perspectives - who may have provided more accurate accounts of what children are learning and doing in these contexts. Within Study 3, novel insights were offered related to toddler and preschooler children's sport, OPA, unstructured sport, and active play habits, while also highlighting common features (i.e., layout/structure) and engagement patterns (i.e., deliberate play), pertaining to this age-group for the very first time. Finally, Study 4 responded to calls to better understand coaches' roles and experiences in early-years sport (AAP, 2001; Brady, 2004; Tierney & Nelson, 2009), highlighting key coaching challenges and strategies in varied sport and organization types, together providing applied examples of age-appropriate programming for coaches to use in their day-to-day practices. Overall, the qualitative design guiding Studies 2, 3, and 4 and the overall multiple (i.e., collective) case-study design allowed for the examination of similarities and differences across varied early-years sport contexts (i.e., between coaches, from different programs), which contributed to robust, and reliable findings (Baxter & Jack, 2008; Yin, 2003), immediately following participants' engagement and experience within early-years programming (Stake, 2005).

Study Limitations and Future Research Directions

Despite the seminal value of Study 1's scoping review, only nine studies met the review's inclusion criteria, almost all of which relied upon proxy-measures by parents or teachers, inferring that much of what has been known about developmental outcomes of toddler and preschooler sport and OPA is from the perspective of significant others, which may be skewed

by social desirability or response bias (Alderson, 2005; Van de Mortel, 2008). Together with concerns over the quality of the retained studies, this review reiterated the need to continue being cautious in making generalizations about outcomes of sport and OPA participation among toddlers and preschoolers. To enhance transparency in future research on early-years sport, agreeance over what constitutes 'sport,' among toddlers and preschoolers is vital, given that the study's conceptualization of OPA may not have captured sports that qualify as 'sports' under other study definitions.

To discern a greater understanding of early-years sport from a methodological standpoint, the continued use of modified interview techniques (i.e., less structured as opposed to question-answer format, use of visual aids, drawing, photo-elicitation) (Bagnoli, 2009; MacDougall, Schiller, & Darbyshire, 2004; Scott, 2004; Serpentino, 2011), which enable the active participation of young children in the research are necessary (Alderson, 2005). Combining several types of data collection (e.g., observational and modified interviews) and gathering proxy-information from individuals who are not children's direct caregivers (i.e., parents' or dual-role parent/coaches) such as teachers, daycare providers or non-parent coaches may provide less biases, and enable triangulation in research involving young children moving forward. In the current study, children, parents, and coaches all participated in a single, stand alone, interview, and interviews with children were notably short in duration; future research may benefit from interviewing participants at both the start and completion of a season, to better capture children's or parent' changing perceptions of sport, and evolving coach challenges and strategies over the course of a season or session. The use of large cohort or survey data may also be necessary in effectively examining the impact of early sport and OPA participation over time, capturing participation at two time points in development, and ideally helping researchers to compare

outcomes with participants who did not engage early in sport or OPA. This may also enable potential comparison between different organized sport contexts, and other organized educational and structured early-years programming (e.g., daycare, preschool, kindergarten, or music classes).

Finally, while children's sport take-up, pathways, and patterns of engagement in Study 3 were discussed in light of existing life-span sport participation and development models (LTAD; CS4L, 2016; DMSP; Côté & Fraser-Thomas, 2016), observations were not intentionally conducted with this objective in mind. Future studies may yield more practical findings if researchers' observations of early-years sports contexts are guided by the actual LTAD stages and/or principles of the DMSP, while children's time spent in various activity forms (e.g., deliberate, active play) could be more rigorously determined by integrating accelerometers or observational sport quality appraisal tools (i.e., Program Quality Assessment in Youth Sport; Bean, Camiré, Fraser-Thomas, & Forneris, 2018).

