Sport Social Work Journal

Volume 6, Issue 1
2024

Sport Social Work Journal (ISN: 2835-5571)
OpenJournals.bsu.edu/SportSocialWorkJournal
SSWJ.org

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Sport Social Work Journal is supported by the Alliance of Social Workers in Sport.

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Introduction to the Special Issue: Evidence-Based Sport Social Work Practice

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Scholars and practitioners, alike, have increasingly begun to recognize sport social work as a subspeciality of social work practice (e.g., Kratz & Rosado, 2022). Despite the recent and continued growth of sport social work, barriers to professionalizing the subspeciality remain (Newman et al., 2022). Indeed, research exploring interprofessional healthcare teams has routinely underscored misconceptions of social work practice, particularly within the context of sport (McHenry et al., 2021). Broman (1995) offers three primary components that define a profession that can act as an organizing framework for the professionalization of sport social work: (a) specific standards of training and education, (b) an ethical code, and (c) a theoretical foundational and applied knowledge base.

To meet the first criterion, there has been scholarship and advocacy for increased specialized educational opportunities for sport social work, including practicum placements in sport-specific settings (e.g., Clark et al., 2022; Magier et al., 2023). As such, the Alliance of Social Workers in Sports (ASWIS) created professional and educational guidelines for undergraduate and graduate social work programs when developing and supervising sport-specific practicum placements (Beasley et al., 2023). Bates and Kratz (2022) also reported the growth in specific sport social work academic learning pathways, including specialized certificates, concentrations, and courses. Scholarship has also clearly demonstrated the alignment between the National Association of Social Workers (2021) Code of Ethics and sport social work practice (Beasley et al., 2022; Moore et al., 2018), thereby meeting the second criterion—sharing of an ethical code—of professionalization.

The development of a clear theoretical foundation and applied knowledgebase of sport social work, however, has been more difficult. Sport social work scholars have begun to define

common roles fulfilled by sport social workers (Newman et al., 2022). For instance, sport social workers have a long history of using sport and recreation to promote youth and community development (e.g., Anderson-Butcher & Bates, 2021). Becoming more commonplace for sport social workers is the provision of case management and licensed mental health services with elite-level athletes in collegiate athletics and professional sports (e.g., Beasley et al., 2021). Sport social workers are also known to utilize sport as a social platform to advocate for social justice and equity (e.g., Tarr et al., 2023). Much like the social work profession itself, sport social workers operate within sport settings and systems in a diversity of ways. Therefore, for sport social work to truly emerge as a unique subspeciality within the social work profession, research establishing evidence-based practices is compulsory.

The goal of this special issue is to begin filling that gap by collating evidence-based sport social work practices. Like sport social work, the articles in this special issue highlight a diversity of ways that social work and sport intersect to become sport social work. The seven articles in this issue are organized to underscore the distinct ways in which sport social work has begun to emerge.

Interventions

The first three articles explore various approaches to sport social work interventions. In their article, *The Ecological Map of Adolescent Athletes: Examining Integrated Care Approaches,* Werner explores the lived experiences of adolescent athletes living with a physical illness. Findings, interpreted through the lens of ecological systems theory, provide empirical support for an integrated care approach when working with adolescent athletes, especially considering the intersection of physical and mental health. Bates, Nothnagle, and Mokadam's article, *Resilience Training for High School Student-Athletes: A Pilot of the Life and Leadership Through Sport Series,* examines the development, implementation, and evaluation of a six-session resilience training—the Life and Leadership Though Sport Series—for high school athletes and coaches, comparing two different methods of program delivery. Analysis of post-intervention evaluations support the possible effectiveness of this resilience training program for high school athletes and coaches but suggest different delivery methods may be more effective for coaches versus athletes. Finally, Roberts, Darroch, and Hayhurst, using a feminist participatory action research (FPAR) design, explore the use of trauma-informed physical activity for women who have experienced violence and the barriers that the COVID-19 pandemic created in providing such care. By interviewing service-providers in Canada, the authors explore the challenges to providing physical activity interventions in virtual settings and the ways in which physical activity interventions in social service organizations have become framed as a "nonessential" in the time of the pandemic. They conclude with a call for practitioners to advocate for the continued inclusion of trauma-informed physical activity in conjunction with traditional social services. Together, these set of articles add to the sport social work literature by providing implications for evidenced-based sport social work interventions.

Mental Health and Measurement Tools

This special issue also features two articles that expand upon the use of mental health measurement tools, particularly when providing mental and behavioral health services in

collegiate athletics. In the first article, Cohen-Young conducted *A Systematic Literature Review of Mental Health Assessment Measures for College Athletes: Analyzing the Rigor of Empirical Validation and Implications for Practice*. Findings from the study indicate there are currently very few empirically supported assessment tools available to screen for mental health diagnoses among college athletes. Appropriately, Gavrilova1, Donohue, Barchard, and Allen conducted a study *Examining the Factor Structure of a Widely Used Measure of Psychiatric Symptoms in Collegiate Athletes*. Results from the Confirmatory Factor Analysis provide support for the use of the Symptom Checklist 90 – Revised (SCL-90-R) with college athletes to determine symptom severity of mental health diagnoses. Ultimately, to adequately support the holistic, biopsychosocial health of college athletes, there remains a need to develop novel, athlete-specific measurement tools.

Teaching and Pedagogy

The final section of this special issue features unique insights into educational programs and curricula, which are gleaned from advancements in education and training for sport psychology professionals. First, Gorczynski, Miller Aron, Oftadeh-Moghadam, and Olusoga provide a descriptive example of *Collaborative and Interdisciplinary Teaching in Sport and Exercise: Lessons from the Development and Delivery of an Equity, Diversity, and Inclusion Workshop*. Specifically, the authors highlight key features of the Sport and Exercise Psychology Accreditation Route (SEPAR) training program offered through the British Association of Sport and Exercise Sciences. The final article from this special issue—*Engaging Youth with the Teaching Personal and Social Responsibility Framework: Sport Psychology Graduate Students' Experience in a Service-Learning Course* by Wyatt, Altierie Jr., Hayden, Whitley, Diehl, and Tichnor-Wagner—explored a service-learning course designed for sport psychology students. Findings from their study highlight the importance of self-reflection and supervision during service-learning for graduate student learners. Indeed, for aspiring sport social workers, interprofessional learning opportunities may provide unique insights and important lessons for competently serving the needs of college athletes.

A Final Thought

As sport social work continues to become professionalized as a subspecialty within the social work profession, so must the research that seeks to capture critical insights and construct novel understandings. To advance the foundational and applied knowledge base of sport social work, future research must continue to investigate the diversity of ways sport social workers are currently serving the needs of people and communities in sport. For instance, using an ecological systems perspective, research can begin to explore the bidirectional impact of sport participation, on both the individual and broader community. Research is also needed to examine the effectiveness of interprofessional healthcare team models in sport organizations and the ability to provide equitable and accessible behavioral and mental healthcare services in sport. There are undoubtably numerous other future research opportunities to continue to build an applied knowledge base of sport social work, and we hope the articles included in this special issue inspire some of this work. Ultimately, the goal of this special issue—*Evidence-Based Sport Social Work Practices*—is to build upon the foundation laid by sport social work trailblazers, scholars and practitioners, alike, and help to further establish sport social work as a unique area of social work practice. As such, we want to express our sincerest gratitude to the authors for

their innovative contributions to this special issue and to the reviewers for their thoughtful and insightful comments.

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Zooming in and Out of Programming: Considerations for Post-Pandemic Physical Activity Programs for Equity-Deserving Groups

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This article draws on research supported by the Social Sciences and Humanities Research Council.

Researchers have found that physical activity is an effective health promotion tool due to its positive effect on wellbeing, however, despite the overwhelming evidence on the benefits of physical activity, many structural and systemic inequities exist that affect access and uptake particularly for women. These barriers have been exacerbated over the last few years as conditions surrounding the COVID-19 pandemic has made engagement in physical activity even more difficult for equity-deserving populations. Community organizations have reported an increase in gender-based violence and a strain on support services. In this qualitative research study, we present findings that demonstrated how COVID-19 complicated the delivery of in-person programs for equity-deserving populations. Using a feminist participatory action research approach, community-specific barriers to physical activity from the perspectives of individuals who deliver physical activity programming and social services to self-identified women were generated in three themes using thematic analysis: 1) Increased need, decreased services; 2) Online service provision was not effective for clients or providers; 3) Physical activity was not deemed an "essential service"- transitioning from survival mode to a new normal. Taken together, findings underlined the importance of effective and sustainable resources and strategies to improve access for equity-deserving groups to engage in physical activity programs.

Keywords: COVID-19 pandemic, equity-deserving, service providers, physical activity, social services, online services, trauma-and violence-informed physical activity

The outbreak of the COVID-19 pandemic presented unprecedented challenges that disrupted numerous facets of life. Engagement in physical activity, an important health promotion tool, was particularly disrupted as lockdowns, social distancing measures, and the access and availability of spaces and programs for physical activity were severely impacted (Faulkner et al., 2021). Service providers were strained to pivot their services online to follow social distancing measures (Wilke et al., 2020), however, this presented barriers and additional stress for clients and service providers (Wood et al., 2022). Despite evidence demonstrating the positive physical and mental effects of physical activity (Rebar et al., 2015; Reiner et al., 2013), access to programming during the pandemic was reduced, changing the way in which individuals engaged in physical activity (Cheval et al., 2021). These challenges were exacerbated for equity-deserving populations - such as women, Indigenous peoples, people with disabilities and others – who often experience substantial, collective barriers in accessing resources and opportunities that create mechanisms of exclusion to access support, resources, and programming (Government of Canada, 2022). Indeed, the pandemic exposed significant disparities among equity-deserving groups, shedding light on the enduring injustices, discrimination, and racism faced by individuals with intersecting identities (Martinez et al., 2021). Although researchers have explored the delivery of services to marginalized populations within the COVID-19 context (Williams et al., 2021; Wood et al., 2022), there is a dearth of research examining the barriers to physical activity from the service provider perspective during the pandemic, particularly for equity-deserving populations.

Literature Review

Impacts of COVID-19 on Health Outcomes for Equity-Deserving Communities

In March 2020, the World Health Organization (WHO) declared the coronavirus disease (COVID-19) a pandemic (WHO, n.d.), drastically changing the lives of people around the world. While containment guidelines and restrictions were put in place to manage the spread of disease, these measures amplified risk factors for already vulnerable populations (Wilke et al., 2020) and inequities in the social determinants of health (Brakefield et al., 2022). Individuals and groups who are equity-deserving often face numerous stressors that contribute to inequitable access to healthcare, including: pre-existing medical conditions; lack of access to accessible and discrimination-free healthcare; living environments; and lower socio-economic status – all of which have been magnified during the pandemic (Lund, 2021). In times of crisis, marginalization and discrimination within educational systems, labor markets, and workplace environments are exacerbated due to limited resources resulting in fear (Kantamneni, 2020). These inequities were triggered during the COVID-19 pandemic as observed through the increasing unemployment and major economic losses (Kantamneni, 2020). In parallel, these inequities have increased susceptibility to COVID-19 outcomes such as socio-psychological, health, and economic burdens (Brakefield et al., 2022).

In addition to the increased inequities experienced by individuals, social service organizations also experienced significant stress as the need for services increased. Globally, domestic and gender-based violence (GBV) reports increased and intensified, leading researchers to label such increases in violence as a "pandemic within a pandemic" (Sri et al., 2021), a "shadow pandemic" (Parry & Gordon, 2021), and a "twin pandemic" (Dlamini, 2021). The

social and economic stress brought on by COVID-19 has increased the vulnerability of women by exacerbating pre-existing social norms and gender inequalities (Dlamini, 2021). Moreover, and considering the pandemic impacts, women with intersecting identities (e.g. women living in poverty, women of color, women who have immigrated, etc.) are at an even higher risk of experiencing violence (Dlamini, 2021). Women, who have been historically marginalized within the labor force, are particularly at risk of experiencing a differential impact of COVID-19 as they engage in childcare and household responsibilities more than men, subjecting them to additional strains while managing multiple roles and responsibilities (Kantamneni, 2020). Despite this increased strain, many women had severely reduced access to childcare options and services to alleviate this burden (Wilke et al., 2020).

Access to Services During COVID-19 for Equity-Deserving Groups

The onset of the COVID-19 pandemic compelled those who deliver key services (e.g. residential care, family preservation, foster care, etc.) to vulnerable groups to significantly adapt their programs (Wilke et al., 2020). While clients experienced an increased need for services, they also faced new barriers to access as services providers were challenged with the social distancing protocols put in place with the pandemic (Wood et al., 2022). COVID-19 led to major transitions for organizations with a rush to adapt activities to be offered in virtual settings, amplifying stress in the home environment (Mazza et al., 2020) as well as the intensity of encounters with private partners (Jatmiko et al., 2020). Some women were targets for violence during quarantine, making the home environment a dangerous place for victims of domestic violence (Mazza et al., 2020). This was further complicated by the evolving and sometimes inconsistent public health guidelines (Williams et al., 2021). In parallel, many non-governmental organizations experienced decreases in funding support resulting in the inability to deliver adequate social services, especially to vulnerable populations who lacked access to technology (Wilke et al., 2020). The persistent lack of resources to support clients, including the lack of easy access to technology, created additional stress for staff and put frontline workers at risk for high levels of occupational stress, risking their own personal health and wellbeing (Wood et al., 2022). In a study by Williams et al. (2021) looking at the experiences of service providers who delivered intimate partner violence (IPV) care across different sectors during the pandemic, participants described their work throughout that time to be “overwhelming,” “exhausting,” and “gruesome” (p. 8). Many providers worked to fill gaps in service provision arising from the changes in IPV care and resources, resulting in workforce fatigue (Williams et al., 2021).

When planning and implementing COVID-19 pandemic recovery and response interventions, risk factors and vulnerabilities that differ across communities must be recognized and considered (Brakefield et al., 2022). While online programming can be convenient, Jatmiko et al. (2020) described an unintended consequence of using technology during the lockdown period - abuse towards women during COVID-19 may have been facilitated by technology, complicating the use of online programming. The authors demonstrated how social media has become a vehicle for online sexual violence through the rise in social media users and the escalating intensity of social media (Jatmiko et al., 2020). Wood et al. (2022) suggested offering a hybrid care model that could offer flexibility to tailor services to each client’s needs. Williams et al. (2021) suggested that moving forward in a post-pandemic environment, providers should continue to use creative approaches developed to provide safe and equitable services to

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https://doi.org/10.33043/z6c9ayb6.

individuals who experience IPV, such as incorporating virtual interactions within care plans. Notably, all service changes should consider the well-being of both the client and the service provider (Williams et al., 2021).

Physical Activity During Pandemic Times

Physical activity is an important contributor to positive physical and mental well-being (Rebar et al., 2015; Reiner et al., 2013). Yet, COVID-19 guidelines and restrictions put in place during the pandemic severely impacted the ways in which individuals engaged in physical activity. Globally, health authorities advised populations to practice social distancing and self-isolation regulations to reduce the spread of disease, which drastically changed daily life (Faulkner et al., 2021). Cheval et al. (2021) reported two ways in which the pandemic affected physical activity and sedentary levels: first, through the lockdown measures that restricted public movement and commuting; and second, through reduced inclination for individuals to leave the house in fear that they would contract the virus. Interestingly, while there were reports of individuals' increased sedentary behavior and decreased vigorous physical activity, researchers also reported an increase in time spent doing moderate physical activity such as walking (Cheval et al., 2021). In a review of scientific literature on recommendations of physical activity during the pandemic, Polero et al. (2020) concluded that physical activity such as aerobic, strength, flexibility, and balance exercises were recommended during confinement caused by COVID-19. Fearnbach et al. (2021) acknowledged the individual factors that affect physical activity during the pandemic such as living alone, loss of employment, COVID-19 related changes in income, and low household income. Of significant concern was low household income, which had a reported difference of 363 minutes/week between the highest and lowest income categories (Fearnbach et al., 2021), demonstrating how participation in physical activity was related to socio-economic status. Furthermore, a cross-sectional analysis of the relationship between physical activity and the mental health and well-being of adults in the United Kingdom, Ireland, New Zealand, and Australia revealed that participants who reported a decrease in physical activity behavior during the initial COVID-19 confinement period demonstrated poorer mental health and well-being when compared to individuals who reported a positive change or no change in their exercise behaviors (Faulkner et al., 2021). Although the positive effects of physical activity on mental health was well-established prior to the pandemic (Tao et al., 2022), researchers have affirmed the importance of physical activity for mental health – a relationship that is especially relevant in the COVID-19 context (Faulkner et al., 2021; Fearnbach et al., 2021; Marashi et al., 2021; Tao et al., 2022). Ultimately, researchers have found that sufficient levels of physical activity can help individuals cope with major stressful events (Cheval et al., 2021; Marashi et al., 2021), which needs to be considered when discussing public health guidelines for not only future pandemic(s) but for positive mental health and overall wellbeing more broadly.

