

# Reenvisioning Postpandemic Youth Sport to Meet Young People's Mental, Emotional, and Social Needs

Meredith A. Whitley,<sup>1</sup> Alan L. Smith,<sup>2</sup> Travis E. Dorsch,<sup>3</sup> Matthew T. Bowers,<sup>4</sup> Erin E. Centeo,<sup>5</sup> and 2020–2021 President's Council on Sports, Fitness & Nutrition Science Board

## ABSTRACT

Before 2020, young people were experiencing significant psychosocial challenges, with the COVID-19 pandemic and related events (e.g., lockdowns, social isolation, and economic disruption) amplifying concerns about their well-being. Youth sport is a context for promoting mental, emotional, and social health, and yet it is not achieving its full potential in the United States. The purpose of this expert commentary, composed by the 2020–2021 President's Council on Sports, Fitness & Nutrition Science Board, is to present a vision of youth sport in the United States that prioritizes young people's mental, emotional, and social health. The extraordinary events of 2020 and 2021 provide an opportunity to reenvision our approach to youth sport as pandemic-related restrictions are lifted. Ten recommendations from this vision are presented in this article, along with 10 innovative, actionable takeaways; each of these offer meaningful benefits to young people's mental, emotional, and social health.

Before the COVID-19 pandemic, young people across the United States were experiencing significant mental, emotional, and social health challenges. These concerns have been amplified by the pandemic and the lockdowns, social isolation, and economic disruption it engendered. The imprint of these times will be long lasting, and deliberate efforts are needed to address the wide-ranging effect on the well-being of young people. The purpose of this commentary is to reenvision youth sport as it relates to the mental, emotional, and social health of children and adolescents across the United States, using the National Youth Sports Strategy (NYSS) as an organizing

framework (1). Although physical health and other issues are also important, the psychosocial demands of the pandemic are particularly acute and warrant urgent consideration and prioritization. Therefore, 10 recommendations coupled with 10 actionable takeaways are outlined for youth sport as it relates to young people's mental, emotional, and social health.

## MENTAL, EMOTIONAL, AND SOCIAL HEALTH CHALLENGES OF YOUTH ACROSS THE UNITED STATES

Before the pandemic, young people across the United States were reporting high rates of trauma (e.g., abuse, neglect, and violence), along with other mental, emotional, and social health challenges (i.e., anxiety and depression) (2,3). The psychosocial challenges experienced by young people were amplified and multiplied during the pandemic, with increasing concern about a secondary mental, emotional, and social health pandemic (4, 5). This began with the degree, range, and persistence of stress exposure. For example, the fear of contracting COVID-19 was an ongoing stressor in young people's lives, with this fear disproportionately felt among minority, marginalized, and other vulnerable populations given the higher rates of infection, hospitalization, and mortality (6). In addition, as unemployment and underemployment rates grew, more young people (particularly those of color and/or poverty) experienced economic insecurity within their family units that led to housing and food insecurity (4,7). Another stressor was the disruption to young people's learning environments, with many youth experiencing technology barriers, pedagogical issues, attention deficits, and unpredictable and inconsistent schedules (7–9). These challenges were even more disruptive for those with special needs (e.g., autism, attention deficit hyperactivity disorder, and learning disability). For especially vulnerable youth, increased time at home disproportionately resulted in increased exposure to stress, abuse, and trauma, with limited access to safe spaces such as schools and community centers during the pandemic (4,5). These realities,

<sup>1</sup>Department of Health and Sport Sciences, Adelphi University, Garden City, NY; <sup>2</sup>Department of Kinesiology, Michigan State University, East Lansing, MI; <sup>3</sup>Department of Human Development and Family Studies, Utah State University, Logan, UT; <sup>4</sup>Department of Kinesiology and Health Education, University of Texas at Austin, Austin, TX and <sup>5</sup>Department of Kinesiology and Rehabilitation Science, University of Hawai'i at Mānoa, Honolulu, HI

Address for correspondence: Meredith A. Whitley, Ph.D., Department of Health and Sport Sciences, College of Education and Health Sciences, Adelphi University, Woodruff Hall, One South Avenue, Garden City, NY 11530 (E-mail: mwhitley@adelphi.edu).

2379-2868/0000/e000177

Translational Journal of the ACSM

Copyright © 2021 by the American College of Sports Medicine

among others, led to escalating rates of stress, anxiety, substance use, depression, and suicide (4,10,11).

These mental, emotional, and social health challenges were partially caused and compounded by the containment measures of the pandemic. For example, lockdowns, school closures, physical distancing, and social isolation limited young people's access to traditional support systems (i.e., peers, extended family, and religious groups) and services (i.e., school-based mental health resources) (4,8,9,11). Many of the caring adults who identify early signs of risk and take action (i.e., teachers, nurses, counselors, social workers, and pediatricians) had reduced contact, if any, with young people (4,8). In addition, young people reported decreased physical activity and increased sedentary behavior, particularly during the most stringent lockdowns and among those of color and/or poverty (9,12–14). This is concerning given the health outcomes associated with physical activity and sedentary behavior (15). Altogether, the substantial disruptions of the pandemic introduced challenges to the developmental context of youth sport, which plays a central role in the lives of young people, their families, and their communities.