While the diversity of the overall study sample informing Study's 2, 3, and 4 allowed for broad understanding of participants' experiences within early-years sport, the boundaries of the cases under study must be considered (i.e., experiences of 10 families and coaches in South-Eastern Ontario). While a mix of mothers and fathers (i.e., six female, four male) spoke about their child's early-sport experiences, the number of programs that children participated in may be an advantage made possible by parents' resources/socioeconomic status (Eime, Harvey, Craike, Symons, & Payne, 2013). All of the parents in the study's sample were married, belonged to dual-income homes, and all had college, undergraduate, or graduate-level education, which afforded parents the opportunity to offer their children multiple early-years sport, OPA, music, and enriching preschool programming/opportunities. In essence, parents' middle-class status

enabled them to offer the 'privilege' of breadth and intensity of early-years programming, which may be reserved for children with parents who can afford it, leading to the cultivation skills which may ultimately give children advantages over their peers (Eime et al., 2013; Lareau & Weininger, 2003). This concept is very troubling, and could contribute to an early-divide in children's ability or capital before entering grade-school, as "the ability to pay for enrichment (…) means that it is incorporated into, and transforms, middle-class family life in ways not open to working-class families" (Holloway & Pimlott-Wilson, 2014, p. 613). Subsequently, it is important to note that the sport engagement pathways of children in the current study may not emulate the reality among single-parent or lower-income families, who may have fewer resources (e.g., financial or time) to invest in their children's sport (White & McTeer, 2012).

This study captured the experience of primarily male children (n=9), indicating children's early-years sport pathways may not have been wholly captured, given known sex differences in sport interests and motivations among older children and youth (Deaner, Balish, & Lombardo, 2016), which suggest that female athletes more commonly participate in individual sports (Canadian Youth Sport Report, 2014), and that the current study largely looked at team sports. Therefore, future research should continue to explore early-years programming across an array of team and individual sports. Additionally, given that nine out of ten study participants had (mostly younger) siblings, this study primarily captures the sport experiences and outcomes of first-born children, which may not be generalizable to later-born children. Future research examining potential birth-order differences in relation to children's physical development (Krombholz, 2006), expertise (Hopwood et al., 2015), and psychosocial development are worthy of exploration, particularly in light of the rise in single-child homes in Canada (Bohnert, Milan, & Lathe, 2014).

Finally, coaches were from diverse sport types (multi-sport, soccer, dance, rugby, hockey, and t-ball); thus, challenges and strategies identified by these coaches may be unique to each of these individual sport-types. Some coaches were volunteer (n=5), some were dual-role parents-coaches (n=3), and half of the coaches (n=5) were paid, highlighting differences in training, experiences, and investment, which may have influenced reporting. Further, findings revealed substantively different coaches' experiences based on the organization in which they belonged to (i.e., private 'for profit', club-based 'non-profit', or community-based 'non-profit' programs); the programming delivered by coaches within private and club-based programs in this study may not represent 'typical' programming and may yield more positive experiences and outcomes. Future research should examine the effectiveness of various types of coach training for early-years sport coaches to bridge the gap between coaches from community-based and private or club-based programs, drawing from past research which has identified coaches' preferred formats for continuing education to include online training (Vargas-Tonsing, 2007), recurrent opportunities (i.e., not one-time, beginning of year training clinics), as well as 'hands-on' workshops and mentorship (Wiersma & Sherman, 2005). Together, study findings can be used as a springboard for early-years coach training focused on age-appropriate delivery, so all community-based volunteer coaches may feel prepared to work within their programs.

Conclusion

This dissertation significantly advanced the understanding of early-years sport and OPA participation, a research area otherwise in its infancy. Through a triangulated approach, this project offers insight into the perceived experiences of sport and OPA among the early-years, patterns of sport take-up, pathways, and engagement, and coaching challenges and strategies unique to the early-years sport context/demographic. Together, research highlights the need for

more clarity on what is optimal early-years sport programming, what outcomes it is possible for toddler and preschool-aged children to acquire, and the potential negative implications early-years sport may have on children's other unstructured and active free-play habits. Future research should examine these themes through an altogether more diverse and robust sample.

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Appendices

Appendix A: Informed Consent for Parents and Child

Study Name: Advancing understanding of early-years in sport and organized physical activity (OPA) in Canada (Phase 3).

Researchers:
Principal Investigator: Meghan Harlow, School of Kinesiology and Health Science, York University
Co-Investigator: Dr. Jessica Fraser-Thomas, School of Kinesiology and Health Science, York University
Co-Investigator: Dr. Rebecca Bassett-Gunter, School of Kinesiology and Health Science, York University
Co-Investigator: Dr. Christopher Ardern, School of Kinesiology and Health Science, York University
Co-Investigator: Dr. Jennine Rawana, Department of Psychology, York University

Purpose of the Research: The present study is being conducted to explore the experiences of toddlers, preschoolers' and their parents' involvement in sport and organized physical activity over the course of early childhood, which is the third phase of a larger study looking at preschoolers' involvement in sport and organized physical activity in Canada.