Challenges to engage in physical activity brought forth by the pandemic also extend to include the devastating impacts on organized sports clubs and fitness centers as, in many instances, leisure facilities were the first to close and the last to re-open (Payne, 2021). Given the physical nature of their job, many physical activity providers faced unique challenges when trying to engage their clients in virtual programming, leading to more sedentary behaviors and mental health concerns (Faraji et al., 2020). Even when leisure facilities began to open and

clientele were craving social interactions, many individuals faced economic hardships and were not able to afford memberships (Payne, 2021), especially for those among marginalized populations. Payne (2021) recognized that the survival of many community sports and gyms may have been contingent on their ability to adapt to new regulations and whether they were able to offer enticing, affordable options. In their research, Thorpe et al. (2022) labeled fitness spaces as "riskscapes" due to these spaces prompting affective responses from women as they return to gyms and studios post-lockdown. They found that women have an array of responses that include both new fears and anxieties related to returning to indoor spaces and an appreciation to share movement in spaces for their wellbeing (Thorpe et al., 2023). As we move into a post-pandemic environment, re-imagining participation in physical activity for both participants and service providers is essential.

Physical Activity for Equity-Deserving Groups

Researchers exploring physical activity for equity-deserving communities outside of the pandemic context have demonstrated disparities in access (Moore et al., 2008), engagement (Withall, et al, 2011), and health outcomes (Cleland et al., 2012). Structural and systemic barriers perpetuate these inequities by unequally distributing physical activity resources, thereby enabling socially advantaged individuals to be more likely to engage in physical activity, and less likely to experience adverse health outcome compared to their marginalized peers (Ball et al., 2015; Craike et al., 2018; Mendoza-Vasconez et al., 2016). Efforts to address these disparities require targeted community-based physical activity interventions created in collaboration with local organizations and service providers. Given the collective trauma experienced during the pandemic (Watson et al., 2020), providers who offer services to marginalized populations may benefit from engaging in trauma- and violence-informed (TVI) approaches to health promotion. Researchers have demonstrated the benefits of utilizing trauma-informed approaches to physical activity for populations who have experienced violence (Darroch, 2022; Gammage et al., 2022) and have called for these types of programs (Darroch et al., 2022; Pebole et al., 2022). Despite the health benefits of engaging in TVI programs (Varcoe et al., 2021), TVI health promotion strategies in the realm of physical activity are limited (Darroch et al., 2022). Trauma- and violence-informed physical activity (TVIPA) has been identified as a promising approach to developing physical activity programming for individuals who experience marginalization by accounting for the intersecting effects of systemic, structural, and interpersonal violence within all phases of program creation and implementation (Darroch et al., 2022). While there are some reports of engaging with this approach globally with physical activity providers, there are limited activity choices for participants and minimal shared practice strategies among practitioners (Darroch et al., 2020; Palladino et al., 2022). As such, there is a need for further research to explore physical activity programs that account for the additional complexities and ensuing impacts experienced by equity-deserving individuals.

Current Study

While some researchers have looked at the experiences of service providers who deliver services to marginalized populations and survivors of IPV (Williams et al., 2021; Wood et al., 2022), our goal was to focus on community-specific barriers experienced during COVID-19. To our knowledge, barriers to physical activity during the COVID-19 pandemic have not been

explored specifically from the perspective of service providers who deliver physical activity and essential services to equity-deserving populations. This feminist participatory action research (FPAR) aimed to explore how COVID-19 has changed in-person programs for equity-deserving communities with a focus on physical activity given the mental health benefits. In addition, the goal of this study was to concurrently develop strategies to prioritize physical activity programming for equity- deserving groups.

Methodology and Theory

This qualitative study is part of a larger, multi-phase, mixed methods research project aimed at identifying best strategies to integrate trauma- and-violence-informed physical activity (TVIPA) programming for women who experience(d) violence. Our goal in this first phase of the project was to identify barriers to physical activity during the pandemic and to inform strategies to implement physical activity programming that best support equity deserving groups. This study is framed within a social constructionism epistemological perspective, recognizing that all knowledge is shaped by individuals and groups within a social context (Crotty, 1998). In alignment with social constructionism principals, we sought to understand the complex factors that influence engagement in physical activity for diverse populations from the perspective of service providers working within or in collaboration with partner organizations. The aim of this phase was to understand the current needs of partner organizations across three geographic and culturally diverse locations in Canada: Ottawa, Toronto, and Vancouver. Partner organizations involved in this project deliver a variety of services and programs with the commonality that they work with equity-deserving groups. Services delivered by partner organizations include counselling, residential services, food programs, child development programs, nutrition programs, as well as sport and physical activity programs (basketball, soccer, youth sport programs, etc.). To effectively engage with partner sites, it was important to utilize a methodology that prioritizes meaningful engagement. As such, we utilized an FPAR approach to promote collaboration and action-oriented elements in all stages of the research, while also foregrounding gender equity throughout the research process (Frisby et al., 2005). This approach creates a space for all individuals to understand and explain gender-based systemic biases within the context of the research (Gervais et al., 2018). Indeed, researchers have demonstrated that FPAR can be an effective methodological framework when working collaboratively with populations experiencing multiple marginalizing conditions including low-income (Reid et al., 2006), Indigenous status (Hayhurst et al., 2015), immigrant status (Frisby et al., 2007), and experiences of trauma (Darroch et al., 2022).

At the core of FPAR is the commitment to authentically engage with community members (Frisby et al., 2005; Reid et al., 2006). Importantly, including community members in the research process can facilitate more equitable decision making (Frisby et al., 2005; Reid et al., 2006) and address power differentials (Frisby et al., 2005). As such, we formed three community advisory boards (CAB) across the geographic locations comprised of community members, community partner representatives/service providers, and researchers to guide all aspects of the research process. The development of each CAB enabled community members and organization representatives/service providers to contribute colloboratively during the research process through guiding the recruitment process, co-creating data collection materials, and participating in data collection and data analysis while sharing their experiences with accessing

programs and services. The CABs met monthly on a rotating schedule to provide guidance for initiating and implementing the research. In the first monthly cycle, members met in-person at the partner site in their respective contexts and continued to meet bi-monthly. During the in-between months, all CABs across each site convened virtually using Zoom to discuss the unique challenges across sites. This pattern repeated for the duration of the study.

Consistent with FPAR principals, we employed an intersectional theoretical framework. Intersectionality is a concept that was developed by Kimberlé Crenshaw (1989) that recognizes that people's identities and social experiences are shaped by the interconnected nature of social categorizations such as race, gender, class, sexuality, disability, and other dimensions on identity. Utilizing intersectionality enabled us to obtain a nuanced understanding of the barriers to participation in programming and more specifically, physical activity programming, for equity-deserving individuals with intersecting identities. Abrams et al. (2020) highly endorsed the use of intersectionality in qualitative research to generate new insights and holistic representation of marginalized experiences. Moreover, this theory enables researchers to advance social justice by critically exploring access to essential and/or social services and how this may affect an individual's health.

Methods

To begin, we conducted semi-structured interviews with service providers from community partner sites in Ottawa, Toronto, and Vancouver. The objective of this first phase was to better understand the current needs of the organizations, the ways in which the COVID-19 pandemic complicated the delivery of in-person programs to equity-deserving populations and assess the desire for and appropriateness of TVIPA programming. The aim was to concurrently address community-identified barriers to physical activity and to conceptualize potential programming for organizations to enhance access to physical activity programming. This research was approved by Carleton University's Research Ethics Board (CUREB-B 112643) and York University's Research Ethics Board (#2023-133).

We interviewed a total of 33 service providers from our partner organizations as well as from organizations affiliated with our partner sites. Service providers had diverse backgrounds and years of experience in providing services for various needs such as – but not limited to – mental health support, residential services, and physical activity/sport programming in Ottawa, Vancouver, and Toronto. Providers' ages ranged from 26-68 with an average age of 38.9 years. Of the 33 participants, 11 providers identified as men, 20 providers identified as women, one provider identified as non-binary, and one provider identified as gender nonconforming. In addition, service providers had diverse racial backgrounds including Black, Latino, East Asian, White, and Mixed backgrounds. To this paper, we will refer to this group as "service providers." For deidentification purposes, we have assigned pseudonyms using a random name generator and broadly outlined what type of services they provide (see Table 1). To recruit participants, we relied on posters being shared through our partner organizations virtually and within their respective facilities and snowball sampling. We set the following inclusion criteria to participate in this study: speak English, be 19 years of age or older, and be an individual who works for an organization that provides care or services to equity-deserving individuals. When participants reached out to the researchers and expressed interest, we arranged an interview time that was

scheduled to be conducted either online via Zoom or in-person (location was dependent on the participant's preference) and sent a link to the online participant consent form, which was to be completed prior to the interview.

Examples of questions asked during the interview included: *Is physical activity a priority for your organization? Do you think trauma-informed physical activity programming would be (or is) beneficial for the clients at your organization? What are some of the ways in which COVID-19 has changed the way you work? How has your ability to offer physical activity specifically changed since the beginning of the pandemic?* To recognize the participants for their involvement, each service provider received a $25 gift card. Each interview lasted between 30-60 minutes, was audio-recorded, transcribed verbatim, and accurately checked by the first author. All transcripts were sent to participants for verification. Three service providers made small changes to their transcripts.

Analysis

To analyze the data, we engaged in Braun and Clarke's (2006) six-step approach to thematic analysis in combination with their updated approach to include reflexivity (Braun & Clarke, 2019). In the early stages of analysis, the authors familiarized themselves with the data by reviewing the transcripts. After reviewing the transcripts, all authors generated preliminary codes and descriptive data segments. Examples of preliminary codes included physical activity during COVID-19, COVID-19 challenges, online programming during pandemic, and return to play after pandemic. Then, we organized the data into potential themes. In the next step of analysis, the authors met to discuss and finalize themes. Once the themes were finalized, we defined and named the themes. To ensure co-production of knowledge, we presented our interpretation of the findings with each respective CAB (Toronto, Vancouver, Ottawa) to ensure it aligned with their experiences. Ultimately, we co-constructed three themes: 1) Increased need, decreased services; 2) Online service provision was not effective for clients or providers; 3) Physical activity was not deemed an "essential service"- transitioning from survival mode to a new normal.

Given the focus on gender equity throughout this research, as self-identifying women it was important for all authors to engage in reflexivity as our positionalities may have affected our interpretation of the findings during the data analysis process. All authors have knowledge and/or experience in gender equity research and TVIPA programming while collectively living through the COVID-19 pandemic and experiencing challenges associated with accessing programs and services. Authors two and three had young children at home and co-parented while also working full time during lockdowns and school closures. Importantly, while we all faced challenges with engaging in physical activity, we recognize the positions of privilege we hold that enable us to have access to resources that facilitate engagement. It was thus critical for us to remain cognizant of these preconceived beliefs by engaging in reflexivity throughout our feminist participatory action research process (Braun & Clarke, 2019; Frisby et al., 2005). According to Frisby et al. (2005), reflexivity is "about reflecting on power" (p. 381) and reflecting on the power dynamics that are present. By engaging with the CAB and involving participants through the review of transcripts, interpretation of the results, and informing this manuscript, we engaged in reflective practices that attempted to challenge power dynamics. In addition to self-reflecting, other

methods were employed by the authors to ensure we were putting "reflexivity in action" (Trainor & Bundon, 2021, p. 707). These processes included using a reflexive journal to promote introspection and to document and examine researcher's own biases and reflections throughout analysis and mutual collaboration, which acknowledges the contributions of the co-authors and participants to the construction of knowledge (Trainor & Bundon, 2021).

Our analysis underlined the tensions experienced by service providers during the COVID-19 pandemic and the gaps in the provision of physical activity programming. Below, we argue the need for effective and sustainable resources and strategies to improve access for women to engage in physical activity programs.

Results

The following results are organized around three themes. In the first theme, we focus on the increased need of services experienced by the service providers interviewed and the challenges in meeting these needs. The second theme is focused on the ineffective delivery of online programming throughout the pandemic. Finally, in the third theme, we explore the unessential-izing physical activity. Taken together, these themes highlight the need to improve access to physical activity for equity-deserving women.

Increased Need, Decreased Services

All participants described the delivery of services throughout the COVID-19 pandemic as being challenging. As noted by several social service providers, organizations experienced many difficulties as they aimed to attend to their clients' increased need for services while managing the evolving restrictions and guidelines. For example, and as Jordan asserted,

> Having those isolation zones, lockdowns, kids not being able to go to school, we saw a really big increase in abuse and neglect against children, as well as intimate partner violence with the pandemic. There were more barriers, the need increased and there was an increased interest in accessing the services, but there were restrictions to then access these services.

For many organizations, COVID-19 brought gaps in their services to the forefront, including the inequities that many women face. Building off their previous comment, Jordan felt that working in their field was challenging from an equity lens,

> It was hard because we provide in-person services. And so being really limited or restricted on who we could provide those services to … I found really challenging for my work, in terms of like an equity standpoint.

Conversely, some participants felt that the need for services has always been present; however, the pandemic exacerbated gender equity issues and brought increased attention to GBV. Isabella argued,

> I believe the need [for services] has always been there, but a change in focus on gender equity and an increase in the strength of the spotlight shining on this issue has brought to

> the surface many issues that were bubbling below the surface of our society for a long time.

Indeed, attention to issues surrounding GBV increased globally. Along these lines, Erin acknowledged that providers are exposed to incidents of GBV regularly and that the problems women face have not shifted; however, the decreased access to programs and services within the community was problematic,

> I was still dealing with the same number of people dealing with the same problems. And I could be biased too, because I work at a second stage housing for women fleeing violence, so obviously I'm going to have a higher number of people that I'm coming into contact with that are. What I will say is that there was definitely less community support because there's less places that you could go. There were less places that you could get away from that.

In addition to a lack of community support, Emma expressed that the first few weeks and months of the pandemic timeframe were especially challenging in Canada as there was confusion surrounding the government messaging, making it more problematic to deliver services. As Emma explained,

> Particularly in those first few weeks, everything was pretty chaotic. The information that we were getting shared from the ministry and from the government was changing, sometimes hour to hour and day to day. In a residential environment, changing the rules of the house on people was creating a really high stress environment for people.

Even for providers, accessing services for their own personal health and well-being was a struggle, which impacted their ability to deliver services. Jordan expressed their difficulties when not being able to incorporate physical activity into their daily life,

> Before, I was super into the gym and yoga, and then those things were not available anymore at the start of the pandemic. And then it was also the fear of how [COVID-19] is being transmitted early on. The shutdowns and isolation just kind of slowly eroded the physical movement components that I was incorporating in my daily life. It was a bit of a quick taking away, but then it was a bit of a slow erosion because it was like "maybe next month they'll be open again." … And then, all of a sudden, my options were to walk outside but then being outside was scary. And so not having access to those services definitely impacted my mental health and well-being.

Taken together, the COVID-19 pandemic had severe consequences on in-person programming and services for clients and service providers alike. Most providers experienced increased demands for their services, and many felt that the pandemic especially further exacerbated gender inequities for women.

