



Youth sport in the time of COVID-19: Considerations for researchers and practitioners

Journal:	<i>Managing Sport and Leisure</i>
Manuscript ID	RMLE-2020-0083.R1
Manuscript Type:	Commentary
Keywords:	Coronavirus, Pandemic, Lockdown, Athlete development, Personal assets framework
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Youth sport in the time of COVID-19: Considerations for researchers and practitioners

Abstract

COVID-19 represents an unprecedented challenge for the youth sport sector. Due to regional and national public health policies designed to slow down the transmission of this highly infectious disease and mitigate secondary impacts, youth sport programs around the world have experienced sudden interruptions to their sport activities. As such, this health crisis presents numerous considerations for key stakeholders in the sport environment. In this commentary, we put forward the Personal Assets Framework (PAF) as a tool to explore the potential implications of COVID-19 on youth sport development. Adaptations to the dynamic elements of the sport experience, including personal engagement in activities (i.e., virtual coaching; developmental trajectories), quality social dynamics (i.e., athlete relationships; health and well-being), and appropriate settings and organizational structures (i.e., social-cultural factors; safety concerns), are explored. This article will also discuss the potential consequences of changes in these dynamic elements on immediate, short-, and long-term developmental outcomes. Further, we offer contextual, methodological, and practical considerations for researchers and practitioners operating in youth sport to consider during this crisis. Finally, we suggest this crisis provides an opportunity to reflect upon existing youth sport structures and to develop strategies to improve the quality of youth sport programs.

Key words: Coronavirus; Pandemic; Lockdown; Athlete development; Personal assets framework; Sport experiences

Youth Sport in the time of COVID-19

Introduction

COVID-19 represents a global health crisis that has challenged nearly every sector of our society. It is thus crucial for researchers and practitioners to examine the ways in which we can effectively address these challenges. To date (15th June 2020), this highly contagious disease has resulted in 7,823,289 confirmed cases and 431,541 deaths (World Health Organisation, 2020). As the COVID-19 pandemic continues to develop around the world, various protective measures have been introduced by regional and national authorities. One of the central public health mitigation strategies for COVID-19 has been the promotion of physical distancing and self-isolating practices, which encourage individuals to limit interactions with others (Hammami, Harrabi, Mohr, & Krustup, 2020). Due to these measures and policies, youth sport has experienced an impromptu halt to regular activities in countries around the world (Parnell, Widdop, Bond, & Wilson, 2020). Given these unprecedented circumstances, it is important to reflect on how the COVID-19 pandemic may influence youth sport.

The Personal Assets Framework

In an effort to understand the far-reaching implications of COVID-19 within the youth sport context, we can examine this crisis through the lens of youth development. Although there are several applicable youth development models, we put forward the Personal Assets Framework (PAF; Côté, Turnnidge, & Evans, 2014; Côté, Turnnidge, & Vierimaa, 2016) as a representation of development in youth sport. Drawing upon work in developmental and sport psychology, this framework suggests that there are three integral dynamic elements needed for sport development to occur, including: (a) personal engagement in activities (i.e., the what), (b) quality social dynamics (i.e., the who), and (c) appropriate settings and organizational structures (i.e., the where). When these elements interact with each other, an immediate sport experience is

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3 44 created that can influence short- (e.g., changes in athletes' competence, confidence, connection,
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5 45 and character; the 4Cs) and long-term (e.g., performance, participation, and personal
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7 46 development; the 3Ps) outcomes. By highlighting the key mechanisms (i.e., the dynamic
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9 47 elements) and desired outcomes (i.e., immediate, short-, and long-term), the PAF provides a
10
11 48 useful framework to summarize the potential implications of the COVID-19 pandemic on youth
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13 49 development in sport.
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17 50 **Dynamic Elements**