### **POTENTIAL FOR YOUTH SPORT TO ENGENDER MENTAL, EMOTIONAL, AND SOCIAL HEALTH**

Youth sport participation is considered a rite of passage in the United States, with the deeply ingrained belief that sport is a meaningful developmental context. However, young people's sport experiences are not uniform, and sport is known to produce a range of positive and negative outcomes (16–19). Potential benefits of youth sport are well established, falling into five categories: (a) mental, emotional, and social health; (b) physical health; (c) educational and career success; (d) lifelong physical activity participation; and (e) economic and community impact (20,21). The mental, emotional, and social benefits of well-administered sport are always important, but they take on particular significance at this time. These benefits include lower rates of stress, anxiety, and depression; reduced suicide risk; and greater feelings of empowerment, confidence, self-esteem, and personal responsibility (22–24). Evidence-based practices that maximize these benefits include (a) cultivating a safe, caring, and stable climate with adult and peer relationships founded on respect and trust and (b) offering ongoing training for coaches, parents, mentors, and other adults supporting youth. Moreover, when young athletes are considered the central authority within the youth sport system (e.g., afforded leadership and voice) and there is support for their autonomy and competence within and beyond this system, they are most likely to thrive (25).

Preceding the pandemic, there were efforts in the United States to galvanize a more organized and centralized youth sport system that would optimize its developmental benefits. This included the renaming the President's Council on Sports, Fitness & Nutrition to emphasize sports as first billing, along with the release of the NYSS by the U.S. Department of Health and Human Services (1).

*The NYSS provides a variety of opportunities and action items to unite the nation's youth sports culture around a shared vision: that one day all youth will have the opportunity, motivation, and access to play sports, regardless of their race, ethnicity, sex, ability, or ZIP code.*

To promote nationwide awareness, the document was broadly disseminated and promoted through a series of virtual workshops. In addition, a partnership initiative was undertaken to unite and support organizations working in alignment with the NYSS vision.

Building on this, the President's Council on Sports, Fitness & Nutrition Science Board (a subcommittee of the Council) was reestablished and charged with developing a series of recommendations aimed at equipping the Council with additional support for promoting key features of the NYSS, as well as a fully referenced fact sheet (21,26). However, the COVID-19 pandemic required dramatic shifts in the ways organizations and communities designed and delivered youth sport. This temporarily hampered the agenda to promote a consistent and developmental approach to youth sport. Yet notable organic and deliberate innovations emerged in response to the challenges posed during the COVID-19 pandemic. Some of these are discussed next.

### **INNOVATIONS IN YOUTH SPORT DURING THE PANDEMIC TO ADDRESS MENTAL, EMOTIONAL, AND SOCIAL HEALTH**

Some youth sport programs offered a modified experience at different points during the pandemic, including a number of innovative approaches to address the mental, emotional, and social health challenges young people were facing (27,28). During the most stringent lockdowns, sport for some youth transformed into live and recorded virtual workouts, at-home fitness challenges, and activities. Efforts were made to enable physical distancing and some indoor youth sport programming was moved to outdoor environments. Youth sport stakeholders created opportunities for social connection through chat, telephone, and video sessions. Many of these sessions were discussion based, at times topically focused and others intentionally unstructured to facilitate social connections. Other sessions were designed to teach valuable life skills (e.g., coping strategies and goal setting). Additional adaptations included helping youth address practical concerns (e.g., Internet connection or computer issues for school, homework questions, and food insecurity), learn how to prevent the spread of the virus, and navigate challenging realities such as being stuck in an abusive or neglectful environment.

These innovations required particular attention to the coaches, mentors, and other adults supporting young people. Although many youth sport programs were forced to furlough or lay off staff because of economic constraints, others were able to prioritize staff retention and support. There was a particular focus on training staff to work in a virtual environment and help youth address the challenges imposed by a global pandemic, social isolation, virtual learning, and economic uncertainty (27). Although many groups facilitated their own training and educational efforts, several agencies provided this support to youth sport programs and individual stakeholders (e.g., Aspen Institute Project Play, Laureus Sport for Good Foundation USA, and Up2Us Sports). For example, the Office of Disease Prevention and Health Promotion within the U.S. Department of Health and Human Services held six virtual workshops throughout the summer for 106 youth sport stakeholders to discuss the reintroduction of sport in the wake of the pandemic and to identify specific steps for realizing the NYSS vision at local and regional levels. Importantly, these

national, regional, and local efforts put young people's interests at the center of the adaptations they proposed.

The challenges of the pandemic also pushed youth sport to adapt through advocacy, which tends to be disjointed and inconsistent because of the decentralized approach to youth sport in the United States (29). Community and national sport organizations and stakeholders joined forces to advocate for youth sport. They sought COVID-19 relief through government loans and grants and identified the steps that should be taken to preserve the viability of youth sport during and after the pandemic. An example of more localized coordinated advocacy was the "Fields 4 NYC Youth" coalition in New York City (30), where over 120 organizations serving more than 60,000 youth joined together to successfully advocate for access to outdoor spaces to serve youth during the pandemic.