Ineffective Online Service Provision: Challenges and Tensions for Clients and Providers

Service providers unanimously expressed the difficulties with shifting to online programming as guidelines and restrictions limited in-person options. For example, Cameron described these challenges regarding providing physical activity programming,

> In the beginning, when it was fresh and it was new, online provide[d] an opportunity to still access programming and still get people moving. And then after a while, it just became redundant where folks were itching to get back to in-person programming where they can interact again. There's only so many kids that want to throw a sock into a laundry hamper … they actually want to play basketball.

Participants across engaging in both types of service delivery recounted a definite "decrease in attendance to all programs", as Isabella remarked. The decrease in program attendance was particularly problematic for organizations whose funding is contingent on participation and numbers. As Jordan eloquently stated, "it was hard too because, on the agency side, here we are trying to get numbers for our funders and try[ing] to say that yes, we still need this funding to provide these services." As described by Emily, many social service and physical activity organizations were forced to be creative in their approaches to maintain funding, including online activities,

> We worked with a lot of these community partners, but certainly COVID-19 itself unfortunately hit us as well. That's where the funding gets a little dicey and forces us to be a little more creative in how we can still provide these affordable events and programs while still having to manage our own budgets.

While being creative and shifting to online programming resulted in allowing participants to continue engaging in activities from home (albeit in much lower numbers), it required extra resources to which many organizations did not have access. Emma drew attention to these issues,

> For the first couple weeks that we were doing it [the program] online. I was like, we have to just completely shift what we're doing until we find a way to get people program materials to their door. But that took extra funding, extra staff time, extra preparation. There are programs that we shifted to, like filming in advance and posting online and then delivering people program materials so that they can follow along.
> Service providers specifically noted the challenges that women experienced when

balancing online programming with responsibilities at home, such as caregiving. Lewis emphasized the difficulty of providing services to mothers,

> The downfall in the long term was everyone was Zoomed out or participants started dropping off. It was just too much, too long for them. It's not the same as being in a room physically with somebody. Learning different things where you're at home, on your phone, or on their computer doing a Zoom call and your mind wanders or you're in your own place. The kids are right beside them. They [women accessing services] didn't have childcare for them."

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https://doi.org/10.33043/z6c9ayb6.

Lewis identified the lack of childcare as "the biggest hurdle that [they] had to go through." Jordan added to this discussion by expressing their concerns over unsafe spaces for women accessing programming,

> One person might be more able in terms of being able to organize their home life, right? Like, OK, I've got this virtual group from five to seven. I need to make sure that baby is fed by whatever time, that so-and-so knows I'm going to be doing this group. And it was just really challenging, right? Because creating that safe space, that trauma-informed space, is so important. Then now when you have everybody kind of through a screen, maybe a home environment isn't safe and then trying to talk about like stress management, coping strategies, is a bit of a moot point.

Providers also experienced difficulties of their own when offering services. Erin offered an example of what working during the pandemic was like for them,

> For people who do have access to Internet and a computer, you can do it wherever you are. … For me, that was pretty helpful. But, as you can probably hear in the background right now, I have crying kids in the other room and another kid knocking on my office door. And, so, I don't get the same benefit.

As expressed by Erin, there are concerns about the difficulties (e.g. access to technology and safe spaces) experienced by clients; however, providers also experienced challenges in offering uninterrupted care. Many providers who deliver emergency services, including Jolene, detailed how pivoting away from in-person programming was especially difficult,

> It's definitely hard because we were so used to immediately going to help the person in distress. […] We're like, OK, so we have to do this from six feet away or we have to do this over the phone. It's not as, in my opinion, effective if somebody is in distress over the phone and you just be like, "oh, just come in, we can help you. […] Unfortunately, you can't come in because COVID-19 is a thing."

Alice felt similarly in that providers were missing the opportunity to build connections with program participants through movement, especially in physical activity-focused spaces,

> My reason for getting into this industry [sport] is the connections you build. And I think that was very difficult to build online. You can't build connections - they're not really deep. I think they're surface level.

Ultimately, providers felt that program participants were experiencing "Zoom fatigue" and that continuing with online programming took extra resources that were either unavailable or were not sustainable. Moreover, providers themselves were facing challenges in delivering programming as they too struggled with the challenges of working from home and building meaningful connections with their clients.

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https://doi.org/10.33043/z6c9ayb6.

Unessential-izing Physical Activity: Transitioning from "Survival Mode" to a New Normal

Despite best efforts to pivot all programming online, for most providers, physical activity was not a priority, and the resources of organizations and service providers were drawn to other needs. Mark described their experience in speaking with community members and other service providers about their struggles during the pandemic,

> I was in a meeting with youth and with a lot of service providers, and they said that the priority was employment and food. And it makes sense because when you're in survival mode, when all these services are cut, you need money, and you need food. It's hard to even concentrate online if you're hungry, right? If you're a family that's struggling to make ends meet, the food bank wasn't enough for them. So physical activity wasn't even a priority during the pandemic.

Dylan shared the same sentiments as Mark, and interestingly commented on the need for programming related to food. Dylan described where their organization directed their efforts,

> During the course of a pandemic, much of our focus went towards the real, tangible needs of families and communities. We were working with people to deliver food baskets and finding ways to get technology to people so they can participate in online school, like those real like nuts-and-bolts things that people were struggling with. Because yes, we can provide some fun online physical activity videos or resumes or whatever it might but during the pandemic, I would say the majority of our focus went towards one of those stand out things that are tough for families and members and communities right now and putting our efforts towards that.

For organizations who focused on women's only programming, providers felt that re-starting the programming after the restrictions were lifted was a lower priority despite vested interest from program participants. Erin explained these challenges,

> It [COVID-19] shut down all physical activity programming that was for anyone facing barriers and a lot of [these programs] have not restarted. We were doing boxing programs, but after the pandemic, that never restarted, and it could have restarted. There was definitely a desire for it. But the programming for moms never restarted … And then I think it just became a lower priority for a lot of organizations because [there were] so many [other] immediate needs. They just had to pivot so quickly to change the way that they were meeting those needs that the physical activity programming … was out the window.

Interestingly, many providers did not make direct links to physical activity and positive mental health. For example, Emma stated, "I think it [physical activity] gets a bit pushed to the wayside in favor of mental health." Isabella, on the other hand, was among the participants who viewed physical activity as a preventative measure rather than being adjacent to care,

> When they [program participants] are living in another shelter or hotel, they need to focus on essential needs for survival – finding shelter, food, legal support, physical health and

> mental health services. When an individual has urgent needs, the concept of accessing programs that address more of a preventative aspect are not as much of a priority. As the restrictions and guidelines related to the COVID-19 pandemic loosened, service

providers noted that the needs of participants were transitioning. Charlotte explained,

> There was an increased need there [during the pandemic] especially, and a lot of it was an increased need for basic needs like food security, the social determinants of health, … Ontario Works support, things like that. I think it's slowly starting to dwindle a bit. The need has kind of transitioned. It's less so like filling those basic needs, whereas now it's more, I would say, like higher level needs.

While physical activity was not deemed a priority during the pandemic, the interest in engaging into these types of "higher level needs" programs are increasing. After conducting a needs analysis for their organization, Charlotte identified the current needs of participants, including the deviation from online programming and the interest for in-person programming again,

> Towards the end [of the pandemic], a lot of the comment's clients were making [included] that they just wanted more in-person programming, which is interesting because, at the beginning, a lot of them mentioned that they liked the flexibility of virtual programming.

The repercussions from the pandemic led service providers to focus on the immediate concerns of clients, noting that physical activity as a lower priority. Now, as we enter a "post"-pandemic environment, providers and organizations are focusing more on physical activity, as noted by Mark, "post-pandemic we're looking at how to reintegrate kids, families, and individuals back into physical activity." However, a consequence that some providers have observed "post-pandemic" is a decrease in female participants. Henry highlighted this issue,

> If] we look at pre-pandemic levels of participation, we were close to 50/50 between boys and girls and now we're seeing closer to 60/40, potentially even greater than that split. There are definitely going to be impacts when it comes to looking [at] sport participation down the road and talk[ing] about drop offs and the benefits that physical activity can provide to women and girls. We need to refocus and really bring that cohort, that group of girls, and try and find ways to reconnect them to the opportunities that exist within neighborhoods, within their communities, and bring them back in.

Although we are seeing a shift back to pre-pandemic attitudes, physical activity providers such as Emily noted the importance of public health guidelines moving forward,

> I think there's basically no way that we're ever not going to consider public health. Obviously public health is a concern, but when you're working in sports events, you're definitely focusing on the physical injuries, not the autoimmune injuries or afflictions. So that's going to have a greater impact. One of the big things is going to be what the programming is with the pandemic.

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https://doi.org/10.33043/z6c9ayb6.

As restrictions and guidelines loosen, and as we move into a post-pandemic environment, creating opportunities for women and girls to engage in physical activity will be crucial so that they may reap the positive mental health benefits. Moreover, these results underscore the need for providers to be intentional in creating physical activity programs using trauma-and violence-informed approaches that are specifically designed for equity-deserving groups.

Discussion

The COVID-19 pandemic has presented unique and unparalleled challenges for service providers across various domains, including the provision of sport and physical activity programs. In this study, we examined how service providers creatively navigated these challenges in their day-to-day lives and explored the critical implications of their maneuvering for sport and physical activity provision in Canada. Our findings add to the existing literature by expanding on the work of scholars who have examined similar topics. Below, we outline how our findings build on, and extend, the work of other scholars who have engaged with similar topics. We then provide insights into how these findings can inform future policies and practices in the field.

The findings in this study make important contributions to the literature surrounding the experiences of service providers working with equity-deserving communities and the ability to engage in physical activity programming during the COVID-19 pandemic and as restrictions loosen. While previous researchers have captured the experiences of frontline service providers who deliver services to survivors of intimate partner violence and vulnerable families (Wilke et al., 2020), our research extends the literature in this area to include the experiences of service providers who work with equity-deserving populations who offer programming through both essential social services and physical activity programs. Notably, the results outlined in this paper reveal the paradoxes of provision experienced by service providers who faced an increased need for their services during the pandemic, but who – at the same time – were simultaneously constrained by the guidelines in place that restricted their in-person services and their personal circumstances. These pressures were further complicated by the lack of technology for clients to access online programming, and the lack of staff time and resources required to deliver online programming. Physical activity and essential service came with a unique challenge, involving a dire need to pivot programming provision to meet the needs of clients in ways that aligned with the numerous restrictions in response to the pandemic.

Service Provision During the Pandemic

The COVID-19 pandemic significantly impacted the provision of in-person services. Collectively, all service providers in our study working with equity-deserving individuals and groups identified an increased need and a decreased ability to offer services. This is nothing new or locally distinct. Internationally, other researchers have reported similar findings (Williams et al., 2021; Wood et al., 2022). While pivoting service provisions to online platforms did provide a mechanism by which clients could access services, many organizations were left to rely on creative approaches to keep the interest of their clients and to appease their funders. Although using online services was an attractive option at the beginning of the pandemic, providers unanimously reported an overall decrease in numbers as participants began to feel “Zoomed

out." This finding has been confirmed by other recent studies that highlight the gendered impacts and digital (dis)connections of virtual sport and fitness sector provision (Thorpe et al., 2022). In instances where providers in this study delivered essential services, the COVID-19 safety measures and social distancing requirements were increasingly problematic as it was challenging to support individuals in distress over the phone or from six feet away. Similarly, these barriers also prevented physical activity providers from building deep, meaningful connections through sport. Not only did the pandemic present challenges for clients, but it also limited access to essential services for providers themselves, which, as found by Williams et al. (2021), can lead to fatigue and other health challenges that may affect a provider's ability to deliver services. The service providers interviewed have diverse lived experiences and identities that have shaped their experiences during the pandemic. Many providers identified as being embedded within the communities in which they work, demonstrating their deep understanding of the issues presented in this study.

Importantly, our use of an intersectional framework allowed us to shed light on the inequities in access to programs experienced by equity deserving groups because of multiple social categories. Specifically, many essential service providers noted an increased need in services for women. These findings are consistent as increased reports of violence against women has been reported internationally (Hsu & Henke, 2021) resulting in researchers labeling the increased violence as another pandemic (Dlamini, 2021; Parry & Gordon, 2021; Sri et al., 2021). Most participants felt that there was an increased need for services, however, there were a few participants who felt that the need has remained consistent and instead there has been increased attention to GBV. Essential service providers discussed at length what they described as a gender equity issue when accessing services. Participants in this study felt that women often assume most childcare duties and thus experienced even greater barriers to accessing online services. Through an intersectional lens, we can recognize a women's role in a family/partnership (e.g., child, mother, grandparent) and consider the dynamic interplay of multiple social oppressions that affect a woman's experience and agency in accessing physical activity. Traditional gender roles may dictate the perceived appropriateness of engaging in physical activities, which can also intersect with race and class to intensity these expectations. In addition, women from different racial and ethnic backgrounds may face unique cultural expectations that can influence their engagement in physical activity. These social oppressions interact and can greatly impact access and participation in physical activity which must be considered when creating and implementing programming. Although physical activity providers didn't comment on an increase in violence, likewise they noted the lack of participation of girls in their programming when compared to pre-pandemic levels, illustrating gendered impacts of the pandemic. These results point to a need for an intersectional approach moving forward. Given the insights gained from service providers' experiences during COVID-19 in this paper, enhancing policies and practices to better support equity-deserving populations is critical.

Physical Activity Provision

The guidelines and restrictions in place during the pandemic made it difficult for clients to access services and programming, and for organizations and providers to offer physical activity programming. Despite the overwhelming evidence on the benefits of physical activity (Rebar et al., 2015; Reiner et al., 2013), engagement in physical activity during the pandemic

was mixed. While there were some reports of increased levels of physical activity (Cheval et al., 2021), from an intersectional perspective, providers in our study identified the additional barriers for marginalized individuals, including access to the resources required to engage in physical activity such as access to equipment and technology. Fearnbach et al. (2021) noted the complexities of engaging in physical activity for "highest risk" individuals who experienced the greatest reduction in physical activity, including those with lower income. While the researchers highlighted protective factors to reduce the decline of physical activity such as purchasing home-based equipment (Fearnbach et al., 2021), Bandara et al. (2021) added that low socio-economic status (SES) individuals may not have the resources required to engage in these solutions. Instead, they highlighted alternative strategies suggested by Jurak et al. (2020) such as skipping and climbing stairs to engage in exercise to reduce the inequitable effect on physical activity levels for low SES community members. In their review of literature looking at physical activity recommendations, Cheval et al. (2021) found that participants spent more time walking; however, this does not account for those who may not have the time or feel safe in their communities. The use of intersectionality theory is important when discussing physical activity as it illuminates the need for a nuanced understanding of how intersecting factors, such as SES, can create unique challenges for individuals which must be addressed when creating and delivering accessible physical activity opportunities.

Interestingly, service providers pointed out how physical activity got "pushed to the wayside" in favor of mental health even though the connection between physical activity and mental health has been well established (McKeon et al., 2022), particularly during the pandemic (Cheval et al., 2021; Faulkner et al., 2021). Especially at the beginning of the pandemic, the priority for services shifted to employment, food, housing, and mental health services, among others. As the restrictions loosened over time, attention appeared to be gradually focusing more on physical activity and how to reintegrate activities that were available pre-pandemic. Although the attention is continuously shifting, Emily felt that there will always be some consideration of public health in the realm of physical activity and sport moving forward. Notably, the first two themes included discussion from many essential/social service providers compared to physical activity providers. This can be attributed to the lack of ability to pivot physical activity programming online, and the increased focus on essential needs. Throughout the pandemic, physical activity was an underutilized tool that we need to consider more closely as we move forward in a post-pandemic environment to reduce barriers to participation in programming, and to address issues related to the collective trauma experienced during the pandemic (Watson et al., 2020).