19 51 **Personal Engagement in Activities**

21 52 When examining youth sport during this crisis, it is important to recognize that the
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23 53 emphasis has often been focused on the influence of physical distancing and self-isolation
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25 54 policies on organized youth sport. We know, however, that youth sport extends beyond the
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27 55 boundaries of sport organizations. Indeed, youth sport is comprised of a wide range of activities
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29 56 beyond structured practices and competitions, such as practicing free throws in the driveway and
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31 57 playing backyard soccer games. Previous research suggests that sport activities can be
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33 58 characterized by: (a) their primary focus (i.e., practice activities focused on skill development vs.
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35 59 play activities focused on enjoyment) and (b) who directs the activity (i.e., adult vs. youth-led;
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37 60 Côté & Erickson, 2015). **Consequently, researchers and practitioners should explore the**
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39 61 **influence of COVID-19 on youth's engagement in both practice and play-based activities.**
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44 62 Most noticeably during the COVID-19 pandemic, young athletes have experienced an
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46 63 interruption of their regular routine of organized, adult-led practices and competitions. The
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48 64 disruption of these activities has the potential to influence young athletes' developmental
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50 65 trajectories. Côté and colleagues (Côté & Vierimaa, 2014; Côté, Baker, & Abernethy, 2007)
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52 66 propose the Development Model of Sport Participation (DMSP) to outline the processes,
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3 67 pathways, and outcomes associated with youth sport development. From a high-performance
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5 68 perspective, for example, the DMSP offers two pathways during childhood that can positively
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7 69 influence the attainment of senior professional status, including: (a) early diversification (i.e.,
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9 70 increased engagement in multi-sport activities; Gullich, 2017) or (b) early specialization (i.e.,
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11 71 increased engagement in sport-specific practice and competition; Zibung & Conzelmann, 2013).
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14 72 Thus, the removal of these activities for a prolonged period may influence sport-specific
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16 73 development and performance. From a recreational outlook, Côté, Lidor, and Hackfort (2009)
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18 74 offer seven postulates of the DMSP, which promote not only performance, but also continued
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20 75 participation and personal development for all youth involved in sport. Côté and Vierimaa (2014)
21
22 76 suggest that the DMSP and its postulates integrate the various outcomes of sport by focusing on
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24 77 key proximal processes and the environment in which the processes are happening. Thus, the
25
26 78 changing landscape of these proximal processes (e.g., the removal of coach-led practice) and the
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28 79 environments in which young athletes are restricted to (e.g., increased access to parents and
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30 80 siblings) may affect youth's developmental pathways and subsequent outcomes of youth sport
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32 81 development. Given the current uncertainty regarding these effects, it would be worthwhile for
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34 82 future research to examine how participation in sport activities (e.g., coach-led practice, youth-
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36 83 led practice, youth-led play, competition) during the time of COVID-19 influences youth's
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38 84 developmental trajectories.

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42 85 Among the many changes associated with COVID-19 (e.g., engagement in sport
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44 86 activities within the home), the restricted access to traditional, coach-led practice has also led to
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46 87 the use of alternative delivery solutions to continue engagement in youth sport settings. Due to
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48 88 the COVID-19 restrictive measures, the emerging role of structured online activities appears to
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50 89 be a commonly used method to resume organized youth sport provision amongst practitioners
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3 90 and their athletes (Sherwin, 2020). The regular use of these virtual tools is still in its infancy and
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5 91 practitioners' methods for engaging young athletes is constantly evolving. For instance, team
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7 92 meetings, skill challenges, and physical routines, represent some examples of activities that have
8
9 93 shifted to structured, online delivery. As such, the way in which these activities are being
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11 94 delivered should be monitored to explore the most effective methods of delivering structured
12
13 95 online activities in youth sport. Given that even beyond the recent COVID-19 restrictions, the
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15 96 dynamics of technological advancements and their rapid integration into different social spheres
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17 97 such as youth sport (i.e., the 4th Industrial Revolution; Smith, Erickson, & Maleté, 2019) were
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19 98 already beginning to outpace traditional predictions, it will also be important to explore how
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21 99 these virtual methods of delivery may continue or evolve once sport activities resume.
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26 100 Where available, children and young athletes have been engaging in sport activities
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28 101 within a wide array of settings such as backyards, bedrooms, hallways, and any other accessible
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30 102 spaces. Whilst it is not uncommon for children and adolescents to utilize these spaces for sport
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32 103 activities during their development, the frequency and volume of play-based activities may have
33
34 104 significantly increased during the lockdown period. Given the demands and responsibilities
35
36 105 currently expected of adults during this pandemic (e.g., coaches, parents), it is also possible that
37
38 106 there has been an increase in youth-directed sport activities. Previous research suggests that an
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40 107 increased accumulation of youth-led activities, such as deliberate play, can positively influence
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42 108 athletes' long-term participation, performance, and personal development (e.g., Côté & Erickson,
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44 109 2015; Till & Baker, 2020). Additionally, more practice-oriented activity types (that are
45
46 110 nonetheless still youth-directed), such as 'spontaneous practice' (Côté & Erickson, 2015) in
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48 111 which young people independently engage in self-chosen/directed sport activities with skill
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50 112 improvement as the goal (without external direction from a coach), may be particularly salient
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3 113 under lockdown conditions. Overall, it will be worthwhile to capture the types of activities in
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5 114 which youth are engaging, their experiences of these activities, and the potential outcomes
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8 115 resulting from these activities.
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10 116 **Quality Social Dynamics**