What You Will Be Asked to Do in the Research: If you choose to participate in this study, you will be invited to complete an individual interview lasting approximately **45-60 minutes**. You will be asked to share your thoughts and experience pertaining to past and present participation in sport or organized physical activity, as well as about your child's experience in sport or organized physical activity. Interviews will be audio recorded. These recordings will be transcribed verbatim and a copy of your transcript will be sent to you. You will be able to remove any information you do not want included in the study, clarify meaning, and further elaborate on any point.

Additionally, if you provide consent for your child to participate in this study, he/she will also be invited to complete an individual interview lasting approximately **15-20 minutes**. He/she will be asked about his/her thoughts and experience pertaining to his/her participation in sport or organized physical activity. Additionally, child participants will be observed at their sport or organized physical activity program at three time points (start, middle, and end of session) by researchers, to gain a holistic understanding of the sporting experience and assist in interview findings. A summary of the findings of the study will be shared with you when the study is complete.

Risks and Discomforts: It is highly unlikely there are any risks associated with this study. However, if any question makes you, or your son or daughter uncomfortable in any way, the question does not need to answered. If at any time during the interview you or your son or daughter want to stop, you may inform the interviewer and the interview will be stopped.

Benefits of the Research and Benefits to You: There are no direct benefits to you as an individual, or your son or daughter. However, the information you both provide will advance our understanding of preschoolers' involvement in sport and organized physical activity in Canada, contributing to the advancement of academic knowledge and applied practice in the area. *Participating families will be provided a small token of appreciation for their time and involvement in the study. Specifically, a parent/guardian will be provided $20 following their personal interview*

Voluntary Participation: Your participation in the study is completely voluntary and you, as well as your son or daughter may choose to stop participating at any time. Your decision not to volunteer will not influence the nature of your relationship with York University either now, or in the future.

Withdrawal from the Study: You can stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or your or your son or daughters refusal to answer particular questions, will not affect your relationship with the researchers, York University, or sport organization associated with this project. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality: Following the transcription of the interview's audio recording, any personal information will be removed, and all names will be replaced with pseudonyms. Any information that you, or your son/daughter provide will remain confidential. All electronic data will be stored on a password protected computer within a locked office. Hard copies of data will be securely stored in a locked file cabinet within a locked office. Only Dr. Fraser-Thomas and the co-investigators will have access to the data collected. The data will be kept for five years post publication, after which everything will be destroyed. Once we have finished the study we will present the results at conferences and in an academic journal. No identifying information (e.g., names, locations) will be included in any results presented in academic settings.

Questions About the Research? If you have questions about the research in general or about your role in the study, please feel free to contact Dr. Jessica Fraser-Thomas. This research has been reviewed and approved by the Human Participants Review Sub-Committee, York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, York Research Tower, York University.

Legal Rights and Signatures:

I_____consent to having _____, as well as myself participate in Advancing understanding of toddlers and preschoolers' involvement in sport and organized physical activity in Canada (Phase 3), conducted by *Meghan Harlow.* I have understood the nature of this project and wish to participate, as well as let my son or daughter participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Signature _____ **Date** _____
Parent

Signature _____ **Date** _____
Child Name:

Signature _____ **Date** _____
Principal Investigator:

Appendix B: Informed Consent for Coaches

Study Name: Advancing understanding of early-years sport and organized physical activity (OPA) in Canada (Phase 3).

Researchers:
Principal Investigator: Meghan Harlow, School of Kinesiology and Health Science, York University
Co-Investigator: Dr. Jessica Fraser-Thomas, School of Kinesiology and Health Science, York University
Co-Investigator: Dr. Rebecca Bassett-Gunter, School of Kinesiology and Health Science, York University
Co-Investigator: Dr. Christopher Ardern, School of Kinesiology and Health Science, York University
Co-Investigator: Dr. Jennine Rawana, Department of Psychology, York University

Purpose of the Research: The present study is being conducted to explore the experiences of toddlers' and preschoolers' involvement in sport and organized physical activity over the course of early childhood, which is the third phase of a larger study looking at preschoolers' involvement in sport and organized physical activity in Canada.

What You Will Be Asked to Do in the Research: If you choose to participate in this study, you will be invited to complete an individual interview lasting approximately **30-45 minutes**. You will be asked to share your thoughts and experience pertaining to coaching sport or organized physical activity at the preschooler level. Interviews will be audio recorded. These recordings will be transcribed verbatim and a copy of your transcript will be sent to you. You will be able to remove any information you do not want included in the study, clarify meaning, and further elaborate on any point. A summary of the findings of the study will be shared with you when the study is complete.