Primarily, our focus of this FPAR research was to understand the provision of services during the COVID-19 pandemic from the perspectives of services providers to strategize ways to move forward to support equity-deserving communities in engaging in physical activity through an intersectional lens. In line with an FPAR approach the findings from this component of the larger, multi-stage project have identified important areas of action and will inform the ways in which we conceptualize sustainable and effective physical activity programming with our partner sites. Reid et al. (2006) defined action as a process in which researchers take steps to change circumstances. As such, initial conceptualization of programming included online programming, however, our findings demonstrate the desire for in-person programming and limited success in online delivery during the pandemic and lockdown periods. In addition, our findings have also

reaffirmed the need to prioritize programming for women and girls as providers are noticing a decrease in engagement compared to pre-pandemic levels. To provide services for individuals who experience multiple intersecting identities, it is crucial to tailor programming to the specific contexts and populations for whom the programs are intended. As such, utilizing an intersectional lens will be essential to maintaining our focus as we progress towards creating action and change through the co-creation and co-development of programming. Similarly, it is important for organizations to ensure they are considering intersecting identities to understand workplace dynamics and to create inclusive and diverse work environments for service providers. COVID-19 has served as an important opportunity to make long-term structural changes and to re-imagine what equity and access to services can look like (Loeb et al., 2021), especially for women. Indeed, resources, such as increased training, financial support, and increased opportunities to develop supportive partnerships and networking among service providers, needs to be prioritized to better support organizations and service providers who can then support women and other equity-deserving individuals. While partner organizations are still recovering from the immense strain of the pandemic on both staff and resources, there is a heightened sense of the importance of helping clients deal with the collective trauma of the pandemic. Loeb et al. (2021) called for structural, professional, and individual changes to address health inequities for marginalized populations as returning to the norm is "simply not enough" (p 63). Through TVIPA, service providers are called to consider individual, institutional, structural, and systemic issues (Darroch et al., 2022) that have been highlighted during the pandemic making this approach to programming an appropriate pathway forward.

Limitations

The limitations of this study must be considered. Importantly, this paper focuses on the perspectives of services providers. Although future phases of this multi-stage research project will focus on the experiences of community members during the pandemic, their perspectives are nonetheless missing from this paper. In addition, this study includes the views of service providers in two different sectors. While providers had diverse backgrounds and training in physical activity and/or social services, they all share important commonalities, such as the interest in engaging in approaches to better serve equity-deserving women. This work doesn't conflate the two experiences but rather demonstrates the common interest in creating accessible programming. It is also important to note that this study includes pan-Canadian perspectives. Data was collected from providers from three unique geographic areas across two provinces. Throughout the pandemic, COVID-19 guidelines and restrictions varied provincially and thus could have had different impacts on programming. In general, at the time of interviewing, most provincially mandated restrictions had been lifted, however, some providers and organizations maintained COVID-19 restrictions at an organizational level. Nonetheless, including perspectives from across Canada provided an important opportunity to obtain perspectives nationally.

Conclusion

The findings presented in this study add a nuanced perspective to the expanding body of literature focusing on service delivery during the COVID-19 pandemic (Thorpe et al., 2022; Wilke et al., 2020; Williams et al., 2021; Wood et al., 2022) by addressing questions related to

physical activity. The findings presented highlight the complexity of delivering services to equity-deserving populations, the gendered impact of COVID-19, and the prioritization of different services. Central to this discussion are the tensions between the increased need of "essential services" such as employment, food, and shelter and the decreased access to services for clients due to guidelines and restrictions that were in place throughout the pandemic, including access to physical activity programs and resources. Despite providers pivoting their services online to the best of their ability, organizations ultimately experienced decreased participation which has had serious implications for the organizations. Interestingly, there was limited direct connection between physical activity and mental health by providers, which serves as an important opportunity moving forward in this study to encourage physical activity within our partner organizations who focus on social services. Ultimately, these findings serve as an impetus to consider how physical activity programming can be re-envisioned to support equity-deserving populations with intersecting identities and, more specifically, how trauma- and violence-informed physical activity can be utilized in conjunction with usual services to better support these populations.

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Sport Social Work Journal

Collaborative and Interdisciplinary Teaching in Sport and Exercise: Lessons from the Development and Delivery of an Equity, Diversity, and Inclusion Workshop

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Training in sport and exercise that is collaborative and interdisciplinary allows for the delivery of key knowledge and skills that help shape trainees' practice. Such training also demonstrates how collaborations can take shape and how individuals can work together in the future. We present an example of collaborative and interdisciplinary training used within an equity, diversity, and inclusion workshop that was provided to trainees enrolled on the Sport and Exercise Psychology Accreditation Route (SEPAR) training program offered through the British Association of Sport and Exercise Sciences. The SEPAR program was designed to allow trainees to gain knowledge, skills, and experience to apply and register as Practitioner Psychologists with the Health and Care Professions Council in the United Kingdom. The workshop was a collaboration between individuals trained in sport and exercise psychology and clinical social work. Overall, the workshop helped trainees gain an understanding of key terms and definitions concerning equity, equality, diversity, inclusion, and social justice as well as legal responsibilities. The workshop also demonstrated a variety of perspectives from sport and exercise psychology and clinical social work as to how inclusive and socially just approaches can be used to create safe environments that can foster strong therapeutic relationships with clients.

Keywords: collaborative, interdisciplinary, teaching, practice, equity, diversity, inclusion, social work, sport psychology

Collaborative and interdisciplinary professional practice within sport and exercise settings is essential to deliver high quality care to individuals (Moore et al., 2022b). Be it the delivery of community-based exercise programs, or the delivery of highly specialized performance related care in elite sport, a variety of professions often work in concert to help address the unique needs of individuals. For example, the delivery of exercise programs to individuals living with serious mental illness requires the attention of multiple healthcare professionals. Research on community-based exercise programing as part of overall weight management for people living with schizophrenia in Toronto, Canada demonstrated a unique collaborative effort amongst exercise scientists, psychiatrists, general practitioner physicians, clinical psychologists, social workers, recreation therapists, physical therapists, occupational therapists, and clinical dieticians in helping identify various client needs and working toward the delivery and maintenance of exercise provisions (Faulkner et al., 2009; Gorczynski et al., 2013). This included conducting physical and mental health assessments, creating safe and motivating climates to exercise, scheduling and delivering exercise sessions, and organizing post exercise care, which included dietary care. Delivery of professional services within elite sport is equally as occupationally diverse (Reardon et al., 2019). For instance, mental health literacy programs designed to help educate athletes, coaches, staff, referees and others on mental health symptoms and disorders, reduce stigma, and promote help seeking behaviors are rooted in the collaborative efforts of psychiatrists, sports physicians, clinical psychologists, clinical social workers, and sport and exercise psychologists (Gorczynski et al., 2021; Moore et al., 2022a). The use of such collaborative and interdisciplinary models demonstrates how multiple and different professions can work together to identify and address client needs and create safe spaces.

Collaborative and interdisciplinary models of professional practice rely on building a climate of mutual respect and shared values, using knowledge across disciplines to assess and address client needs, strong and clear communication skills to understand clients and provide care in a responsive and collaborative manner, and the application of relationship building values and principles of team dynamics to structure and continually enhance the way interdisciplinary interactions occur (Interprofessional Education Collaborative, 2023). Collaborative and interdisciplinary professional practice is meant to be clear, comprehensive, respectful, and rooted in professional competencies with legislative and regulatory boundaries. Collaborative and interdisciplinary professional practice should not result in hierarchical power struggles amongst professionals or blur professional boundaries. Ultimately, collaborative and interdisciplinary professional practice centers around a shared purpose: the betterment of the client through the application of multiple and unique professional services.

One of the greatest obstacles that stand in the way of collaborative and interdisciplinary professional practice is competition (McHenry et al., 2021; Moore et al., 2022a). There are many reasons why competition exists amongst healthcare professionals, especially within the delivery of services related to mental performance and mental healthcare within sport and exercise. Unfortunately, competition has created multiple turf wars over client acquisition and retention, delivery of services, scopes of practice, and revenue (Moore et al., 2022b). Some individuals view competition positively and believe that competition amongst healthcare professionals results in more efficient services, innovative practices, continual improvement of services, lowered costs, and overall better options for clients (Barros et al., 2016). Many individuals do

https://doi.org/10.33043/4acz7d3c.

not share this perspective and believe that competition results in a lower quality of care, restricted and inequitable access to services, and inefficient coordination of care amongst healthcare professionals (Barros, et al., 2016). Furthermore, competition may also result in the commodification of exercisers and athletes where they are viewed as economic units and sources of income, rather than individuals who need help (Edwards, 2021). Ultimately, competition may drive healthcare professionals away from providing needed holistic care to support their clients which can only be achieved through collaborative and interdisciplinary approaches (McHenry et al., 2021; Miller Aron et al., 2023; Van Slingerland et al., 2020). Competition may also limit opportunities to deliver collaborative and interdisciplinary training across healthcare professions.

Ensuring that collaborative and interdisciplinary models of care remain respectful, coordinated, and efficient, healthcare trainees need training in the creation and maintenance of such models of practice. In essence, trainees need exposure to the design of such collaborations and how such collaborations can improve overall client care. In this article, we present a strategy taken by professionals in sport and exercise psychology and clinical social work to deliver a workshop in equity, equality, diversity, inclusion, and social justice for trainees enrolled on the Sport and Exercise Psychology Accreditation Route (SEPAR) training program offered through the British Association of Sport and Exercise Sciences (BASES). The purpose of this article is to provide insight into how collaborative and interdisciplinary professional practice can be discussed with and taught to trainees.

Background

The Sport and Exercise Psychology Accreditation Route training program offered through BASES was designed to help psychology trainees in the United Kingdom gain necessary knowledge, skills, and experience in sport and exercise psychology so that they could apply to the Health and Care Professions Council (HCPC) as Practitioner Psychologists (BASES, 2023). The HCPC is the regulator of health and care professions in the United Kingdom. The goal of the training program is to ensure trainees develop core competencies to be industry ready and practice ethically, safely, and efficiently in an autonomous manner. The SEPAR training program can take between two and four years, where trainees work with their supervisors to produce a portfolio of evidence to demonstrate a minimum required level of proficiency across a variety of competencies as well as engagement in 3,200 hours of activity, including consulting, continued professional development, and broad dissemination of information about the profession. Included in the SEPAR training program are a series of core workshops that trainees must attend and complete. Workshops were developed to deliver key knowledge and skills to trainees in a wide variety of competencies.

The Workshop

The Equality, Diversity, and Inclusion workshop was designed in 2022 to provide both theoretical and practical knowledge and skills to ensure trainees were practicing in an inclusive and socially just manner (Cunningham, 2019). The on-line, one-day workshop was designed by individuals trained in sport and exercise psychology and clinical social work with an aim to provide essential training around cultural factors to further promote diversity and inclusion in sport and exercise. The team consisted of one registered practitioner psychologist with a

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doctorate in sport and exercise, one clinical social worker, and two individuals with doctorates in sport and exercise psychology. A further aim of the workshop was to demonstrate to trainees their legal responsibilities, such as the need for referral to other healthcare professionals when necessary. The on-line workshop included 4 mini-lectures, small breakout rooms with group exercises that focused on collaborative learning, and larger forums for discussion. Trainees were provided with key readings, resources and follow-up exercises to assist with reflective practice. Workshops were limited to 25 attendees. Specifically, the workshop covered the following topics:

- Definitions of equality (e.g., people have the same conditions), equity (e.g., fair allocation of resources to reach equality), diversity (e.g., socially meaningful differences), inclusion (e.g., embracing difference and integration of people), and social justice (e.g. changes to systems that lead to sustainable and equitable access to resources);
- Protected characteristics and legal responsibilities in sport and exercise psychology;
- Epidemiology of discrimination, harassment, bullying, and violence in sport and exercise settings;
- Conscious and unconscious bias, stereotypes, prejudice, and discrimination;
- Cultural competence;
- Representation and generational diversity and inclusivity in sport and exercise psychology;
- Holistic life perspectives within sport and exercise psychology;
- Socioecological perspectives with respect to inclusivity and diversity;
- Sport and exercise psychology curriculum decolonization strategies;
- Inclusive leadership styles;
- Relationship development and management amongst healthcare professionals;
- Referral; and
- The sport and exercise psychology scope of practice, SEPAR core competencies, British Psychological Society Code of Ethics, and BASES Code of Conduct.

The workshop provided attendees with key skills to appreciate, understand and interact with a variety of individuals in their professional practice, be it clients or other healthcare professionals. Ultimately, the workshop helped convey the message of inclusive and socially just approaches that can be incorporated into one's professional practice.

Lessons Learned

This collaborative and interdisciplinary workshop has resulted in trainees gaining experience in theoretical and practical knowledge and skills. Ultimately, the workshop offered a variety of perspectives – from sport and exercise psychology and clinical social work – and space to discuss the creation of meaningful connections with clients and other healthcare professionals. Specifically, the workshop discussed the use of inclusive and socially just approaches to build cultural competence and better identify when clients need to be referred, such as in the instance of addressing mental health symptoms and disorders. The workshop also

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helped trainees understand different strategies that are needed to develop strong therapeutic relationships to facilitate treatment adherence and success (Gorczynski et al., 2022).

Workshop facilitators discussed their own experiences of how they have fostered strong therapeutic relationships with clients and helped refer clients when needed. For instance, from a clinical social worker perspective, it was demonstrated that by taking an inclusive and socially just approach, a client can begin to feel genuinely understood, seen, respected, and cared for. The use of such inclusive and socially just approaches provide the foundation for the creation of a safe space where trust and a therapeutic bond can be established and maintained. Such a bond can lead to shared decision making in therapy, agreement on goals and interventions, and the opportunity to address problems and challenges that may come up with the relationship during treatment. Without a firm understanding of equity, equality, diversity, inclusion, and social justice, a therapeutic relationship between a clinical social worker and a client would not be possible.

From a sport and exercise psychologist perspective, rooting one's practice in diversity and inclusion allows for a better understanding of a client and their situation throughout the consulting process. Operating in a manner that is inclusive and socially just allows the sport and exercise psychologist to establish a stronger relationship and gain a clearer sense of expectations and goals in the intake process as well as gather necessary knowledge about the client during needs analysis. It is at this point that a sport and exercise psychologist may identify client needs that exceed their scope of practice, such as addressing mental health symptoms and disorders that would need to be referred to a clinical social worker or clinical psychologist, for instance. Working inclusively also allows the sport and exercise psychologist to understand the client to collaboratively choose, plan, deliver, and monitor any agreed upon interventions for mental performance alongside their client.

Some insights for other individuals considering using a similar approach to collaborative and interdisciplinary training:

- Assume trainees have little working knowledge of other healthcare professions;
- Explain different scopes of practice for other healthcare professions;
- Demonstrate how collaborative and interdisciplinary approaches can address client needs in different ways;
- Consider the use of case studies to help demonstrate different approaches to care;
- Root training in core competencies of the Collaborative and Interdisciplinary model (i.e., climate of mutual respect and shared values, using knowledge across disciplines to assess and address client needs, strong and clear communication skills, and the application of relationship building values);
- Allow time for reflective practice throughout the workshop;
- Understand that not all trainees will be comfortable or equipped to discuss certain topics (e.g., decolonization), so create opportunities for guidance and reassurance to help strengthen self-efficacy around the topics engaged throughout the workshop; and
- Make the sessions fun, interactive and enjoyable by allowing plenty of time for group discussion where trainees can ask questions.

https://doi.org/10.33043/4acz7d3c.

Conclusion

Collaborative and interdisciplinary professional practice within sport and exercise settings is essential to provide support to clients. Using collaborative and interdisciplinary approaches in professional training helps establish a climate of mutual respect and shared values and build strong and clear communication skills. The purpose of this article was to provide insight into how collaborative and interdisciplinary professional practice can be discussed with and taught to trainees. We hope this article may stimulate educators within sport and exercise psychology, social work, and other professions to teach in a manner that is collaborative and interdisciplinary.