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12 117 Sport is an inherently social activity. Interactions with teammates, coaches, parents,
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14 118 officials, and our broader sport communities represent an integral component of the youth sport
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17 119 experience. Within the context of COVID-19, it is these social interactions which are being
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19 120 directly challenged. As we strive to stay home and stay safe, sport stakeholders are being asked
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21 121 to refrain from engaging in face-to-face interactions and to adapt to virtual environments. It is
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23 122 thus important to examine how these interactions are changing, how we experience these
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25 123 changes, and the implications of these changes on development.
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28 124 One social group that has been brought to the forefront during this crisis is family. While
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30 125 often relegated to the literal sidelines of sport, parents and siblings have been brought to the
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32 126 frontline of sport activities. Indeed, since many of us are being asked to limit social interactions
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34 127 to our immediate households, parents and siblings are now fulfilling multiple roles: play mates,
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36 128 activity directors, and rule arbitrators for those inevitable disputes that arise. To date, a
37
38 129 predominant focus of sport research has been on parents' supportive functions (e.g., providing
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40 130 tangible resources, spectator behaviours; Fraser-Thomas et al., 2013). While they are still
41
42 131 supporting their children, parents are also playing a very active role in shaping youth's current
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44 132 and future sport experiences. Thus, it would be worthwhile to investigate how parents may be
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46 133 directly and indirectly influencing youth's engagement in practice- and play-based activities
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48 134 during this crisis. Moving forward, parents will also play a key role in the return to play
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53 135 transition. Understanding the needs and concerns of **parents** will be crucial for coaches and sport
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3 136 organizations as they adapt their sport programs to this new era (Solomon, 2020a). Lastly, it may
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5 137 be beneficial to examine how this crisis has influenced the quality of parent-child relationships
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8 138 and how these relationships may influence youth's immediate, short-, and long-term outcomes.
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10 139 In addition to the parent-child relationship, we need to explore how parents are
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12 140 interacting with coaches and sport organizations during this crisis. More specifically, how can
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15 141 parents, coaches, and sport organizations effectively engage with each other? It is also important
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17 142 to consider the multi-faceted nature of parents' engagement in youth sport. In many countries
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19 143 around the world, parents represent not only the consumers of youth sport, but also their
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21 144 volunteer workforce (e.g., coaching, officiating, fundraising; Trussell, 2016). In a time of both
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24 145 health and economic uncertainty, we may need to reflect on the demands being placed on parent
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26 146 volunteers and to explore ways to support these integral members of our sport systems both now
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29 147 and in the future.