### **REENVISIONING POSTPANDEMIC YOUTH SPORT TO MEET YOUNG PEOPLE'S MENTAL, EMOTIONAL, AND SOCIAL NEEDS**

Despite such notable successes, there is a drive to return to "normal" within communities and youth sport organizations, with important innovations possibly left behind as pandemic restrictions are lifted. This would be a mistake, as the youth sport system that existed in 2019 failed to meet the mental, emotional, and social needs of many young people. In light of the stress, grief, and trauma related to the pandemic, along with specific concerns about young athletes' health and well-being (12), this return to youth sport is a unique and compelling opportunity to reenvision how the nation's communities, schools, and organizations design and deliver youth sport. This vision is presented below, with a focus on 10 recommendations with the greatest potential for wide-ranging benefits to young people's mental, emotional, and social health. Within each recommendation, we identify one innovative, actionable takeaway that exemplifies our vision.

These early-phase recommendations are informed by systems thinking to meaningfully improve the delivery of youth sport (31) yet are not dependent on specific entities, policies, funding, or support. The recommendations align with two themes. First, youth sport must be locally driven, culturally aware, and contextually relevant, yet cognizant of the national framework offered by the NYSS (1) and other evidence-based resources such as the *Sport for All Playbook* (32). These resources, among other academic and industry research and presentations, guided our vision. Second, youth must be the central focus, beneficiary, and authority within the youth sport system; this is essential for meeting their mental, emotional, and social needs. These themes permeate the 10 specific recommendations that are outlined below, with additional implementation strategies identified in the NYSS (1) and the President's Council on Sports, Fitness & Nutrition Science Board Report (26).

1. **Increase access.** Long-standing disparities in youth sport participation (e.g., females, racial and ethnic minorities, youth living in rural areas, youth with nonconforming gender identities, and youth with disabilities) widened during the pandemic, with these participation disparities compounded by broader social and economic inequities (6,33). Young people cannot benefit from sport if they

are not participating. Despite widespread support for universal access (34), the youth sport system is actually trending in the opposite direction: many adaptations have resulted in a more exclusionary and professional approach, with the needs of the developing child and society secondary to athletic skill and performance-related outcomes (29,35). One explanation for this trend is the coordination, collaboration, and support required for systemic change, which have been roadblocks to universal access to youth sport. Here is one specific, actionable takeaway that can be implemented by local stakeholders:

*Develop shared use agreements for local sport facilities and recreation spaces, such as allowing the general public to use school facilities and grounds during non-school times, and ensuring schools have access to local play spaces for recess and school-based programming (e.g., interscholastic, and intramural).*

2. **Train coaches on trauma-informed practices.** There are only 1.2 million mental health professionals (i.e., psychologists, counselors, and social workers) serving adults as well as young people in the United States (36) and over 6.5 million coaches (32). Thus, coaches can meaningfully expand our reach in efforts to promote the psychological well-being of young people. To realize this potential, coaches must be appropriately trained and receive ongoing professional development, perhaps in the form of mandatory continuing education. In the postpandemic era, perhaps the most pressing coach training need as it relates to the mental, emotional, and social health of young people is in the use of trauma-informed practices. These help coaches understand the ubiquity of trauma (especially in light of the pandemic), recognize how trauma may manifest in young people's lives, and respond to the effects of trauma in ways that buffer its effects, build resilience, and promote healing (37). For example, coaches learn to cultivate safe environments where youth feel a sense of belonging and connection while promoting growth and resilience (38,39). One specific takeaway that can support this type of training is as follows:

*Create partnerships among local programs and organizations like Positive Coaching Alliance, Up2Us Sports, We Coach, and Doc Wayne Youth Services, with expertise on sport-based trauma-informed training. Engage local stakeholders (e.g., coaches, parents, teachers, and community leaders) to ensure the training design and delivery is culturally aware and contextually relevant.*

3. **Check for signs and symptoms of need.** Ongoing monitoring and screening of young people's psychosocial well-being was disrupted during the pandemic, with common checkpoints missed as doctor's appointments were delayed, classes became virtual, and extracurricular activities were canceled. This highlights the need for all adults in young people's lives to learn how to check for signs and symptoms of need, including coaches, mentors, and others involved in youth sport. This begins with basic needs (e.g., food, shelter, and clothing) and extends to other mental, emotional, and social health needs (e.g., safe home environment and consistent school attendance). A tool that may prove useful is as follows:

*Provide a simple checklist of common signs and symptoms of mental, emotional, and social health needs, with clear steps for making local referrals when warranted.*

4. **Get active.** Many young people were less active during the pandemic, given the various restrictions and closures combined with increased virtual learning and other screen time activities (9,12,14,40). This is concerning because physical activity offers physical health benefits, encourages an adaptive response to stress, and lowers anxiety and depression (41,42). Although physical activity may seem integral to youth sport, research indicates there are times when sport skill development, life skill development, or even behavior management take priority (24,43). We need to help young people meet the daily physical activity guidelines (i.e., at least 60 min a day of moderate to vigorous physical activity and 3 days of muscle- and bone-strengthening activity) to maximize the benefits of participation (15,44). One specific takeaway as it relates to young people's mental, emotional, and physical health is as follows:

*Use creative and evidence-based strategies (e.g., minimize lines, avoid lectures, encourage free play, create stations, provide equipment for each participant, practice in small sided games, and empower young people to lead activities) to increase activity levels in youth sport.*

5. **Have fun.** Fun is a primary motive for sport participation (45), but an environment filled with fun and laughter also decreases stress hormones; increases health-enhancing hormones (e.g., endorphins); increases relaxation; elevates mood, self-esteem, and hope; and reduces feelings of stress, anxiety, and tension (46). One specific recommendation to enhance the amount of fun and laughter within youth sport is to resist the prepandemic trend toward offering more structured sport settings;

instead, play should be built in as an integral feature of organized sport settings. In addition, play should be prioritized as an adult-free, youth-led recreational component outside organized settings. Informal play remains an underutilized context that has the dual benefit of helping to build a healthy, positive relationship with sports for youth while augmenting their development as athletes (47). One actionable takeaway is as follows:

*Carve out time for unstructured play, with coaches, mentors, and other adults joining youth to have fun and laugh together (e.g., scavenger hunt as a warm-up instead of running laps).*

6. **Empower young people.** Sharing power and control are two evidence-based strategies for cultivating resilience in response to challenging or threatening situations like the pandemic (48,49). Moreover, sharing power and control in youth sport settings supports a sense of autonomy (i.e., the ability to make decisions for oneself), which then contributes to positive identity development, self-advocacy, and agency (50,51). With many of these attributes stripped away from young people through pandemic lockdowns, shutdowns, and beyond (52), deliberate efforts to empower young people in youth sport could be transformative. A specific takeaway is as follows:

*Create youth advisory boards where local youth sport participants have meaningful, authentic ways to influence (if not determine) the design of their sport experiences and decisions made within their youth sport programs.*

7. **Emphasize social connections.** Social isolation resulting from pandemic-related lockdowns, school closures, virtual learning, and limited social contact have negatively affected young people's mental, emotional, and social health (9,11). We need to help young people rebuild social connections, which can help them feel a sense of belonging and cohesion. Relationships, belonging, and cohesion are determinants of resilience (37,48) and are foundational elements of effective youth sport settings (53–55). One specific takeaway for supporting the development of social connections is as follows:

*Organize sport-based mentorship programs with diverse formats, including adult to youth, peer to peer, group, long distance, and cross generational.*

8. **Teach coping skills.** Young people do not have the advanced emotional development of adults and can struggle to process difficult circumstances.

Ineffective coping skills put young people at risk for depression, stress, and trauma (56). Therefore, building self-regulation capacity (i.e., positive coping skills) can be quite impactful because it is a fundamental protective factor that promotes resilience and well-being (49,56). There is a growing body of research on the potential for sport-based settings to build young people's self-regulation capacity, given the natural ups and downs of sport (e.g., competitive environment and performing in front of others) and the focus on skill building (38, 53,55). Actionable takeaways are as follows:

*Teach self-regulation skills (e.g., recognize emotions, use deep breaths, use relaxation techniques, reframe the situation, and ask for help), provide youth with opportunities to practice these skills within and beyond sport settings, and encourage reflection on their use of these skills.*

- Promote collaborative support of young people.** It is unrealistic to expect youth sport, or any singular entity, to meet all of the mental, emotional, and social needs of young people across the United States (57). Those working in sport settings must collaborate with others in youth-centered environments (e.g., schools, after-school programs, community centers, and churches) as well as with families in an effort to jointly support positive mental, emotional, and social health of young people. In addition, youth sport stakeholders should seek out opportunities to extend family engagement beyond spectating, with events such as family fun days/nights offering opportunities to cultivate more meaningful relationships and collaboration with families. One specific takeaway for adults involved in youth sport is as follows:

*Build relationships with adults in other youth-centered environments (e.g., teachers, after-school workers, and pastors) and with families to understand if and how young people are engaged across their environments and what opportunities exist to collaboratively support young people's development and well-being.*

- Cultivate healing spaces for all.** As has been the case for America's young people, adults have been profoundly affected by the events of 2020 and 2021. This includes their mental, emotional, and social health, with higher rates of stress, insomnia, substance use, anxiety-related behaviors, and depressive symptoms (9,58,59). These rates highlight the importance of focusing on all Americans' well-being, as the adults in young people's lives also have signs and symptoms of need (e.g., stress, anxiety, and grief) that result in collective emotional

and psychological wounds and damaged or broken social networks. Without an explicit focus on community healing, any gains made within sport settings as it relates to young people's mental, emotional, and social health will be limited. The ubiquitous nature and the cultural resonance of youth sport suggest that it could be a space for community healing, along with a chance to reduce social isolation, (re)connect families, (re)build social support networks, and foster neighborhood attachment. One takeaway that could be acted on immediately is to:

*Design sporting events to promote community healing, such as opportunities to (re)build connections with neighbors (e.g., having conversation opportunities/breaks) and to participate in fun activities that promote relaxation and laughter (e.g., during a natural pause in the sporting event, ask a local dance instructor, pastor, or comedian to lead a 5-min activity).*

## CONCLUSION

The pandemic will have cascading effects that will affect the mental, emotional, and social health of young people across the United States for years to come. We must embrace the full return of youth sport after the pandemic as an opportunity to reenvision this developmental setting to better meet young people's mental, emotional, and social needs. Activating the 10 recommendations identified in this article, along with the 10 actionable takeaways, would advance the NYSS (1), which aims to unite the nation's youth sport system around a shared vision "that one day all youth will have the opportunity, motivation, and access to play sports, regardless of their race, ethnicity, sex, ability, or ZIP code." Importantly, this would situate young people as the central concern, beneficiary, and authority within youth sport and the promotion of their mental, emotional, and social health as a core purpose of youth sport in the United States.

The remaining members of the 2020–2021 President's Council on Sports, Fitness & Nutrition Science Board are as follows:

Bradley J. Cardinal (Board Chair), Oregon State University; Nan A. S. Hayworth (Council Liaison), President's Council on Sports, Fitness & Nutrition; Cara B. Ebbeling, Boston Children's Hospital and Harvard Medical School; Cynthia LaBella, Ann & Robert H. Lurie Children's Hospital of Chicago and Northwestern University's Feinberg School of Medicine; Felipe Lobelo, Emory University; Kathryn Lucas, University of Louisville; Karin Allor Pfeiffer, Michigan State University; Matthew J. Robinson, University of Delaware; and John O. Spengler, Texas A&M University.

The authors are also grateful to Alison Vaux-Bjerke and Kristina Harder, the U.S. Department of Health and Human Services' Office of Disease Prevention and Health Promotion, and the President's Council on Sports, Fitness & Nutrition for helpful feedback and support during the development of the manuscript.

The authors thank the reviewers for their insightful comments and efforts on earlier drafts of this article.

The analysis and recommendations within this commentary do not constitute endorsement by the American College of Sports Medicine. There is no conflict of interest to disclose.