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Sport Social Work Journal

Resilience Training for High School Student-Athletes: A Pilot of the Life and Leadership through Sport Series

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High school student-athletes are reporting challenges following the pandemic and coping with the current landscape of school-based sport. With stressors and pressures surmounting, opportunities exist to develop and pilot school-based interventions to prevent mental health concerns and teach student-athletes how to "bounce back" in the face of adversity. This article details the development, implementation, and evaluation of the Life and Leadership Through Sport Series, a six-session resilience training piloted in Tier I and II formats. The study aimed to explore student-athlete and coach perceptions of the intervention and to examine whether student-athlete perceptions of knowledge, skills, coping, and help-seeking differed based on the delivery format. In total, 415 student-athletes and 26 coaches participated in the Tier I intervention, and 16 student-athletes participated in the Tier II intervention. Using a post-training evaluation measure, descriptive statistics indicated that student-athletes participating in the Tier II intervention reported more favorable perceptions of the intervention and efficacy regarding the learning outcomes than those participating in the Tier I intervention. Our pilot provides preliminary evidence regarding the potential for the Life and Leadership Through Sport Series to act as an evidence-based Tier II intervention for high school student-athletes participating in school-based sports.

Keywords: school-based intervention; high school; student-athletes; pilot; resilience skills

Every young person's path to adulthood, including reaching developmental and emotional milestones, learning life and social skills, and coping with stress, comprises different life successes and challenges. High school is often a pivotal time when young people learn skills to help them navigate the future, including coping with adversity. Coping with adversity is overcoming exposure to circumstances that deviate from the expected environment and require significant adaptations (McLaughlin, 2016). In other words, coping with adversity can include developing or utilizing skills and resources to adapt or grow after enduring events that have a meaningful impact on one's social, psychological, and developmental processes.

Notably, several adverse factors are affecting high school youth in the U.S. today, including the growing use of social media, increasing academic pressures, and forces associated with the COVID-19 pandemic, inflation, rising income inequality, and social injustices influencing families, schools, and communities (Abrams, 2023). The factors mentioned above coincide with an alarming uptick in child and adolescent mental health concerns witnessed in the last decade. From 2009 to 2019, the Centers for Disease Control and Prevention reported a 40% increase in mental health symptomology among adolescents. Meanwhile, suicide rates increased by 57% among youth ages 10 to 24 from 2007 to 2018 (Curtin, 2020). Furthermore, since the COVID-19 pandemic, symptoms of depression and anxiety have doubled (Racine et al., 2021), and emergency department visits have skyrocketed among this population (Yard et al., 2021). Of concern, exposure to adversity can cause dysregulated stress responses, increasing adolescents' risks for anxiety, depression, and other maladaptive problems (Stroud et al., 2009). One might argue that now, more than ever, adolescents need support to develop the skills to adapt and grow, especially in response to the adversities linked to the COVID-19 pandemic.

In the United States, an estimated 7.8 million high school student-athletes participate in school-based sport programs each year (National Federation of State High School Associations [NFHS], 2023), and schools are the number one location where young people access sports (Project Play, 2023). School-based sport programs are defined as those that require student-athletes to maintain academic eligibility and to compete on behalf of their school and community during out-of-school time (e.g., often practices take place after school, competitions in the evening or on weekends). Within this context, scholars are beginning to uncover trends that mirror broader national concerns about the health and well-being of adolescents, hereafter referred to as student-athletes. For example, the COVID-19 pandemic significantly altered the environments of student-athletes (Graupensperger et al., 2020). Collins et al. (2020) found that student-athletes reported that canceling school and sport seasons contributed to emotional challenges and feelings of uneasiness, disappointment, and frustration.

Following the pandemic, trends point to persistent levels of stress and pressure reported by this population. Ward et al. (2023) found that 91% of student-athletes reported experiencing some stress associated with sport, and 58% reported experiencing moderate to extreme stress. This quantitative study was further contextualized when Bates et al. (2024) reported academic and sport pressures are perceived to be mounting for high school student-athletes. Unique stressors in the school-based sport environment affected student-athletes psychologically, socially, academically, and physically (Bates et al., 2024). Lastly, and most concerning, few studies distill whether heightened levels of stress and pressure or emergent mental health issues are contributing to risks for suicide among high school student-athletes (Kaishian & Kaishian,

2021). However, loss due to suicide was recently deemed the second leading cause of death among collegiate student-athletes (Whelan et al., 2024), pointing toward a need to intervene early and engage in prevention activities.

Overall, the trends mentioned above are concerning given mental health concerns among student-athletes are comparable to the general student population (Gulliver et al., 2015; Giovannetti et al., 2019; Kaishian & Kaishian, 2021; Wolanian et al., 2016), yet they are far less likely to seek professional help compared to nonathletes (Eisenberg, 2014). With such high participation rates and emergent issues affecting this population, opportunities exist to implement targeted, structured, and systematic programs that foster resilience and help-seeking within school-based sport contexts (Chow et al., 2021).

School-Based Resilience Interventions

Schools in the U.S. are environments suitable for delivering targeted and universal interventions that can facilitate resilience among young people. Resilience is a multi-faceted concept that relies on the absence or presence of knowledge, skills, or resources that help an individual effectively cope with adversity (Joyce et al., 2018). Knowledge, skills, and resources that support the development of resilience exist across systems, including at the individual level (e.g., successful responses to prior exposure to stressors or personal coping strategies) and environmental levels through family, school, community, or cultural supports (Joyce et al., 2018; Ronen, 2021; van Breda, 2018). Said another way, resilience trainings focus on empowerment by increasing knowledge, teaching coping skills, and increasing access to or awareness of resources that can help individuals "bounce back" and adapt after experiencing an adverse event (Joyce et al., 2018; Smith et al., 2008, p. 194).

In a systematic review of existing resilience interventions, Joyce and colleagues (2018) found resilience trainings often involve a combination of components such as psychoeducation, mindfulness, cognitive skills, self-compassion skills, gratitude practice, emotional regulation training, relaxation, and goal-setting. In schools, a majority of school-based interventions targeting stress management or well-being utilize problem-solving, social skills training, mindfulness, relaxation techniques, and time management approaches to help adolescents reduce stress and improve coping, academic, and social skills (Carsley et al., 2018; Feiss et al., 2019; O'Connor et al., 2018; van Loon et al., 2020; 2022). In the U.S., school-based interventions are often delivered within the multi-tiered system of support (MTSS) framework and implemented at the Tier I, Tier II, and Tier III levels (Bates et al., 2021). Tier I interventions are often described as universal, primary, or core interventions delivered to 80% to 90% of students. Tier I interventions are designed to prevent problems, support academic achievement, and promote school success. Tier II represents secondary interventions for 5% to 10% of students who need targeted group support (Bates et al., 2021).

Several studies demonstrate the efficacy of school-based interventions delivered within the MTSS framework in reducing depressive symptoms (Arora et al., 2019), reducing internalizing behaviors (Franklin et al., 2012), and addressing psychosocial outcomes such as sexual health, aggression, self-esteem, school attendance, and identity (Allen-Meares et al., 2013). Moreover, several programs have been developed and tested with student-athletes over 18

(Breslin et al., 2018). Examples include Scarlet and Grit, which draws upon components of cognitive behavioral therapy, mindfulness, and positive psychology to help student-athletes thrive despite experiencing adversity, stress, or trauma (Sullivan et al., 2023). Golby and Wood (2016) also implemented psychological skills training with student-athletes that improved mental toughness, self-efficacy, self-esteem, and positive affect. However, to our knowledge, no school-based Tier I or Tier II resilience interventions in the U.S. have been designed and piloted to support high school student-athletes. Opportunities exist to examine whether programs can facilitate the constructs underlying resilience (e.g., knowledge, skills, coping, resource awareness) and at what Tier programs would be most effective when implemented in schools.

This research study examines the implementation and associated learning outcomes of a pilot resilience intervention for high school student-athletes called the Life and Leadership Through Sport Series. Our research questions sought to examine constructs underlying resilience by asking (a) What were student-athlete and coach perceptions of the intervention at the Tier I and Tier II level (e.g., enjoyment, satisfaction, knowledge gained)? (b) How did the delivery format influence student-athlete perceptions of their skills, ability to cope with stress and pressure, and help-seeking behaviors?

Intervention Development and Implementation

Context, Design, and Delivery

This study was one element of an extensive community-based participatory research (CBPR) study and coach training and education program called Coach Beyond (see Bates et al., 2023; Wallerstein et al., 2020). This CBPR work primarily aimed to empower high school coaches to go "beyond the Xs and Os" by training them on topics such as mental health, leadership, life skill development, etc. These topics were those most pressing for coaches based on data from a state-wide needs assessment survey (see Bates et al., 2021) and data collected from focus groups with student-athletes across the state (Bates et al., 2024). Coaches, athletic directors (ADs), and school leaders on the state-wide advisory team leading this work (e.g., Coach Beyond State Team) also voiced a need for parallel programming for student-athletes to supplement coach trainings and respond to their needs following the pandemic. These broader state-wide CBPR methods led to the development, implementation, and evaluation of interventions for student-athletes.

Together, a team of university researchers, sport social work practitioners, and Coach Beyond State Team members met quarterly to brainstorm content and activities needed to train coaches on each priority topic effectively. Following the brainstorming sessions, leaders of Coach Beyond would develop a pilot training that was then tested at the next Coach Beyond State Team meeting, allowing coaches, A.D.s, and school leaders to provide feedback and help craft each training's content, activities, and takeaways. Once each coach training was developed, it was piloted in high schools across the state with minor refinements made over time to improve quality and facilitation. Leaders of Coach Beyond then went a step further and gamified all the lessons to design a pilot program for student-athletes. Each session for student-athletes included a psychoeducation lesson, an interview with a member of the local athletic community, and a play-based application activity.

Next, the intervention was piloted in two formats. The Tier I intervention was implemented with all student-athletes and a subset of coaches in three high schools. The Tier II intervention was implemented with a targeted group of student-athletes from one high school. No coaches participated in the Tier II intervention. Six curricular sessions were offered at each school, approximately one per month, for one hour each. Sessions were optional, but A.D.s at each school encouraged participation and engagement throughout the year. A.D.s communicated with families about this program, allowing choice regarding participation. The program included a post-intervention evaluation to gather de-identified secondary data to assess learning outcomes and offer insights for future improvements.

Participants

Approximately 400 student-athletes from three high schools within one large school district, totaling an estimated 1,200 participants, were involved in the Tier I intervention. Additionally, an estimated 20 to 30 coaches from each school and the high school athletic directors attended the Tier I sessions. According to school report cards, 32% of students across the three high schools identified as Black, Indigenous youth of color, and 23% were experiencing the effects of poverty and its correlates (e.g., "Non-White" and "Economic Disadvantage" designations; Ohio School Report Cards, 2023). In total, 415 student-athletes (35% response rate) and 26 coaches (43% response rate) completed the optional evaluation survey of the Tier I intervention. At the Tier II level, 25 student-athletes from one high school were invited to participate in the intervention, and 16 (64% response rate) completed the evaluation survey. In this high school, 32% of students identified as Black, Indigenous youth of color, and 26% were experiencing the effects of poverty and its correlates (Ohio School Report Cards, 2023). Demographic characteristics of student-athletes and coaches who completed the evaluation measures are reported in Table 1, including their self-reported gender, grade, race, number of sessions attended, and sport(s) played or coached.

Life and Leadership Through Sport Series

Session 1: Supporting Student-Athlete Mental Health

The first session focused on the importance of mental health and wellness for student-athletes. The session began with an icebreaker activity where participants anonymously responded to the following prompts via Slido (e.g., online polling mechanism): (a) *It is challenging at times to balance school and sport*; (b) *If I were struggling, I would know who to go to for help in my school*; and (c) *I am interested in learning life and leadership skills*. The facilitator used the responses (% agreed or strongly agreed) to frame the session and supported the school-specific results with broader trends seen nationally (e.g., 91% of student-athletes report struggling to balance school and sport; Ward et al., 2023). In the Tier I session, guest speakers were invited to a stage to discuss their experiences with mental health and sports. In the Tier II session, student-athletes utilized a card deck to discuss stigma regarding mental health in the sport environment.

Next, the facilitators shared strategies to normalize wellness check-ins with teammates and those that coaches could utilize at the beginning of practice (examples here). Additionally,

facilitators had student-athletes practice several techniques (e.g., body scans and mindfulness activities) that could be easily implemented in warm-up routines. Finally, the session concluded with a discussion about linkage and referral methods specific to each school. High school counselors and social workers were asked to introduce themselves and share how student-athletes and coaches could contact them to gain support or resources. Student-athletes were tasked with three homework prompts: (1) How will your team normalize checking in with one another?; (2) What is one mental wellness strategy you can include in your warm-up or pre-game routine?; and (3) How can you/your coach contact someone if you/they need support?

Session 2: Developing Leaders

The second session was designed to teach student-athletes about different leadership styles. Student-athletes were exposed to five sport-specific leadership domains: Game Day Leaders, Locker Room Leaders, Engagement Leaders, Social Leaders, and Brave Leaders. In the Tier I sessions, guest speakers who were former student-athletes shared their perspectives on leadership through sport. In the Tier II sessions, student-athletes completed the Coach Beyond Leadership Inventory. They discussed domains where they scored high, indicating they emulated strong leadership abilities, and areas where they scored low, indicating they had room for improvement. After a brief psychoeducation session describing the characteristics of the five leadership domains, student-athletes engaged in a game of Leadership Family Feud in which they responded to scenarios related to each domain.

In these real-life scenarios gathered via focus groups with student-athletes from across the state (see Bates et al., 2024), student-athletes were challenged to show up and emulate leadership, whether as a "Game Day Leader" or a "Brave Leader." The game aimed to have groups of student-athletes problem-solve and identify leadership roles and responsibilities across the five domains. After the session, student-athletes were given the following homework assignments: (1) complete or keep the Coach Beyond Leadership Inventory and discuss the results with a teammate or coach, and (2) submit pictures and descriptions of your team or teammates acting as Game Day, Locker Room, Social, Engagement, or Brave Leaders that could be shared in this next session.

Session 3: Mental Strategies for Improving Athletic Performance

Session three focused on teaching mental strategies to improve athletic performance and help student-athletes cope with adversity. Specifically, student-athletes learned four specific mental strategies: mindfulness, reframing thoughts and actions, positive self-talk, and routines and rituals. The facilitator presented a brief psychoeducation component defining and providing examples of these mental strategies before shifting to a play-based activity. Then, student-athletes engaged in a game of Mental Strategies Jeopardy. The four categories of questions corresponded with one of the mental strategies discussed in the session: mindfulness, reframing thoughts and actions, positive self-talk, and routines and rituals. Playing Mental Strategies Jeopardy reinforced the topics introduced in the lecture component and allowed the student-athletes to apply the material to real-life examples (e.g., reframe this unhelpful thought after not scoring). At the end of the session, the student-athletes were tasked with homework to implement at least one mental strategy on their own, with their team, or at practice.

Session 4: Building a Community of Support

Session four concentrated on different strategies that student-athletes could use to set boundaries and build a community of support with peers, family members, coaches, and members of their communities. The component included information from the schools' respective athletic departments' handbooks, outlining specific expectations for and consequences of negative student-athlete, parent/caregiver, or fan behavior. Then, student-athletes learned how to identify and express their emotions and strategies to communicate their needs and establish boundaries. Specifically, student-athletes learned about naming their emotions before reacting to them ("name it to tame it") and using "I" statements to share their feelings with others. They also were given strategies to set boundaries with parents/caregivers, such as the "24-hour rule." The "24-hour rule" included asking a parent/caregiver to allow 24 hours after a game or competition before discussing their performance.

To communicate needs and establish boundaries, student-athletes were also taught how to communicate using the Situation, Background, Assessment, and Recommendation (SBAR) approach. This approach includes describing the situation and relevant background information, assessing the situation, and recommending improvements (Haig et al., 2006). After the psychoeducation portion, student-athletes competed in a bracket-style "World Cup: Sport for Support" game where they were asked to respond to scenarios using communication strategies from the lesson. An example is "You are unhappy with your playing time. How can you communicate your feelings with your coach using an "I" statement?" The session concluded with the following homework prompts: (1) have a conversation with your parents/caregivers or a fan to talk about the expectations of your athletic program and discuss how they can support you while playing sports; (2) review the athletic handbook as a team; and (3) thank members of their fanbase when they engage in positive fan behaviors.