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31 148 Another family relationship to consider in the context of COVID-19 is youth's
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33 149 relationships with their siblings. While often separated into different activity settings based on
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35 150 sport type, gender, or age, physical distancing and self-isolation policies may lead to a
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38 151 resurgence in engagement in sport activities with one's siblings. This is particularly important
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40 152 since our understanding of sibling relationships in sport remains relatively limited (Blazo &
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42 153 Smith, 2018; Fraser-Thomas et al., 2013). Nonetheless, the opportunity to engage in sport
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45 154 activities (both adult- and youth-led) with younger and older siblings may offer unique benefits
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47 155 for youth. Previous research highlights that mixed-age play can positively influence the sport
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49 156 experiences for both older and younger participants (Downey, Condrón, & Yucel, 2015). It
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51 157 would thus be worthwhile to examine how COVID-19 has influenced opportunities for engaging
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3 158 in sport with siblings, as well to investigate potential developmental effects of engaging in these
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8 160 Beyond the family unit, the COVID-19 crisis has also created unique challenges for
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10 161 youth sport coaches. Coaches represent an integral element of the youth sport environment (Côté
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12 162 et al., 2014). With the sudden halt to organized sport activities, coaches were asked to quickly
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14 163 adapt to ever changing circumstances. From delivering sessions and hosting team socials online
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16 164 to dropping off equipment to young athletes, the roles and responsibilities of coaches have
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18 165 dramatically changed due to the pandemic. As such, we need to examine how these experiences
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20 166 are influencing coaches' relationships with their athletes, whilst also exploring how coaches are
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22 167 experiencing these changes themselves. This leads to several interesting questions for researchers
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24 168 and practitioners, including: (a) how can we foster effective coach-athlete and coach-team
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26 169 relationships given the contextual constraints; (b) what are the implications of COVID-19 on
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28 170 coaches' physical and psychological well-being (i.e., how can coaches balance work, coaching,
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30 171 and family demands during a very unpredictable and stressful time; how might job insecurity
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32 172 influence coaches' well-being); and, (c) what resources (e.g., education, funding) are needed to
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34 173 support coaches during time?

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40 174 Lastly, youth athletes' peer interactions have been significantly influenced by the
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42 175 pandemic. Often reported as a driving force motivating athletes to participate in sport, these
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44 176 central social interactions have been upended. Studies consistently demonstrate that peers greatly
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46 177 influence the quality of youth's sport experiences, through increasing perceptions of fun, social
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48 178 identity, and motivation (Smith, 2003; Vierimaa & Côté, 2016; Visek et al., 2018; Weiss &
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50 179 Petlichkoff, 1989). We thus need to investigate how high-quality peer interactions can be
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52 180 facilitated given the current constraints. For example, how can we enable young athletes to
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3 181 socially connect with their peers while physically distancing and self-isolating? In addition to
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5 182 examining ways to connect with peers, it may be beneficial to explore how changes in peer
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8 183 interactions may influence youth's desire to engage in sport activities and their developmental
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10 184 outcomes in both the acute and recovery phases of this pandemic.

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12 185 Taken together, it is evident that COVID-19 may influence the quality of our social
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14 186 interactions. When examining common frustrations expressed in relation to the restrictive
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17 187 measures, as well as with regards to proposed rule changes to sport (e.g., no handshakes or
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19 188 celebrations involving physical contact) it is interesting to note how many are related to our
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21 189 interactions with others. While the activities of sport hold value on their own, our passion and
22
23 190 love of sport is often derived from engaging in those activities with others. Our teammates,
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25 191 opponents, coaches, and communities represent an integral component of the sport experience.
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27 192 As such, it is crucial to examine how we can support these social dynamics in the time of
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29 193 COVID-19.