## REFERENCES

1. U.S. Department of Health and Human Services. *The National Youth Sports Strategy*. Washington, (DC); 2019.
2. Finkelhor D. Trends in Adverse Childhood Experiences (ACEs) in the United States. *Child Abuse Negl*. 2020;108:104641.
3. Merikangas KR, He JP, Burstein M, et al. Lifetime prevalence of mental disorders in U.S. adolescents: results from the national comorbidity survey replication-adolescent supplement (NCS-A). *J Am Acad Child Adolesc Psychiatry*. 2010;49(10):980–9.
4. Fegert JM, Vitiello B, Plener PL, Clemens V. Challenges and burden of the coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality. *Child Adolesc Psychiatry Ment Health [Internet]*. 2020;14(1):20. Available from: <https://capmh.biomedcentral.com/articles/10.1186/s13034-020-00329-3>.
5. Singh S, Roy D, Sinha K, Parveen S, Sharma G, Joshi G. Impact of COVID-19 and lockdown on mental health of children and adolescents: a narrative review with recommendations. *Psychiatry Res [Internet]*. 2020 Nov 1 [cited 2021 Jan 21];293:113429. Available from: [https://pubmed.ncbi.nlm.nih.gov/3444649/?report=abstract](https://pubmed.ncbi.nlm.nih.gov/3444649/).
6. Webb Hooper M, Nápoles AM, Pérez-Stable EJ. COVID-19 and racial/ethnic disparities. *JAMA [Internet]*. 2020 Jun 23;323(24):2466–7. Available from: <https://www.chicago.gov/city/en/sites/covid->
7. Ambrose AJH. Inequities during COVID-19. *Pediatrics [Internet]*. 2020 Aug 1 [cited 2021 Apr 20];146(2):e20201501. Available from: <https://pediatrics.aappublications.org/content/146/2/e20201501>.
8. Lee J. Mental health effects of school closures during COVID-19. *Lancet Child Adolesc Heal [Internet]*. 2020 Jun 1;4(6):421. Available from: [www.thelancet.com/child-adolescent](http://www.thelancet.com/child-adolescent).
9. Verlenden JV, Pampati S, Rasberry CN, et al. Association of children's mode of school instruction with child and parent experiences and well-being during the COVID-19 pandemic — COVID Experiences Survey, United States, October 8–November 13, 2020. *MMWR Morb Mortal Wkly Rep [Internet]*. 2021 Mar 19;70(11):369–76. Available from: [http://www.cdc.gov/mmwr/volumes/70/wr/mm7011a1.htm?s\\_cid=mm7011a1\\_w](http://www.cdc.gov/mmwr/volumes/70/wr/mm7011a1.htm?s_cid=mm7011a1_w).
10. Hill RM, Rufino K, Kurian S, Saxena J, Saxena K, Williams L. Suicide ideation and attempts in a pediatric emergency department before and during COVID-19. *Pediatrics [Internet]*. 2021 Mar 1 [cited 2021 Apr 20];147(3):2020029280. Available from: <https://doi.org/10.1542/peds.2020-029280>.
11. Jones EAK, Mitra AK, Bhuiyan AR. Impact of COVID-19 on mental health in adolescents: a systematic review. *Int J Environ Res Public Health [Internet]*. 2021 Mar 3 [cited 2021 Apr 20];18(5):2470. Available from: <https://www.mdpi.com/1660-4601/18/5/2470>.
12. McGuine TA, Biese KM, Petrovska L, et al. Mental health, physical activity, and quality of life of us adolescent athletes during COVID-19-related school closures and sport cancellations: a study of 13 000 athletes. *J Athl Train [Internet]*. 2021;56(1):11–9. Available from: <http://meridian.allenpress.com/jat/article-pdf/56/1/11/2733928/11062-6050-56-1-11.pdf>.
13. Pavlovic A, DeFina LF, Natale BL, et al. Keeping children healthy during and after COVID-19 pandemic: meeting youth physical activity needs. *BMC Public Health [Internet]*. 2021;21(1):485. Available from: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-021-10545-x>.
14. Stockwell S, Trott M, Tully M, et al. Changes in physical activity and sedentary behaviours from before to during the COVID-19 pandemic lockdown: a systematic review. *BMJ Open Sport Exerc Med [Internet]*. 2021 Feb 1 [cited 2021 Apr 20];7(1):960. Available from: <http://dx.doi.org/10.1136/bmjsem-2020-000960>.
15. U.S. Department of Health and Human Services. *Physical Activity Guidelines for Americans*. 2nd ed. Washington (DC); 2018.
16. Cardinal BJ, Yan Z, Cardinal MK. Negative experiences in physical education and sport: how much do they affect physical activity participation later in life? *J Phys Educ Recreat Danc [Internet]*. 2013 Mar [cited 2021 Jan 15];84(3):49–53. Available from: <https://www.tandfonline.com/doi/abs/10.1080/07303084.2013.767736>.
17. Chalip L. A challenge to why sport matters: managing sport for society. In: Bowers M, Dixon M, editors. *Sport Management: An Exploration of the Field and Its Value [Internet]*. Champaign (IL): Sagamore Venture Publishing; 2015 [cited 2021 Jan 15], pp. 1–16. Available from: <https://www.sagamorepub.com/products/sport-management>.
18. Massey WV, Whitley MA. The role of sport for youth amidst trauma and chaos. *Qual Res Sport Exerc Heal*. 2016;8(5):487–504.
19. Weiss M, Smith AL, Stuntz C. Moral development in sport and physical activity. In: Horn T, editor. *Advances in Sport and Exercise Psychology [Internet]*. 3rd ed. Champaign (IL): Human Kinetics; 2008 [cited 2021 Jan 21], pp. 18–210. Available from: <https://psycnet.apa.org/record/2008-01583-009>.