Session 5: Fostering a Positive Team Environment

Session five focused on cultivating awareness of activities and behaviors that help foster a positive team environment. The psychoeducation component focused on establishing trust, building relationships, and creating an inclusive team culture (acronym "T.R.I."). Trust was taught through the acronym BRAVING: boundaries, reliability, accountability, vault, integrity, non-judgment, generosity (Brown, 2018). Facilitators shared strategies underlying strong relationships, including spending time with each other and utilizing effective verbal and non-verbal communication skills. Additionally, facilitators showed student-athletes and coaches how to utilize a relationship-mapping tool to assess weak and strong ties on a team. Student-athletes also learned how inclusive team cultures have shared values, beliefs, attitudes, and behaviors. After the component, the student-athletes played "The Game of TRI-ing." Using a gamified design, student-athletes would compete and answer scenarios requiring them to identify ways to build trust, establish stronger relationships, or cultivate an inclusive culture. An example scenario from the game read, "There are five new players on your team. What is one thing you do to help your teammates feel included and learn your team norms?" After the session, student-athletes were asked to play "The Game of TRI-ing" as a team, plan an out-of-sport activity with their team, and identify one area of BRAVING they would like to improve upon before the next session.

Session 6: Managing Stress and Pressure as Student-Athletes

The final session focused on teaching student-athletes and coaches physical, mental, emotional, and spiritual strategies that help to manage stress and pressure. The psychoeducation component discussed sources of stress experienced by coaches and athletes (United States Olympic & Paralympic Committee, 2020) and the relationship between cyclical stress and burnout. Then, student-athletes engaged in an activity. In the Tier I intervention, student-athletes who participated in a "Stress Walk" were given an "athlete profile" comprised of a mixture of helpful and unhelpful coping behaviors. In the activity, the facilitator read a broad domain, such as sleep, and then student-athletes would take a step forward if their profile indicated they got enough sleep or take a step backward if they did not. After all the prompts were read, the student-athletes with profiles using more helpful coping behaviors were toward the front, and those with profiles using unhelpful coping behaviors were toward the back. We then gave those toward the front several advantages in a play-based activity (e.g., hula hooping) and those in the back more disadvantages to simulate how stress management and coping influence performance.

In the Tier II intervention, student-athletes played our "Knockout Burnout" card game. Student-athletes were divided into groups and given a custom deck of cards. Cards were designed to represent four categories of coping across each suite (e.g., hearts, spades, etc.): physical, mental, emotional, and spiritual. Cards with the lowest number had unhelpful coping behaviors, while cards with higher numbers had helpful coping behaviors. For example, the Jack of Spades card read, "Finds ways to give back to the community." Student-athletes used the card deck to play a game of "spoons." When a player was "knocked out," they had to debrief and discuss whether each of the cards in their hands were helpful or unhelpful coping behaviors. After debriefing the activity, the facilitators transitioned to the evaluation survey. Because this was the final session, there was no homework assignment; participants were asked to participate in the evaluation survey.

Data Collection and Measures

Student-athletes and coaches who attended at least one session were asked to complete a voluntary post-intervention evaluation survey distributed by a QR code in the last session. Data were de-identified when shared with researchers; thus, analysis was deemed exempt by the author's Institutional Review Board. The evaluation consisted of demographic indicators (see Table 1), perceptions of the overall program, and items assessing enjoyment, satisfaction, knowledge, skills, coping, and help-seeking behaviors.

Enjoyment, satisfaction, and knowledge. Student-athletes and coaches were asked three questions measured on a five-point Likert-style scale about their perceived enjoyment, satisfaction, and knowledge gained from the intervention: (a) "I enjoyed attending the Life and Leadership sessions" (1 = *Strongly disagree*; 5 = *Strongly agree*); (b) "How satisfied are you with the Life and Leadership Series?" (1 = *Extremely dissatisfied*; 5 = *Extremely satisfied*).; (c) "I gained knowledge from the Life and Leadership sessions" (1 = *Strongly disagree*; 5 = *Strongly agree*).

Skills. Student-athletes were asked eight questions that aligned with the learning objectives guiding each session to explore their perceptions of their skills. Items were measured using a five-point Likert-style scale (1 = *Strongly disagree;* 5 = *Strongly agree*). The question's stem read, "As a result of attending the Life & Leadership series, I feel confident in my ability to...". The questions related to the learning objectives established for each session (e.g., "contribute to a positive team culture," "employ a mental strategy to regulate my emotions," and "be a leader on my team").

Coping and help-seeking. Student-athletes also completed the Brief Resilient Coping Scale (Sinclair & Wallston, 2004) comprised of four items measured on a 5-point Likert Scale (1= *Does not describe me*; 5 = *Describes me very well*). Items asked respondents to reflect on their ability to adapt and grow when faced with adversity. An example item reads, "I believe I can grow in positive ways by dealing with difficult situations." Lastly, student-athletes completed an adapted 3-item version of Wyman et al.'s (2008) Help-Seeking Acceptability at School Scale (1 = *Strongly disagree*; 4 = *Strongly agree*). The measure was adapted to include two additional indicators of help-seeking behaviors related to their coaches compared to others in their schools (e.g., counselors and other adults). On this measure, respondents rate their agreement in response to the stem, "If I was really upset and needed help…"

Analytic Approach

De-identified data were screened, cleaned, and analyzed in SPSS (IBM SPSS Statistics for Windows, Version 28.0. Armonk, NY: I.B.M. Corp) and checked for normality and outliers. Given the two sample sizes varied significantly, our analytic approach involved examining descriptive statistics, including the frequencies, means, and standard deviations on each item, and comparing mean scores across the two intervention delivery formats. Valid percentages and mean scores on questions with missing data were reported. Items assessing perceptions of enjoyment, satisfaction, and knowledge completed by coaches and student-athletes were examined first, followed by a comparison of student-athlete perceptions of skills, coping, and help-seeking behaviors.

Results

Enjoyment, Satisfaction, and Knowledge

Perceptions of the resilience skills intervention differed based on the design and delivery of the intervention. At the Tier I level, student-athletes reported low levels of enjoyment (39% reported enjoying the sessions) and moderate levels of satisfaction (53% were satisfied) and knowledge gained (63% gained knowledge). Alternatively, coaches attending the Tier I intervention reported high levels of enjoyment (77%), satisfaction (69%), and knowledge gained (72%). At the Tier II level, student-athletes reported high levels of enjoyment (100%), satisfaction (94%), and knowledge gained (100%). Means scores indicated coaches participating in the Tier I intervention, followed by student-athletes participating in the Tier II intervention, reported more positive perceptions regarding enjoyment, satisfaction, and knowledge gained compared to student-athletes attending the Tier I intervention, respectively (see Table 2).

Skills, Coping, and Help-Seeking

Student-athletes participating in the Tier I intervention reported the highest perceptions on items assessing their ability to contribute to a positive team culture (75%) and build trust with their teammates (70%). In contrast, student-athletes participating in the Tier I intervention reported lower levels of efficacy regarding skills and concepts tied to expressing their emotions (48%) and employing mental strategies (55%). Student-athletes participating in the Tier II intervention reported high levels of efficacy regarding learning their ability to establish boundaries (94%), be a leader on their teams (94%), build trust with their teammates (94%), and employ a mental strategy to regulate their emotions (94%). Notably, student-athletes participating in the Tier II intervention reported higher mean scores on all items, demonstrating greater efficacy in utilizing a skill taught through the intervention than student-athletes participating in the Tier I intervention (see Table 3).

Comparably, student-athletes participating in the Tier II intervention reported higher mean scores on items assessing coping than those who participated in the Tier I intervention. Help-seeking behaviors were also higher for those participating in the Tier II intervention. Notably, participants reported being more likely to talk to a coach when they were upset in both schools participating in the intervention compared to prompts related to talking to counselors or other adults in their schools (71% Tier I, 88% Tier II) at the end of the intervention.

Discussion

This study is one of the first to pilot a resilience intervention explicitly designed for U.S. high school student-athletes participating in school-based sports. Integral to the development and efficacy of school-based interventions is determining how best to support training implementation within the MTSS model in schools. As such, the aims of this study were twofold. First, this study sought to explore student-athlete and coach perceptions of the intervention and examine whether the intervention differed based on the delivery format (e.g., Tier I vs. Tier II). Second, descriptive statistics were examined to determine whether the delivery format influenced student-athlete perceptions of skills, coping, and help-seeking. Findings indicated coaches had positive perceptions of the Tier I intervention. Meanwhile, student-athletes participating in the Tier II intervention reported higher levels of enjoyment, satisfaction, and knowledge gained than student-athletes participating in the Tier I intervention. In addition, student-athletes participating in the Tier II intervention reported higher efficacy levels than those participating in the Tier I format related to coping and help-seeking, especially with coaches.

Our findings are important to compare to other interventions designed to increase awareness or promote resilience among student-athletes and coaches. Based on prior research, studies indicate the size of the intervention group may need to be considered when examining intervention effectiveness. Breslin et al.'s (2017) systematic review of interventions to increase awareness of mental health and well-being found that large-scale interventions with coaches can facilitate knowledge gains and improve mental health literacy. Indeed, many studies demonstrated participation led to reduced stigma and increased efficacy to support someone who may be struggling (Breslin et al., 2017). Perhaps coaches enjoyed the co-learning and sharing on behalf of former student-athletes, coaches, and sport leaders more so than the student-athletes in

attendance. The U.S. National Coach Survey data indicates that 47% of coaches feel confident teaching life skills through sport, and only 29% feel confident developing their athletes into leaders (Anderson-Butcher & Bates, 2022). In this regard, the Tier I delivery format may have served as a form of professional development for coaches, providing them with tools, language, and strategies to utilize that could help them coach "beyond the Xs and Os."

For student-athletes, the Life and Leadership Through Sport Series was received best in the Tier II delivery format. In comparison, Sullivan et al. (2023) delivered the Scarlet and Grit resilience training to 79 collegiate student-athletes, and Golby and Wood (2016) delivered their psychological skills training to 16 student-athletes. In both studies, researchers identified significant and positive outcomes regarding using adaptive coping strategies, seeking social support, and improving perceptions of mental toughness, self-efficacy, self-esteem, and positive affect (Golby & Wood, 2016; Sullivan et al., 2023). Although our study did not compare scores over time, results indicate the intervention delivery in smaller group-based formats may be most enjoyable and protective of greater learning and transfer of skills post-intervention. In the Tier II format, student-athletes had more time to discuss and apply the skills taught and engage in the experiential gamified components of the lessons compared to student-athletes participating in the Tier I format. Experiential learning approaches and play-based activities likely allowed for more observation and reflection, helping the learners construct knowledge, develop skills, and learn from the discussions and peer interactions (Newman et al., 2017).

As high school student-athletes increasingly report elevated mental health concerns (Racine et al., 2021) and heightened stressors associated with sport (Bates et al., 2024; Ward et al., 2023), there is a need for interventions to equip student-athletes with resilience, coping, and help-seeking knowledge and skills. In high school sport contexts, coaches reported feeling confident teaching the "X's and O's" but less confident teaching life skills through sport (Bates & Anderson-Butcher, 2022), meaning student-athletes may not have integrated opportunities through sport to counteract risks for poor mental health outcomes by learning life and leadership skills that promote resilience. Several sessions of the Life and Leadership Through Sport Series were specifically designed to address the growing concerns about student-athlete mental health and stress (i.e., Session 1: Supporting Student-Athlete Mental Health; Session 3: Mental Strategies for Improving Athletic Performance; Session 6: Managing Stress and Pressure as Student-Athletes) and designed to focus on their holistic health and well-being. Promisingly, student-athletes participating in the Life and Leadership Through Sport Series at the Tier II level reported positive perceptions of learning new knowledge skills such as acknowledging or managing stress as a result of participation. Coupled with stronger coping skills and help-seeking behaviors, it appears that the Life and Leadership Through Sport Series at the Tier II level might be one effective way to help high school student-athletes navigate the pressures of contemporary high school sport and learn skills that extend beyond the court, field, mat, or pitch.

The development, implementation, and evaluation of the Life and Leadership Through Sport Series has the potential to inform wellness interventions in high school athletic programs and support the nearly eight million U.S. high school students participating in school-based sports annually (NFHS, 2023). Findings have important implications for practitioners working at the intersection of education and sport. School and sport social workers are often integral parts of education systems and involved in Tier II programming yet may be unprepared to mitigate the

unique challenges student-athletes face. This curriculum provides sport social workers with gamified and relevant tools to promote resilience among this population that can be implemented in collaboration with coaches and A.D.s. This intervention could be taught to coaches, educators, social workers, and sports leaders to implement in their school environments or to empower student-athletes to deliver psychoeducation lessons and prevention activities with their teammates. Implementing these gamified lessons and play-based learning activities can reach a vulnerable population experiencing stigma around mental health symptomology and help-seeking (Kaier et al., 2015) and support life and leadership skill development post-COVID (Yamada et al., 2023).

Limitations. This study is not without limitations. First, this intervention was only offered in four suburban high schools. As such, the groups were not highly diverse. Furthermore, there was not perfect attendance at all of the sessions. This lack of attendance may have impacted the satisfaction of the intervention and outcomes. Additionally, student-athlete participants opted to participate in the intervention and were not randomly assigned, contributing to the potential for selection bias or social desirability bias in the evaluation responses. Also, the evaluation design did not include pre-and post-test data; instead, de-identified secondary data were analyzed post-intervention. The lack of pre-test comparison data might lead to inaccuracies in assessing the change in participants' competencies developed due to the intervention. Future iterations and assessments of the intervention should include pre-and post-test measures for more accurate data collection. Finally, this intervention does not address all of the forces and factors influencing the context of school-based sports and adversities experienced by student-athletes (e.g., parents/caregivers, time, coaches, lack of accountability, abuse, policy oversight, etc.). However, it is one strategy with the potential to facilitate learning and empowerment among student-athletes at a critical developmental time and in partnership with coaches and A.D.s.

Implications for Practice, Research, and Policy

Findings from this pilot study are being used to inform the implementation of the Life and Leadership through Sport Series program in several ways. Based on findings from this study, future programming will primarily operate at the Tier II level to maximize student-athlete enjoyment, satisfaction, self-efficacy, and knowledge. Notably, coaches reported high levels of enjoyment and knowledge gained and moderate satisfaction in the Tier I intervention; however, no coaches participated in the Tier II intervention as a comparison. Because coaches enjoyed learning alongside their student-athletes, the Coach Beyond State Team and school district partners have recommended future sessions invite coaches to participate in a smaller, Tier II setting. Lastly, coaches and A.D.s have requested this intervention be piloted for large student-athlete leadership conferences where breakout groups can mirror the learning and activities at the Tier II level. Bringing different student-athletes together to discuss these topics and learn from and with one another can extend learning beyond one school and empower student-athletes to take the lessons back to their peers, teams, schools, districts, and leagues.

Our findings provide a preliminary examination of the Life and Leadership through Sport Series, providing a foundation for future research studies. In the future, opportunities exist to explore outcomes associated with the intervention using more rigorous research designs and different contexts. Researchers can utilize pre- and post-training evaluations to examine changes

in perceptions over time, qualitative approaches such as focus groups, or randomly assign student-athletes to intervention and control groups. In addition, gathering attendance (e.g., dosage) will be critical to determine whether the totality of the six sessions has a positive effect on student-athletes. One element not studied here was whether the student-athletes completed the homework activities and whether those participating in the Tier II intervention engaged their teammates and teams in the homework assignments. Scholars can conduct observational studies in the future to determine whether homework activities translated to teams or sport-based activities (e.g., daily check-ins at practice). Finally, researchers can study the effects of coaches receiving parallel training on topics similar to those of student-athletes (Bates et al., 2023).