30 31 32 33 194 **Appropriate Settings and Organizational Structures**

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35 195 In addition to influencing the activities and social dynamics of youth sport, COVID-19
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37 196 will also affect the settings in which these activities and social dynamics occur. Throughout the
38
39 197 previous sections, it is evident that several shifts in the settings of youth sport have occurred,
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41 198 including moving away from community- to home-based activities. From micro-level settings
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43 199 where youth play (e.g., backyard or driveway) to the more macro-level settings (e.g., city or
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45 200 country) where youth live, the setting in which we participate in sport can have an important
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47 201 influence on development. Previous studies demonstrate how setting features, such as the size of
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49 202 the city in which an individual has early exposure to sport, can influence athletes' performance,
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51 203 participation, and personal development; commonly referred to as birthplace effects (Côté,
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3 204 MacDonald, Baker, & Abernethy, 2006; Fraser-Thomas, Côté, & MacDonald, 2010; Turnnidge,
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5 205 Hancock, & Côté, 2012). Drawing upon these findings, it will be vital to explore how COVID-19
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7 206 will affect the settings in which sport activities and social dynamics occur.
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10 207 With regards to the youth's immediate settings during COVID-19, children and youth
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12 208 have been engaging in sport activities in a wide variety of settings near their homes, such as
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14 209 backyards, bedrooms, hallways, and driveways. Thus, it is possible that engagement in sport
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16 210 activities (both practice and play-based) may have increased during the lockdown period. It is
17
18 211 important to recognize that access to sport settings within the COVID-19 era may also differ
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20 212 depending on socioeconomic circumstances. In a lockdown context, young athletes whose living
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22 213 arrangements offer greater space, both inside (e.g., bedroom or playroom) and outside (e.g.,
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24 214 backyard or garage), may be better able to continue participating in a wide range of sport
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26 215 activities. Conversely, young athletes in higher density physical environments (e.g., high-rise
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28 216 buildings) may have less indoor and outdoor space to participate in sport. These opportunities
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30 217 may be further limited by restrictive policies limiting access to public recreational areas (e.g.,
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32 218 parks, nature trails, sport fields). As such, this crisis may exacerbate inequities between youth
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34 219 due to their geographic location and socioeconomic factors.
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40 220 Another element of the setting to consider is the organizational structures that dictate
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42 221 youth's engagement in sport activities. Several organizations at the local, regional, and national
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44 222 levels are currently developing return to play protocols. As these develop, we may also see new
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46 223 policies regarding the rules of the game (e.g., increased physical distance between players,
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48 224 limited social greetings, use of protective personal equipment; Mohr et al., 2020) that will
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50 225 influence youth's experiences in sport. Given the limited evidence available to date on how to
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52 226 effectively develop and implement these policies, it is crucial for researchers and practitioners to
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3 227 share best-practices and to put evaluation plans in place to assess the effectiveness of these
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5 228 policies, as well as the implications of these policies (e.g., the affordability, practicality, side-
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7 229 effects, equity of policies and interventions).
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10 230 An important organizational structure to consider will be the costs associated with youth
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12 231 sport. The continued access to structured activities may come at a financial cost; and as a result
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14 232 of these uncertain times, monetary outlay for sport may not be a financial priority. Therefore,
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16 233 young athletes may be withdrawing from sports programmes, or moving even further away from
17
18 234 being able to access them, due to families not being able to afford the fees. In North America
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20 235 (i.e., US and Canada) for example, it is common for youth sport program costs to be borne by
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22 236 participants' families in a pay-to-play model. This increasingly privatized and professionalized
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24 237 structure means that family income was already a primary driver of access to youth sport
25
26 238 (Solomon, 2020b). With the economic costs of the COVID-19 pandemic likely to be substantial,
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28 239 there is significant risk of further exacerbating existing inequalities in youth sport participation
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30 240 (Morning Consult, 2020). In the United Kingdom however, the government, registered charities,
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32 241 and private organisations often fund youth sport clubs (e.g., Sport England, 2020) and academies
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34 242 (e.g., Premier League, 2020). Therefore, it may be argued that those from the United Kingdom
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36 243 may have greater continued access to structured activities due to the potential reduced cost for
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38 244 these services compared to their North American counterparts. As a result, this suggests that
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40 245 national youth sport culture may be an important consideration whilst exploring who is at risk of
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42 246 youth sport dropout.
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49 247 At a broader level, the incidence and severity of the COVID-19 pandemic has varied
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51 248 considerably around the world, as well as the governmental response to the crisis. Consequently,
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53 249 regional and national government policies may significantly shape the influence of COVID-19
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3 250 on the youth sport context. For instance, whereas sport has been halted in several countries (e.g.,
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5 251 Canada, US, France, UK), sport activities have continued in others (e.g., Sweden; The
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7 252 Telegraph, 2020). Since COVID-19 related policies can differ from country to country, cultural
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9 253 implications may also be observed from a global perspective. When exploring the developmental
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11 254 implications of this pandemic, researchers and practitioners should consider the geographical,
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13 255 sociocultural, and political contexts in which youth sport occurs.
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17 256 Lastly, an overarching consideration regarding appropriate settings in the time of
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19 257 COVID-19 is the safety of the sport environment. According to the National Research Council
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21 258 and Institute of Medicine (NRCIM, 2002), one of the key contextual features that can facilitate
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23 259 positive development in youth is the physical and psychological safety of the environment.
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25 260 While discussions of safety in sport have typically focused on important topics, such as
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27 261 equipment and facilities, injuries, mental health, and abuse, novel safety risks have emerged in
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29 262 light of the crisis. Indeed, everyday interactions (e.g., high fives, handshakes, body contact)
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31 263 which represent many of the enjoyable social and competitive aspects of the sport experience,
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33 264 now represent potential risks to health and safety. The importance of these threats to safety are
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35 265 underscored at multiple levels of sport, as stakeholders of professional (e.g., BBC, 2020) and
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37 266 youth sport (e.g., CBC Sports, 2020) have expressed concerns about how to engage in sport.
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39 267 There are also potential risks to psychological safety during this crisis. Mental health may be
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41 268 affected by both participating (e.g., fear, stress) and abstaining (e.g., social isolation) from sport
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43 269 activities. These risks extend beyond the youth participants themselves, as there are also safety
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45 270 concerns for coaches, parents, officials, and sport organizations. Likewise, these considerations
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47 271 are equally important for physical education and school sport environments, whereby teachers,
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49 272 coaches, and youth will be exposed to the same risks and challenges when returning to school
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3 273 (e.g., Association for Physical Education, 2020). It will thus be important to examine these
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5 274 effects and to develop appropriate interventions for supporting all stakeholders' physical and
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8 275 psychological health throughout the crisis.