Risks and Discomforts: It is highly unlikely there are any risks associated with this study. However, if any question makes you uncomfortable in any way, you not have to answer it. If at any time during the interview you would like to stop, you may inform the interviewer and the interview will be stopped.

Benefits of the Research and Benefits to You: There are no direct benefits to you as an individual. However, the information you provide will advance our understanding of preschoolers' involvement in sport and organized physical activity in Canada, contributing to the advancement of academic knowledge and applied practice. *Participating coaches will be provided a small token of appreciation for their time and involvement in the study. Specifically, a coach will be provided $15.00 following their personal interview.*

Voluntary Participation: Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to participate will not influence the nature of your relationship with York University either now, or in the future.

Withdrawal from the Study: You can stop participating in the study at any time, for any reason, if you decide. Your decision to stop participating, or to refusal to answer particular questions, will not affect your relationship with the researchers, York University, or sport organization associated with this project. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality: Following the transcription of the interview's audio recording, any personal information will be removed, and all names will be replaced with pseudonyms. Any information that your son/daughter provides will remain confidential. All electronic data will be stored on a password protected computer within a locked office. Hard copies of data will be securely stored in a locked file cabinet within a locked office. Only Dr. Fraser-Thomas and the co-investigators will have access to the data collected. The data will be kept for five years post publication, after which everything will be destroyed. Once we have finished the study we will present the results at conferences and in an academic journal. No identifying information (e.g., names, locations) will be included in any results presented in academic settings.

Questions About the Research? If you have questions about the research in general or about your role in the study, please feel free to contact Dr. Jessica Fraser-Thomas. This research has been reviewed and approved by the Human Participants Review Sub-Committee, York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, York Research Tower, York University.

Legal Rights and Signatures:

I_____consent to participate in Advancing understanding of early-years sport and organized physical activity (OPA) in Canada (Phase 3), conducted by *Meghan Harlow.* I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Signature_____ **Date**_____
Coach

Signature_____ **Date**_____
Principal Investigator

Appendix C: Parent Interview Guide

Section A: Introduction, review of purpose of interview, assurance of confidentiality

Section B: Demographics: Age, Gender, Marital Status, Level of Education, Occupation, Number of children involved in sport

i. (*complete demographics form, follow-up verbally for clarity*).

Section C: Parent Interview Questions:

Parental Sport Experience:

1. What does sport or organized physical activity (OPA) mean to you?
2. Can you please tell me about your own experience in sport or OPA: (*Probe: what sport OR activity, at what level, for what length of time).* If any:
   a) Would you describe your experience as a positive, negative, or neutral one?
   b) Why did you discontinue organized sport participation (if so)?
   c) To what extent is sport and physical activity still a part of your life? (*Probe: administrator, coach, athlete, manager, parent, referee*)?
3. What hobbies do you enjoy doing outside of sport or OPA?

D: Child Demographics: Age, Gender, Sport Involvement, Number of Siblings, Birth- Order *(Complete demographics form, follow-up verbally).*

Toddler or Preschooler Sport Experience:

1. Why did you choose to enrol your son/daughter(s) in sport or OPA? *(Probe: various motivating factors)*
   - If more than one sibling, what was it like enrolling each child? *(Probe: was there a difference enrolling your second son/daughter in sport compared to the first?*
2. What considerations did you have enrolling your son/daughter(s) in sport or OPA? (*Probe: age of entry, gender, choice of team vs. individual sport*)

   a). Describe a typical game or practice for your son/daughter (*Probe: transportation to game, pre-game rituals, engagement of preschooler during game/practice; 'walk me through your Saturday routine...'*)

   b). What do you think your son or daughter enjoys most about participating in sport or OPA?

c). What do you think your son or daughter enjoys the least?

d). Is there anything that think your son or daughter will GAIN? *(Probe: physical (FMS), social, cognitive, psychological/emotional, life skills)*

- If so- Have you noticed any changes in any of the above-mentioned outcomes since your son/daughters first enrolment in sport or OPA?

e)Did you have any reservations about enrolling your son/daughter in sport when you did, or do you foresee being met with any challenges in the future?