At the policy level, studies such as this one are needed with larger samples in diverse schools and districts to examine whether this type of intervention can act as a form of prevention for broader crises like suicide and also empower coaches to focus on more than sport skills and tactics and help young people prepare for life after sport. Many high schools have boundaries on time allocated for practice and physical training. Yet one wonders whether changes in practice mandates might adapt to include an emphasis on resilience training to counteract some of the pressures and stressors inherent in sport. Perhaps by providing coaches and student-athletes with knowledge, skills, and activities designed to foster resilience, high school sport can holistically contribute to positive youth development and prevention activities to mitigate broader health and social disparities. Training social workers, coaches, or A.D.s to deliver these sessions could also be a sustainable way to continue this work in schools, embedding resilience trainings in athletic departments to support student-athletes.

Conclusion

Student-athletes face numerous academic, social, and sport-related stressors that can negatively impact their health and well-being. Resilience training programs can equip student-athletes with the necessary skills to effectively "bounce back" in the face of adversity and support the development of skills that go beyond the court, field, mat, and pitch and into life. Findings from this pilot study indicate that the Life and Leadership Through Sport Series was well-received by coaches at the Tier I level and most effectively implemented in a Tier II format for high school student-athletes. Our results have important implications for developing evidence-based programs to integrate into the MTSS framework and sharing interventions that sports social workers can implement in schools.

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Table 1.

Demographic Characteristics of Student-Athletes and Coaches

Demographic Characteristics	Tier I				Tier II	
	Student-Athletes (N=415)		Coaches (N=26)		Student-Athletes (N=16)	
	n	%	n	%	n	%
Gender						
Male	139	39	13	68	7	44
Female	218	60	6	32	9	56
Self-describe/Prefer not to answer	5	1	--	--	--	--
Grade						
9th Grade	146	35	--	--	--	--
10th Grade	111	27	--	--	--	--
11th Grade	109	26	--	--	7	47
12th Grade	49	12	--	--	8	44
Race						
African American/Black	29	8	1	3	--	--
Hispanic/Latino	16	4	1	3	--	--
Asian/Pacific Islander	27	8	--	--	--	--
Native American or American Indian	3	<1	--	--	--	--
White	260	72	17	50	15	94
Multiple Races	18	5	--	--	1	6
Self-describe: Prefer not to answer	8	2	--	--	--	--
Sport(s) Played or Coached						

Baseball	23	5	1	3	2	11
Basketball	30	7	4	12	3	17
Bowling	7	2	--	--	--	--
Cheer	27	6	2	6	--	--
Cross Country	27	6	2	6	1	6
Dance	3	<1	--	--	--	--
Field Hockey	--	--	--	--	2	11
Football	34	7	2	6	4	22
Golf	12	3	2	6	1	6
Gymnastics	4	1	--	--	1	6
Ice Hockey	7	2	--	--	2	11
Lacrosse	33	7	2	6	7	39
Soccer	34	8	4	12	1	6
Softball	47	10	3	9	2	11
Swimming and Diving	12	2	--	--	1	6
Tennis	47	10	3	9	3	17
Track & Field	140	31	3	9	1	6
Volleyball	41	9	2	6	--	--
Wrestling	17	4	--	--	--	--

Note. Total percentage of sport(s) played or coached exceeds 100% due to reports of playing or coaching multiple sports. Percentages represent valid percentages of those who chose to answer the demographic questions.

Table 2.
Student-Athlete and Coach Perceptions of the Design and Delivery

Evaluation Item	Tier I						Tier II		
	Student-Athletes			Coaches			Student-Athletes		
	n	Mean (*SD*)	% Agree or Strongly Agree	n	Mean (*SD*)	% Agree or Strongly Agree	n	Mean (*SD*)	% Agree or Strongly Agree
I enjoyed attending the Life & Leadership sessions.	403	2.82 (1.05)	39	26	3.96 (.92)	77	16	4.75 (0.48)	100
*How satisfied are you with the Life & Leadership series?	309	3.44 (.92)	53	19	3.68 (1.00)	69	16	4.13 (.50)	94
I gained knowledge from the Life & Leadership series.	309	3.60 (1.03)	63	18	3.89 (1.02)	72	16	4.44 (0.51)	100

**Note*. The Likert scale on the satisfaction item ranged from 1 = *Extremely dissatisfied* to 5 = *Extremely satisfied*. The range for all items was 1 to 5.

Table 3.
Student-Athlete Perceptions of the Learning Objectives

As a result of attending the Life & Leadership series…	Tier I			Tier II		
	n	Mean (*SD*)	% Agree or Strongly Agree	n	Mean (*SD*)	% Agree or Strongly Agree
I feel confident in my ability to establish boundaries for myself.	376	3.52 (1.05)	60	16	4.25 (1.00)	94
I feel confident in my ability to express my emotions to others.	366	3.31 (1.07)	48	16	3.88 (1.26)	63
I feel confident in my ability to be a leader on my team.	368	3.73 (1.08)	66	16	4.44 (1.03)	94
I am confident in my ability to build trust with my teammates.	369	3.73 (1.08)	70	16	4.38 (1.03)	94
I am confident in my ability to contribute to a positive team culture.	368	3.79 (1.02)	75	16	4.56 (1.09)	88
I know how to act as a leader in a variety of different settings.	345	3.89 (1.01)	63	16	4.31 (1.08)	88
I am able to employ a mental strategy to regulate my emotions.	342	3.64 (.99)	55	16	4.19 (0.98)	94
I am able to employ a mental strategy to prepare for a big test or competition.	339	3.48 (1.05)	54	16	4.25 (1.13)	81
I am able to acknowledge when I am stressed.	337	3.39 (1.05)	63	16	4.31 (1.20)	88
My team has a culture that values wellness.	334	3.62 (1.08)	68	16	4.19 (1.05)	88

Note. The range for all items was 1 to 5.

Sport Social Work Journal

Engaging Youth with the Teaching Personal and Social Responsibility Framework: Sport Psychology Graduate Students' Experience in a Service-Learning Course

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Purpose: *Grounded in the framework of Hellison's (2011) Teaching Personal and Social Responsibility framework, this study sought to understand how graduate students learned to facilitate a youth physical activity program while participating in a service-learning course designed to promote sport for development.* ***Methods:*** *This study utilized a thematic analysis approach. Researchers interviewed one cohort of master's students (n=5) studying counseling and sport psychology who participated in the service-learning course.* ***Results:*** *Identified themes included: (1) supervision and consultation, (2) observation, and (3) self-reflection, along with emergent sub-themes when relevant.* ***Conclusions:*** *This research provides insight into how future service-learning courses in the field of counseling and sport psychology can be developed to facilitate graduate student learning, exploring key elements for student self-reflection and*

supervision. ***Applications in Sport:*** *The results can be valuable for sport psychologists, sport social workers, mental performance consultants, physical education teachers, and coach educators to design practicum and/or developmental experiences to augment their learning of how to work with youth.*

Keywords: Service-learning; sport for development; sports-based youth development; sport psychology; graduate training

Sport is being utilized as a vehicle for social change that can make an impact on pressing social issues such as addressing peace through sport, ameliorating health disparities, promoting economic development, etc. (Anderson-Butcher, 2019). There are many ways across disciplines that describe ways of using sport and physical activity to benefit youth that have a range of goals and approaches and outcomes. Sport for Development (SfD) is transdisciplinary, with sport psychology recognized as a core discipline contributing to this work (Whitley et al., 2022). Another common way to characterize this type of work is sport-based youth development (SBYD; Weiss et al., 2012; Weiss, 2013).

Within the field of sport psychology, there is a call for sport psychologists and mental performance consultants to become more engaged with addressing social inequities and directing services toward communities who have historically been marginalized (Camiré et al., 2022; Compton, 2022; Krane & Waldron, 2021). To serve such communities well, it requires sport psychology students to gain important basic cultural awareness and a set of skills to help them navigate responsibly in community settings that are sometimes quite different from their university. Some in the field of sport psychology have engaged with these issues through a SfD lens (Blom et al., 2015; Whitley et al., 2022).

Within sport psychology graduate programs, in which there is often a bias towards working in elite and high performance contexts, there exists an opportunity to engage students in community-based work that aims to develop a sense of connection and caring for others to address social inequities, which aligns with SfD and SBYD approaches, as much of the literature focuses on adjacent fields, like kinesiology (Whitley et al., 2017).

One way sport psychology students can learn to do SfD and SBYD work is through service learning. Service-learning, an often-used teaching modality in higher education, has become increasingly popular in sport and physical activity-based settings (Chiva-Bartoll & Fernández-Rio, 2022; Chiva-Bartoll et al., 2019; Francisco-Garcés et al., 2022; Salam et al., 2019; Whitley & Walsh, 2014). However, to date, most literature exploring the intersection between service-learning and SfD comes from the sport management field (Bruening et al., 2015; Bush et al., 2016; Klein et al., 2023).

When examining service-learning programs, it is important to consider the curricular framework being implemented because we need to add to our understanding of useful frameworks for working with staff and youth (Holt et al., 2017). In the current study, the teaching personal and social responsibility (TPSR; Hellison, 2011) framework is utilized because it has been implemented and researched in SfD and SBYD programs across the world. Through

the stories of sport psychology graduate students, the present study seeks to add to the existing literature by exploring how they learn in an established SfD service-learning program that utilizes the TPSR framework.

Service-Learning

Service-learning emphasizes experiential-based work, wherein students learn how to work with a given population in their chosen discipline by being present on-site with the students and immediately immersed in practical experience (Salam et al., 2019). Students often have on-site mentors who facilitate programming alongside them in this course-based practice. The presence of mentors helps to support students' growth while encouraging them to implement new approaches that they learn in the traditional classroom setting (Bringle & Hatcher, 1995) Further, in the associated coursework at their school, students engage in an array of reflective exercises, writing prompts, and discussions to help further their understanding of the course's focus and discipline, as well as "an enhanced sense of civic responsibility" (Bringle & Hatcher, 1996, p. 222). In a systematic review of service learning in higher education within sport and physical education, Chiva-Bartoll and colleagues (2019) found overall positive benefits for students engaging in service-learning courses, reporting that many studies indicated self-described student development in professional skills around civic activity, teaching, and understanding of cultures. This discussion was echoed by Francisco-Garcés and colleagues (2022) as they called for a deeper understanding of the reflective process in service learning.

Field experiences are especially valuable for students to be able to take the concepts and theoretical orientations they are learning in their classwork and put them into practical use, some call this going from theory to practice/praxis. Educational philosopher John Dewey (1938) noted, "There is no such thing as educational value in the abstract." Reflective practice is a critical component to students' growth in field experiences. Reflective practice is an iterative cycle of considering, analyzing, and evaluating situations that help inform individuals' future actions in similar situations, e.g., improving one's own coaching and consulting skill working in a youth program (Cropley et al., 2010). This process is often situated within experiential learning to facilitate one's development (Kolb, 1984). These sorts of situated-learning experiences that happen in the field when coupled with reflective practice can lead to deep learning experiences because students must actively match what they know and have learned to a dynamic context.

Sport for Development

The societal importance of sport as a vehicle for social change has been depicted in film (e.g., Invictus) and emphasized disciplines in academia and in the government like the State Department, as evidenced by funding for international SfD programming run by universities in the United States (Burton, 2023).

In the United States, there are many ways that SfD has materialized, with SfD often promoted via (SBYD) programs and other community-based programs that use physical activity as the vehicle for engagement (Weiss et al., 2012; Weiss, 2013). A recent systematic review of SBYD interventions in the U.S. found limited efficacy for these programs as related to public health goals and called for a better understanding of how program leaders are trained to evaluate

the programs' effectiveness more rigorously (Whitley et al., 2019). This limited efficacy was driven mostly by inconsistent quality of methods and challenges with intervention fidelity (Whitley et al., 2019). Given that there are so many programs attempting to deliver benefits of their programs to their participants, there is a need for understanding how to develop the personnel who run those programs, that is the mentors and coaches who interact directly with youth.

There are several existing programs that work to develop their trainers and facilitators (e.g., coaches) to promote sports-based youth development. In one model, the Center for Healing and Justice Through Sport (CHJS) employs an array of training designed to meet the youth's need—whether that be training a coach, a staff, or an entire organization (CHJS, 2023). CHJS derives their training model through sport-based youth development, trauma-informed sport, and an emphasis on girls in sport, targeting engagement events that can last as little as 90 minutes or follow an organization for over a year (CHJS, 2023). Another, Up2Us Sports, developed the first certification in SBYD and focuses many of its offerings to help facilitators build relationships; manage mental and physical health, like youth experiences of trauma; and engage with youth exhibiting challenging behaviors (Up2Us Sports, 2023). Finally, part of the Positive Coaching Alliance's offerings are online workshops and courses designed to impact team dynamics and culture, with one recent workshop geared toward battling racism through sport (Positive Coaching Alliance, 2023). Each of these organizations seek to partner with existing teams and sports communities to help deliver these services to foster youth development through sport.

Another model of programming for SBYD is Doc Wayne, an organization that trains their own coaches as both licensed clinicians and youth development professionals (Doc Wayne, 2023a). Through this hybrid approach integrating trained mental health professionals, youth participating in Doc Wayne programming engage in sport as a vehicle for group and individual therapy. Further, they integrate evidence-based practices like dialectical behavior therapy; attachment, regulation, and competency; and personal and social responsibility (Doc Wayne, 2023b). All these models demonstrate effective ways of integrating SfD into community programs in youth sport. What is currently missing when it comes to understanding the development of SBYD facilitators and trainers is a focus on the dynamics of their learning experiences. Specifically, while the previous models describe what they teach facilitators, there is a gap in the literature in understanding how these facilitators learn and what could improve their training experiences.

Service-learning courses have become an increasingly utilized model to train those preparing to work in sport for development (Bruening et al., 2015; Huffman & Hillyer, 2014; Whitley & Walsh, 2014). For example, Whitley and Walsh (2014) outline a framework for implementing service-learning courses in physical activity settings. Further, they discuss the efficacy of a physical activity-based service-learning course and the students' personal, academic, and intellectual development as well as their increased social and community engagement (Whitley & Walsh, 2014). In the same year, Huffman and Hillyer (2014) outlined a service-learning course and program they have established, focusing on how and why the course was developed as well as how it benefited the students and community. In 2015, Bruening and colleagues found increased social capital development in undergraduate students participating in a service-learning course designed for SfD. These studies all highlight the importance of service-

learning courses in SBYD, and their work has paved the way for future scholars to create similar programs. However, there continues to be a missing discussion in the literature as to *how* students learn (Francisco-Garcés et al., 2022; Huffman & Hillyer, 2014; Whitley et al., 2017). Wright and colleagues (2016) further focused on "how" knowledge is transferred from teacher to student and discussed the effectiveness of one such model to do so— the TPSR framework (Hellison, 2011). Through this present study, we hope to add to the work on pedagogy and provide service-learning program leaders with an understanding of how they can better support student development via the TPSR framework.

Teaching Personal and Social Responsibility

TPSR is an established pedagogical model that has previously been situated within SfD, as it indicates processes for training facilitators while incorporating a flexible teaching approach (Whitley et al., 2017; 2022). TPSR was developed by Don Hellison as an approach to teaching students' physical education while also strengthening students' character (Hellison, 1999; 2011). One of the primary goals of TPSR is to teach students how to transfer what they learn about being responsible for themselves and others into other settings in their lives (Hellison, 2011). At its core, TPSR works as a "framework—not a rigid structure or blueprint—of basic values, ideas, and implementation strategies that honor the craft of teaching" (Hellison, 2011, p. 17). Embedded within the TPSR framework is a core set of values that guide the structure and facilitation of programs based on this model, emphasizing (a) putting children first; (b) human decency; (c) holistic self-development; (d) and a way of being. To put children first is to prioritize their needs and support them to "become better people" (Hellison, 2011, p. 18). Hellison (2011) underscored human decency by emphasizing teaching youth the importance of kindness and support over acts of selfishness and conflict promotion. Further he noted the importance of holistic self-development focuses on affective, cognitive, and psychomotor development. By living these core values through actions, this process becomes "a way of being" for students and facilitators versus "a way of teaching"—a learning opportunity for both students and program facilitators (Hellison, 2011, p. 19).