276 **Immediate Sport Experiences**

277 In both popular and social media, there are a myriad of examples of how youth sport
278 stakeholders are continuing to find enjoyment through sport during these trying times. Whether
279 through creative backyard obstacle courses, toilet paper challenges, or virtual team meetings,
280 athletes, coaches, and parents are using sport as an avenue for fun. Previous studies suggest that
281 young athletes emphasize how trying hard, positive team dynamics, and positive coaching are
282 key determinants of fun in sport (Visek et al., 2018). As such, we need to reflect on ways to
283 provide youth with opportunities for sport activities in which they can experience appropriate
284 challenges and positive interactions with coaches and peers within the current constraints. For
285 example, how can we offer competitive challenges for youth to show off their skills and
286 creativity to their sport communities? Given that two of the key determinants of fun relate to
287 quality social dynamics, it is also important to find ways to facilitate positive relationships while
288 we may be separated.

289 **Short-term: The 4Cs**

290 With regards to the influence of COVID-19 on short term outcomes, it is important for
291 researchers and practitioners to take a holistic perspective. Within the PAF, short-term outcomes
292 are conceptualized as competence, confidence, connection, and character (the 4Cs; Côté et al.,
293 2010; 2014). While it may be tempting to focus on the influence of physical distancing policies
294 on competence related outcomes, we need to examine the potential effects of these changes on
295 athletes' broader developments. For example, how will youth's physical development be affected

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3 296 due to the sedentary nature of the COVID-19 restrictive measures? Also, how might engagement
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5 297 in youth-led activities in settings where they dictate the boundaries of the activity influence
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7 298 perceptions of confidence? It may also be worthwhile to examine the varying effects of this
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9 299 pandemic on athletes' connections with others. Lastly, this pandemic may influence the
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11 300 development of young athletes' character. From caring for siblings, connecting with
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13 301 grandparents, or displaying acts of kindness in their community, COVID-19 has shone a light on
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15 302 humanity's capacity to come together during times of need. As such, researchers and
16
17 303 practitioners should strive to capture and celebrate these stories and experiences. COVID-19 may
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19 304 have important implications for the short-term outcomes that youth derive from their sport
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21 305 participation. Given the unprecedented nature of this crisis, we will need to consider these effects
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23 306 both now and in the future. In doing so, we can develop better programs and policies to support
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25 307 youth sport athletes' development.

Long-term: The 3Ps

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27 309 One of the challenges of this crisis is the sheer volume of unknown long-term
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29 310 consequences. Within the PAF, long-term outcomes are conceptualized as performance,
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31 311 participation, and personal development (the 3Ps; Côté et al., 2010; 2014). Although there is a
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33 312 tendency to focus on long-term development in sport, this crisis may require sport stakeholders
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35 313 to reconsider this approach. If we place our focus on the dynamic elements and create: (a)
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37 314 engaging activities, (b) quality social dynamics, and (c) appropriate settings, we can create the
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39 315 real-time sport experiences that will keep youth interested and engaged in sport. It is this real-
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41 316 time engagement that can eventually lead to both those short- and long-term outcomes.
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43 317 Nonetheless, it will be important for researchers and practitioners to keep track and reflect on the
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45 318 decisions they make during this time that could influence short- and long-term developmental
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3 319 outcomes. Moving forward, athlete development studies will need to account for this crisis in
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5 320 examining their results. It will not be just the existing participants who will be affected. Future
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7 321 generations of athletes, coaches, and parents are being shaped by this important event. Capturing
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9 322 these stories and experiences will be instrumental in designing programs and policies for youth
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11 323 sport for years to come.