20. Council of Economic Advisors. The Council of Economic Advisers The Potential for Youth Sports to Improve Childhood Outcomes [Internet]. 2018 [cited 2020 Jul 10]. Available from: <https://www.whitehouse.gov/wp-content/uploads/2018/05/The-Potential-for-Youth-Sports-to-Improve-Childhood-Outcomes.pdf>.
21. Presidents Council on Sports Fitness & Nutrition. Benefits of Youth Sports. 2020 Sep 17 [cited 2021 Jan 21]; Available from: [https://health.gov/sites/default/files/2020-09/YSS\\_Report\\_OnePager\\_2020-08-31\\_web.pdf](https://health.gov/sites/default/files/2020-09/YSS_Report_OnePager_2020-08-31_web.pdf).
22. Logan K, Cuff S, , Council on Sports Medicine and FitnessLaBella CR, et al. Organized sports for children, preadolescents, and adolescents. *Pediatrics [Internet]*. 2019 Jun 1 [cited 2020 Jul 6];143(6). Available from: <https://doi.org/10.1542/peds.2019-0997>.
23. Eime RM, Young JA, Harvey JT, Charity MJ, Payne WR. A systematic review of the psychological and social benefits of participation in sport for children and adolescents: informing development of a conceptual model of health through sport. *Int J Behav Nutr Phys Act [Internet]*. 2013 Aug 15 [cited 2021 Jan 15];10(1):98. Available from: <http://ijbnpa.biomedcentral.com/articles/10.1186/1479-5868-10-98>.
24. Whitley MA, Massey WV, Camiré M, Boutet M, Borbee A. Sport-based youth development interventions in the United States: a systematic review. *BMC Public Health [Internet]*. 2019;19(1):89. Available from: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-6387-z>.
25. Ward S, Parker M. The voice of youth: atmosphere in positive youth development program. *Phys Educ Sport Pedagog*. 2013;18(5):534–48.
26. Presidents Council on Sports Fitness & Nutrition. PCSFN Science Board Report on Youth Sports [Internet]. 2020Sep [cited 2021 Jan 21]. Available from: [https://health.gov/sites/default/files/2020-09/YSS\\_ScienceBoardReport\\_2020.09.01\\_opt.pdf](https://health.gov/sites/default/files/2020-09/YSS_ScienceBoardReport_2020.09.01_opt.pdf).
27. Hunt P, Loat R, Whitley MA. Sports and development. *Invited Panel as Part of Sports Philanthropy World 2020*. 2020.
28. Office of Disease Prevention and Health Promotion. *Youth Sports Organizations Join Forces Virtually to Address the Challenges of COVID-19 — News & Events 1 health.gov [Internet]*. U.S. Department of Health and Human Services; 2021, [cited 2021 Apr 20]. Available from: <https://health.gov/news/202104/youth-sports-organizations-join-forces-virtually-address-challenges-covid-19>.
29. Bowers M, Ozyurtcu T. Reducing bias to shift demand: a model for reforming youth sports in America. *Sport Entertain Rev [Internet]*. 2018 [cited 2021 Jan 15];4:33–40. Available from: <https://fitpublishing.com/articles/reducing-bias-shift-demand-model-reforming-youth-sports-america>.
30. Fields 4 NYC Youth. Permit Decision REVERSED [Internet]. 2020 [cited 2021 Jan 15]. Available from: <https://www.fields4nycyouth.org/>.
31. Dorsch T, Smith AL, Blazo JA, et al. Toward an integrated understanding of the youth sport system. *Res Q Exerc Sport [Internet]*. 2020; [cited 2021 Jan 15]. Available from: <https://www.tandfonline.com/doi/abs/10.1080/02701367.2020.1810847>.
32. Aspen Institute Project Play. Sport for all, play for life: a playbook to get every kid in the game. *Internet*. 2015; [cited 2021 Jan 15]. Available from: <https://www.aspeninstitute.org/publications/sport-all-play-life-playbook-get-every-kid-game/>.
33. Dorsch TE, Blazo JA, Arthur-Banning SG, et al. National trends in youth sport during the COVID-19 pandemic: understanding American parents' perceptions and perspectives. *J Sport Behav*. 2021;(in press).
34. Hainline B. Early sport specialization: shifting societal norms. *J Athl Train [Internet]*. 2019 Oct 1;54(10):1011–2. Available from: <https://www.cdc.gov/healthyschools/obesity/facts.htm>.
35. Gould D. The current youth sport landscape: identifying critical research issues. *Kinesiol Rev [Internet]*. 2019 Aug 1;8(3):150–61. Available from: <https://journals.humankinetics.com/view/journals/kri/8/3/article-p150.xml>.
36. Resources H, Administration S. The U.S. Health Workforce Chartbook — In Brief September 2018 [Internet]. 2018 [cited 2021 Jan 15]. Available from: <https://bhw.hrsa.gov/health-workforce->
37. Bethell CD, Solloway MR, Guinosso S, et al. Prioritizing possibilities for child and family health: an agenda to address adverse childhood experiences and foster the social and emotional roots of well-being in pediatrics. *Acad Pediatr [Internet]*. 2017 Sep 1 [cited 2021 Apr 20];17(7):S36–50. Available from: <http://www.childhealthdata.org/>.
38. Massey WV, Whitley MA. Adverse experiences of children and youth: can sport play a role in growth following psychologically traumatic events? — Adelphi University. In: Wadey R, Day M, Howells K, editors. *Growth following Adversity in Sport: A Mechanism to Positive Change [Internet]*. Routledge; 2020 [cited 2021 Apr 20], pp. 204–2015. Available from: [https://scholarlyworks.adelphi.edu/discovery/fulldisplay/alma991004241668706266/01ADELPHI\\_INST:ResearchRepository](https://scholarlyworks.adelphi.edu/discovery/fulldisplay/alma991004241668706266/01ADELPHI_INST:ResearchRepository).