f). How do you share your son/daughters sport experience with others? (*Probe: on social media, observing with others at games/ practices)*

g). Can you describe what your experience is like with other parents at practices/ games? *(Probe: positive and negative parenting practices)*

h). Can you describe your child's relationship with their siblings pertaining to sport or OPA?

i). Can you describe your child's coach(es)? (*Probe: experience, gender, coach-preschooler engagement*)

j). Can you share some of the ways you think the sport experience differs for your son or daughter? (choice of sport, engagement with coaches)

k). What did you like most about the program? Is there anything you would like change about the program? *(Probe: time, accessibility, frequency, structure, coach-preschooler ratio)*

3. What are some of the other hobbies or types of physical activity that your son or daughter enjoy outside of sport or OPA?
    - How much time do you think your son/daughter spends in each?
    - Do you feel that the amount of time your child(ren) spends in each is optimal? If not, what might you change?
4. Do you have any additional questions for me? Or is there anything else you would like to clarify or elaborate on based on our previous discussion?

Appendix D: Child Interview Guide

Section A: Introduction, review of purpose of interview, assurance of confidentiality
ii. (*See verbal assent script*)

Section B: Demographics: Age, Sport, Siblings, Birth-Order
iii. (*Ask youth verbally*)

Section C: Youth Interview Questions:

Thank-you so much for talking to me today. I'm going to ask you some questions about yourself and your time playing and being active. Is this okay?

Child Sport and OPA Experience:

1. Can you tell me what activities you like to play when you're 'being active'?
2. When you are moving your body, or being active, what do you like to do?
3. Are there any moving activities you would like to do? Are there any that you don't like to do?
4. Do you know what sports are? Can you think of any sports?
    a. If so, what is your favourite sport; do you watch any on tv?
5. Are there any sports that you play/ would like to play?
6. What do you like about the [sport or activity]? (*Probe: being with friends, learning new things, 'scoring a goal')*
7. What do you not like about the [sport or activity]?
8. How does [sport or activity] make you feel?
9. Do you think that [sport or activity] is good for you?
10. Do you have siblings that play in this [sport or activity]? Others?

(*Several probes and follow-up question based on photographs)*

Appendix E: Coach Interview Guide

Section A: Introduction, review of purpose of interview, assurance of confidentiality

Section B: Demographics: Age, Gender, Name of Organization, Number of Years Coaching (*Ask participant verbally*)

Section C: Coach Interview Questions:

General Coaching Experience:

1) Can you tell me about your own personal experience with sport or physical activity:
    a. Growing up
    b. Currently
2) Can you tell me about your involvement with [sport or organization]?
    a. Number of years
    b. How has your role changed over the years (if at all)
3) Can you tell me about your coaching experience?
    a. Generally
    b. With [NAME] program?
4) Do you currently have any coach certifications, or have you ever taken any courses related to coaching?
    a. What did training look like *(Probe: In general, and in working with toddler or preschooler-aged children?)*

Coaching Experience with Toddlers or Preschoolers:

5) What is it like working with toddlers or preschooler-aged children?
    a. Do you have a main philosophy/ approach?
6) What are some of your strategies for coaching toddlers or preschoolers?
7) What do you think toddlers or preschoolers enjoy the most about participating in [sport]?
8) What do you think toddlers or preschooler enjoy the least?

9) Is there anything that you think toddlers or preschoolers' will GAIN from participation? *(Probe: physical, social, cognitive, psychological/emotional, FMS)*
    a. Do you believe that these skills are a by-product of sport or should they be intentionally taught?
10) Are there any potential negative outcomes that you foresee resulting from their organized sport involvement? *(Probe: physical, social, cognitive, psychological/emotional)*
11) Is there anything you would change about the program?
12) Do you have any additional questions for me? Or is there anything else you would like to clarify or elaborate on based on our previous discussion?

Appendix F: Field Note Template

Date: _____ Youth Observed: _____
Organization Name:_____ Sport: _____
Session #: _____ Length of Session: _____ Ratio: _____

A. Physical Outcomes

Fundamental Motor-Skills:

Locomotor:	Run		Gallop		Hop		Horizontal Jump	
Object Control:	Strike		Catch		Kick		Overhand Throw	

B. Psychological/ Life Skill Development:

Competence		Fun/Enjoyment		Challenge		Confidence	Life Skill	

C. Social Development:

Child-Child interaction		Coach-Child Interaction		Child-Parent Interaction		Coach-Parent Interaction	

TIME	NOTES