324 **Conclusion**

325 Colleagues working in athlete development and are urged to examine the impact of
326 COVID-19 on youth sport (see Table 1). Through utilising the PAF, it offers researchers and
327 practitioners a useful framework to illustrate the potential mechanisms and outcomes of youth
328 sport during restrictive measures. For instance, through evaluating the engagement in activities,
329 social dynamics, and appropriate settings, it will allow us to better understand the potential
330 implications on immediate, short- (4Cs), and long-term (3Ps) development outcomes. Slowing
331 down the spread of COVID-19 to manageable levels may result in prolonged self-isolation and
332 physical distancing measures. As such, it is unknown when or how youth sport activities will
333 resume. Regardless, the opportunity to evaluate existing youth sport structures, alongside
334 carrying forward the impactful strategies that have been forcefully developed during lockdown,
335 may facilitate a greater emphasis on positive youth development in the future.

336 ***Table 1 near here***

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Table 1. Contextual, methodological, and practical considerations based on immediate, short-, and long-term outcomes in youth sport.

Considerations	Potential outcomes		
	Immediate	Short-term	Long-term
Contextual	<ul style="list-style-type: none"> How can peers, parents, coaches, and sport organizations effectively engage with each other, both during the crisis and during return to play? What resources (e.g., education, funding) are needed to support coaches during these times? What are the effects of COVID-19 on the physical and psychological well-being of youth sport stakeholders? Has this crisis exacerbated inequities between youth due to their geographic location and socioeconomic factors? Are young athletes withdrawing from sports programmes, or moving even further away from being able to access them, due to families not being able to afford the fees? 	<ul style="list-style-type: none"> Has this crisis influenced the quality of parent-child relationships? Has COVID-19 influenced greater opportunities to engage in sport with siblings? How are the virtual experiences influencing coaches' relationships with their athletes? How can we foster effective coach-athlete and coach-team relationships given the contextual constraints? How have changes in peer interactions influenced youth's desire to engage in sport activities and their development? 	<ul style="list-style-type: none"> What are the long-term developmental effects of engaging in activities with parents and siblings during COVID-19 restrictive measures? How will social dynamics change because of COVID-19? How will COVID-19 affect the settings in which sport activities and social dynamics occur in the future?
Methodological	<ul style="list-style-type: none"> How are youth sport stakeholders experiencing the effects of COVID-19 in real-time? How do the geographical, sociocultural, and political contexts in which youth sport occurs affect immediate sport experiences? 	<ul style="list-style-type: none"> What are appropriate interventions for supporting all stakeholders' physical and psychological health throughout the prevention, treatment, and recovery processes of this health crisis? How do these interventions influence short-term development outcomes? How will the virtual methods of delivery continue or evolve once sport activities resume? 	<ul style="list-style-type: none"> What are the long-term effects of COVID-19 on performance, participation, and personal development (need for longitudinal, prospective studies)? How can we capture and share the experiences of sport stakeholders to inform future generations?
Practical	<ul style="list-style-type: none"> What are the risks to physical and psychological safety of the environment during return to play? How are youth engaging in sport activities during this time and what are the potential implications of these activities on developmental outcomes? Will this crisis offer an opportunity to shift our focus from practice-based, adult-led activities to play-based, youth-led activities to focus on the quality of youth's immediate sport experiences? 	<ul style="list-style-type: none"> How might engagement in youth-led activities in settings where they dictate the boundaries of the activity influence perceptions of competence and confidence? What are the varying effects of this pandemic on athletes' connections with others? How may the pandemic influence youth's character development? 	<ul style="list-style-type: none"> How will the changing landscape of the proximal processes and the environments in which young athletes are restricted to shape the future pathways of youth sport development? What decisions are sport stakeholders making during this time that could influence long-term developmental outcomes?

Table 1. Contextual, methodological, and practical considerations based on immediate, short-, and long-term outcomes in youth sport.