39. Massey WV, Williams TL. Sporting activities for individuals who experienced trauma during their youth: a meta-study. *Qual Health Res [Internet]*. 2020 Jan 1 [cited 2021 Apr 20];30(1):73–87. Available from: <http://journals.sagepub.com/doi/10.1177/1049732319849563>.
40. Chanchlani N, Buchanan F, Gill PJ. Addressing the indirect effects of COVID-19 on the health of children and young people. *CMAJ [Internet]*. 2020 Aug 10 [cited 2021 Apr 20];192(32):E921–7. Available from: <https://www.cmaj.ca/content/192/32/E921>.
41. Dale LP, Vanderloo L, Moore S, Faulkner G. Physical activity and depression, anxiety, and self-esteem in children and youth: an umbrella systematic review. *Ment Health Phys Act*. 2019;16:66–79.
42. Streeter CC, Gerbarg PL, Saper RB, Ciraulo DA, Brown RP. Effects of yoga on the autonomic nervous system, gamma-aminobutyric-acid, and allostasis in epilepsy, depression, and post-traumatic stress disorder. *Med Hypotheses*. 2012;78(5):571–9.
43. Pfeiffer KA, Wierenga MJ. Promoting physical activity through youth sport. *Kinesiol Rev [Internet]*. 2019 Sep 26 [cited 2020 Aug 4];8(3):204–10. Available from: <https://journals.humankinetics.com/view/journals/krij/8/3/article-p204.xml>.
44. Loprinzi PD, Cardinal BJ, Cardinal MK, Corbin CB. Physical education and sport: does participation relate to physical activity patterns, observed fitness, and personal attitudes and beliefs. *Am J Heal Promot [Internet]*. 2018 Mar 1 [cited 2020 Jul 7];32(3):613–20. Available from: <https://pubmed.ncbi.nlm.nih.gov/28318306/>.
45. Visek AJ, Achrafi SM, Mannix HM, McDonnell K, Harris BS, DiPietro L. The fun integration theory: toward sustaining children and adolescents sport participation. *J Phys Act Heal [Internet]*. 2015 Mar 1 [cited 2020 Jul 6];12(3):424–33. Available from: <https://pubmed.ncbi.nlm.nih.gov/261634/>?report = abstract.
46. Yim J. Therapeutic Benefits of laughter in mental health: a theoretical review. *Tohoku J Exp Med [Internet]*. 2016;239(3):243–9. Available from: [https://www.jstage.jst.go.jp/article/tjem/239/3/239\\_243/\\_article](https://www.jstage.jst.go.jp/article/tjem/239/3/239_243/_article).
47. Bowers MT, Green BC. Reconstructing the community-based youth sport experience: how children derive meaning from unstructured and organized settings. *J Sport Manag [Internet]*. 2013 Nov 1 [cited 2020 Jul 6];27(6):422–38. Available from: <https://journals.humankinetics.com/view/journals/jsm/27/6/article-p422.xml>.
48. Ungar M, Brown M, Liebenberg L, et al. Unique pathways to resilience across cultures. *Adolescence [Internet]*. 2007 [cited 2021 Apr 20];42(166):287–310. Available from: <https://pubmed.ncbi.nlm.nih.gov/17849937/>.
49. Zolkoski SM, Bullock LM. Resilience in children and youth: a review. *Child Youth Serv Rev*. 2012;34(12):2295–303.
50. Mertens N, Boen F, Steffens NK, Cotterill ST, Haslam SA, Franssen K. Leading together towards a stronger 'us': an experimental test of the effectiveness of the 5R Shared Leadership Program (5RS) in basketball teams. *J Sci Med Sport [Internet]*. 2020 Aug 1 [cited 2021 Apr 20];23(8):770–5. Available from: <http://www.jsams.org/article/S1440244019307777/fulltext>.
51. Whitley MA, Donnelly JA, Cowan DT, McLaughlin S. Narratives of trauma and resilience from street soccer players. *Qual Res Sport Exerc Heal [Internet]*. 2021 [cited 2021 Apr 20]; Available from: <https://www.tandfonline.com/doi/abs/10.1080/2159676X.2021.1879919>.
52. Gabriel MG, Brown A, León M, Outley C. Power and social control of youth during the COVID-19 pandemic. *Leis Sci [Internet]*. 2021 [cited 2021 Apr 20];43(1–2):240–6. Available from: <https://www.tandfonline.com/action/journalInformation?journalCode=ulsc20>.
53. Hermens N, Super S, Verkooijen KT, Koelen MA. A systematic review of life skill development through sports programs serving socially vulnerable youth. *Res Q Exerc Sport*. 2017;88(4):408–24.
54. Holt NL, Deal CJ, Pankow K. Positive youth development through sport. In: Tenenbaum G, Eklund RC, editors. *Handbook of Sport Psychology [Internet]*. 4th ed. John Wiley & Sons, Inc.; 2020 [cited 2021 Apr 20], pp. 429–46. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119568124.ch20>.
55. Whitley MA, Massey WV, Wilkison M. A systems theory of development through sport for traumatized and disadvantaged youth. *Psychol Sport Exerc*. 2018;38:116–25.
56. Zhang C, Ye M, Fu Y, et al. The psychological impact of the COVID-19 pandemic on teenagers in China. *J Adolesc Heal [Internet]*. 2020 Dec 1 [cited 2021 Apr 20];67(6):747–55. Available from: <https://pubmed.ncbi.nlm.nih.gov/33885/>.
57. Massey WV, Whitley MA, Blom L, Gerstein LH. Sport for development and peace: a systems theory perspective on promoting sustainable change. *Int J Sport Manag Mark*. 2015;16(1–2):18–35.
58. Ettman CK, Abdalla SM, Cohen GH, Sampson L, Vivier PM, Galea S. Prevalence of depression symptoms in US adults before and during the COVID-19 pandemic. *JAMA Netw Open [Internet]*. 2020 Sep 3 [cited 2021 Apr 20];3(9):2019686. Available from: <https://jamanetwork.com/>.
59. Marroquín B, Vine V, Morgan R. Mental health during the COVID-19 pandemic: effects of stay-at-home policies, social distancing behavior, and social resources. *Psychiatry Res*. 2020;293:113419.