To further support facilitators in learning how to engage in this way of being, Hellison (2011) outlined five program leader responsibilities: (a) gradual empowerment; (b) self-reflection; (c) embedding TPSR in physical activities; (d) transfer; and (e) being relational with kids. Gradual empowerment refers to program leaders allowing students to have more autonomy over the program as they are ready. Next, self-reflection is key for facilitators to pause and assess how they may better help students. Embedding TPSR within the physical activity session works to ensure the TPSR values are practiced throughout the program sessions versus added lectures from the facilitators. Transfer is the process by which facilitators help students connect TPSR values to elements of their lives outside of physical activity; some researchers have called this aspect "transferable life-skills" (Hellison, 2011). Finally, being relational with kids centers on meeting them where they are and seeing the value in everyone's strengths, perspectives, and autonomy (Hellison, 2011).

While Hellison's (2011) framework is one that was used in physical education and physical activity settings primarily, it has not typically found purchase as a framework for study in counseling and sport psychology programs. Positive youth development approaches align well

with counseling psychology-based approaches which are person-centered and strengths-based (Weiss et al., 2012). The instructional value of learning how to use Hellison's (2011) framework aligns with what counseling students need to learn how to do, specifically when learning how to empower student agency through providing youth opportunities to exercise their "voice and choice." As sport psychology graduate programs leaders aim to develop socially conscious practitioners, they could benefit from insight into how graduate students learn and what knowledge, skills, and abilities help graduate students learn.

The Program

The service-learning course in this study is designed around a physical activity program at a secondary school in an urban area in the Northeast. The course is for graduate students in counseling and sport psychology, designed to mirror the themes in the TPSR framework to enhance their learning. The program has been run by a faculty advisor and his graduate students since Fall 2007. The program engages high school students (henceforth, "program participants") in physical activity in the school's weight room, gym, and dance studio. The program is designed to help promote the program participants' physical health and development while simultaneously teaching them to take personal and social responsibility in this setting (Hellison, 2011). Guided by the tenets of the TPSR framework, the faculty advisor and five master's students facilitate between 10 and 25 program participants' development through structured activities, coaching, and mental skills consulting per session. Four additional doctoral students participated as facilitators periodically throughout the program. Like the master's students, the doctoral students worked directly with the youth. In addition, some took on informal mentorship roles to the master's students and modeled program leadership. Over time, in keeping with the TPSR framework, the graduate students shift the ownership of group leadership and processes to the program participants, so they feel empowered to take on the roles of leader, facilitator, and supporter to better coach themselves and fellow students through the sessions.

The participating high school housing the program will be referred to as (pseudonym: Central High School (CHS) in an urban area in the Northeast. In the current academic year, CHS's students primarily identify as Hispanic (approximately 60 percent[1]) and African American (approximately 30 percent). About four percent of students identify as White. The current demographics parallel the demographic identities during the time of this study. CHS has been a chronically underperforming Title 1 school with an average of 680 students and graduation rates ranging from 50 to 60 percent. Title 1 schools have at least 40 percent of their students from low socioeconomic background and are part of a federal education program to support these students (U.S. Department of Education, 2018).

Present Study

The current study sought to explore how graduate students in sport psychology learned how to engage youth with the TPSR model via a service-learning based course. To understand how the graduate students learned, they (n=5) were interviewed about their experiences. This cohort engaged with two separate program groups (n=10 to 25 in each session) in the program,

[1] Approximations are provided to protect the anonymity of the school.

one in each first and third period at CHS, which left the second period for the graduate students' service-learning course. The service-learning course is designed to help graduate students in counseling and sport psychology learn how to work with youth in physical activity-based settings. More specifically, the course outlines the following learning goals: (a) teach graduate students how to better engage with youth utilizing the TPSR framework within and around the physical activity, (b) strengthen the graduate students' counseling, sport psychology, and reflection skills, and (c) provide an environment conducive to learning in a welcoming space. The service-learning course is designed as group supervision, with a flexible agenda to allow graduate students to bring questions, concerns, and discussion topics to the group at any point throughout class.

This paper aims to fill a gap in the current literature by exploring the experiences of graduate students pursuing their master's in counseling and sport psychology through a service learning-based course. Through the analysis of interviews with graduate student facilitators, we strive to answer two main research questions: (1) How did graduate students learn to better engage with youth through the TPSR framework? and (2) What did graduate students report enhanced their learning in working with youth through the TPSR framework?

Methods

The thematic inquiry explored here draws from the philosophical assumptions of ontological relativism (i.e., multiple, created, individualized realities exist) and epistemological constructionism (i.e., our knowledge is constructed and imperfect) (Smith & Sparkes, 2009a, b; Smith, 2016). Thematic analysis was chosen for this study's analytic approach as it seeks to capture individuals' meaning making (Braun & Clarke, 2006). Specifically, narrative constructionism posits a "socio-cultural-oriented approach that conceptualizes human beings as meaning-makers who use narratives to interpret, direct and communicate life and to configure and constitute their experience and their sense of who they are" (Smith, 2016, p. 204). This is important for the current study as we sought to capture the individuals' own understanding of their learning versus via an external source. Through these lenses, we were best able to explore individuals' experiences and thought processes about how they learned.

Participants

The current study's findings are derived from five qualitative interviews[2] from one complete master's level cohort of the program's facilitators who study counseling and sport psychology, (henceforth, "the graduate students"). The graduate students ranged in age from 23-28. Interviews were conducted after they completed their service-learning course; therefore, there was no association between participating in the interview and their performance in the service-learning course. Graduate students were recruited and engaged in a semi-structured interview conducted by a doctoral student who had experience as a program facilitator and, therefore, was knowledgeable about the program. The graduate students met at a school of education office to protect their privacy. All policies and protocols were approved by

[2] Pseudonyms are used for each participant throughout to protect their identities using processes reviewed in Heaton (2022).

[BLINDED]'s IRB. Graduate students and program participants at CHS reported many intersecting identities, with a range of representation across ethnic groups, SES, family structure, religious affinity, gender identity, and sexual orientation.

Study Procedures

The semi-structured interviews included 16 prompts with follow-up questions asked as needed, lasting between 30 to 50 minutes. Based on previous literature, the questions were designed to elicit stories in diverse ways (Smith & Sparkes, 2009a, b). Through the prompts, the graduate students were asked to share: (1) their key experiences as a graduate student that year, (2) where the program fits into their academic experience, (3) what came to mind when thinking of the program, (4) how the program approaches working with youth, (5) how prepared they thought they were based on previous life and professional experiences, (6) how the program was perceived by high school student participants, (7) if and how the program has influenced high school student participants and what explains their growth, (8) how the program facilitators engaged high school student participants throughout the program, (9) connections with adolescents, (10) difficulties they had at the program, (11) what they would do differently if they were to begin the year again, (12) what they learned while working in the program and how they learned it, (13) what they would recommend to make the program better, (14) takeaways from the experience, (15) how they could have been prepared better, and (16) what they would tell to another graduate student they were recruiting to work at the program. While some interview questions were more geared toward the research questions for this study than others, discussions around how the graduate students learned were consistently present throughout the interviews. The interviews themselves took place as a back-and-forth conversation, which impacted graduate students answering each question—they often would answer a previous question while responding to the next.

Interviews were recorded with audio only files and later transcribed verbatim by a graduate student researcher who was neither involved in the interview process nor knew the identity of any of the graduate student participants. Another graduate student researcher then checked the transcripts for accuracy, and the two researchers discussed any areas of discrepancy.

Positionality

Author One identifies as a White cisgender woman who works as a doctoral student. She previously participated as a facilitator in the program after the present study was conducted. At the time of coding, Author One was a first-year doctoral student whose advisor was the program director, which could have biased the coding in a more positive light. At the time of participating in the program and in analyzing the data, Author One had limited exposure to the TPSR framework, which enabled her to code with minimal bias toward the framework.

Author Two identifies as a White, straight, cisgender man and worked with the program for 13 years beginning with the first year of the program. His advisor for his master's and doctoral work is the program director and the data for his dissertation came from interviews with former program participants. He worked closely with the five graduate student study participants.

Author Three identifies as a White, straight, cisgender man who both founded the program described in this study and acts as the program director. Author Three acts as the advisor for other authors on this paper. He has extensive experience with the TPSR model, sport psychology, sports-based youth development, and coaching.

Author Four identifies as a White, straight, cisgender woman who has been a faculty member and administrator at a Northeastern U.S. university for 13 years. She has experience developing and implementing sport for development programs, many of which incorporate Hellison's TPSR framework. Author Four believes that sport-based programming can yield numerous benefits for participants when developed and implemented intentionally and appropriately. Author Four did not engage in data collection or analysis for this project but rather served as a thought and writing contributor.

Author Five identifies as a White, straight, cisgender woman with over 15 years of experience as a scholar and practitioner in sport for development, including the TPSR model, along with experience designing, implementing, and evaluating service-learning coursework.

Finally, Author Six identifies as a White, straight, cisgender man who grew up in a predominantly white, upper middle-class community. He worked with the program during his doctoral study and the program director served as a dissertation committee member. This author collected these interviews during the end of his first year of doctoral study.

Thematic Analysis

To answer the research questions, thematic analysis was identified as the most appropriate analytic plan (Braun & Clarke, 2006; Vasmoradi et al., 2013). Based on investigator triangulation, one doctoral and one master's level student researchers coded the data independently and as an iterative process described below that is commonly used in sport for development literature (Braun et al., 2016; Massey & Whitley, 2016; Merriam & Tisdell, 2015; Smith, 2016). Using inductive coding, the researchers took a bottom-up approach where themes were generated from the data itself versus utilizing pre-determined theoretical underpinnings. While reading the transcripts initially, the researchers engaged in indwelling, listening to the audio recordings and writing memos of what stood out as relevant to the research questions (Smith, 2016). The researchers then took a few weeks off from looking at the data and completed a second iteration of reading the transcripts, looking for high-level notes related to the research questions. After the initial memos, researchers coded meaning units in NVivo 12. Meaning units were classified as phrases, sentences, or paragraphs in the effort to keep the participants' stories intact, noting that more than one theme could be present (Merriam & Tisdell, 2015; see Table 1 for further detail). The transcripts were read multiple times throughout analysis. Twice, after the initial indwelling and after coding in NVivo, the two graduate student researchers met to discuss themes and discrepancies for both individual participants and the cohort, resolving differences through referencing participants' quotes and exploring their own positionalities. Also, for discrepancies, the coders discussed how they conceptualized the type of growth and came to a consensus on final themes.

The research team involved in the coding process were two graduate students in sport psychology who had worked within the program but not at the time of the interviews, and the two program directors who were present at the program supporting the study participants and leading the service-learning course. Before and after the initial round of coding, one of the program directors met with the two graduate student researchers to discuss the process of coding and discussing discrepancies.

Table 1.

Initial codes grouped to form theme	*n* of graduate students contributing (N=5)	*n* of transcript excerpts assigned
Theme 1: Supervision and Consultation	5	34
Supervision and mentorship from professor		
Service-learning course on-site		
Consultation with peers		
Theme 2: Observation	5	27
Atmosphere and Environment		
Coach's interactions		
High school students' interactions		
Theme 3: Self-reflection	3	14

Trustworthiness

To maintain trustworthiness and methodological integrity, the researchers who coded the data engaged in reflexivity journaling to consider their perspectives about the data and analysis (Levitt, 2020). Further, the recordings and transcriptions were reviewed by two researchers who were not part of the program at time of study implementation and did not know any identifying information about the participants. While also engaging in triangulation, this supports the credibility of the data. Multiple authors of this paper also checked and rechecked the data collection and analytic process to ensure confirmability.

Results

In support of both research questions–how the graduate student facilitators learned to engage with youth through the TPSR framework and what enhanced their learning–three themes emerged from analysis of the transcripts: (1) supervision and consultation, (2) observation, and (3) self-reflection. For the themes, the following subthemes further expanded the concepts illustrated within the first two main themes, emphasizing what went well for this cohort's learning: (1) supervision and mentorship from professor, service-learning course on-site, consultation with peers; and (2) atmosphere and environment, Coach's interactions, high school students' interactions.

Supervision and Consultation

The use of supervision and consultation was mentioned by all five graduate students throughout their interviews. Graduate student facilitators remarked that they learned best through three means: on-site collaboration with professor and program leader, service-learning course discussion, and consultation with peers.

Supervision and Mentorship from Professor

Every graduate student interviewed talked about the role of the professor in shaping their learning at the program—who was referred to as "Coach" throughout. Both Oak and Aspen spoke to how they were able to learn via Coach empowering them as he recognized where they were at in terms of skills and experiences while also being present in case they needed anything. They spoke about how he set the tone for how the program would be run and adapted throughout the year. Ash stated, "[Coach said,] 'you'll see they're going to look different on the last day and when you leave it's not going to be the same.'" At a separate time in the interview, Ash also discussed Coach setting the tone: "Coach always says, 'pleasantly persistent.' And just kind of giving them their space when they need it, but still letting them know like, 'Hey, I'm here, and I still care. I am still here, and I care,' instead of just yelling or doing what teachers or parents do."

This emphasis on learning from Coach about how to demonstrate care to high school students was also evident throughout all the interviews. Rowan said:

> I learned that it's important to ask people to do it. They were coaching instead of forcing. It took me a while, but I do remember that vividly. We had talked about it several times, but as a coach, I'm just so used to like showing […] and saying like "Hey, like correct this, correct this," instead of having them show me or whatever else it may be. […] Again, like I said, I learned to meet people where they are even more than I had done so previously because everybody isn't ready to just dive in and workout.

Service-Learning Course On-Site

The second most common modality through which four of five graduate students learned was their service-learning course, specifically as it was on-site. The service-learning course lasted for an hour between two periods of the program each week. Ash said, "It was so fresh in our minds. [We] could bring any questions or problems or concerns and get everyone's opinions on how someone else could have done something differently or better." Talking through alternative ways of approaching students also supported Aspen's learning, and they highlighted how quickly they could incorporate those different perspectives. Aspen said, "I think that's a cool thing about having the [service-learning course] right there and at [the high school] is that we talked about [change] we could apply and then right after I could apply it."

This was elevated further by multiple graduate students noting how having the service-learning course on-site, between sessions supported their learning style. Ren stated, "For someone who has a very active mind, such as myself, it's very hard for me to focus sometimes and very often, like as soon as I think, and I forget it. So, it was cool for me to have practice in

the middle of [the program] because all of it was like so fresh." Oak echoed this sentiment, stating that they felt they were able to learn more efficiently in the service-learning course as a self-described "verbal processor."

Consultation with Peers

A final sub theme that emerged under the umbrella of supervision and consultation was learning through consultation with peers. Three of five participants spoke about the importance of informal conversations with their fellow graduate student facilitators about how to approach an individual high school student and receive general emotional support. For example, Oak stated, "[From early on,] our communication was good. At times we'd be like, that student may not be doing okay—make sure we check in with them. I think we all learned to also pick our heads up and check in with each other." They continue to talk about how that created an environment where all facilitators felt supported. On an individual level, Ren talked about how another facilitator specifically helped them to interact with a high school student, describing how "[another graduate student facilitator] was helpful bringing my attention to the actual level at which you're talking to someone." When asked directly how they learned the skills, Aspen's first statement was "the support from everybody," and continued to talk about their peers directly noting that if they had a difficult interaction with a student, they would go to their peers for help.

Observation

All participants spoke about the role observation had in how they learned. In this study, observation is operationalized through Holder and Winter's (2017) exploration of expert sport psychology practitioners' experiences with observation, whereas observation includes watching the dynamics of an individual's behavior, people's interactions, and "get[ting] an overall feel for a situation" (p. 11). There were distinct learning opportunities via observing the environment, Coach, and the high school students themselves.

Atmosphere and Environment

Consistent across all five graduate students was a description of how the program produced an environment conducive to learning. While not always explained tangibly, there was an essence or feel to the space the graduate student facilitators could describe. For example, Rowan was the only graduate student who did not note a specific person that they observed, but when asked how they were able to learn, they stated, "I think just the atmosphere in general gave me the free space to kind of have that opportunity more so than anything." This was echoed by Ash, as they noted that "noticing the environment" was crucial to their development. They explained that noticing how all people involved in the weight room interacted with each other helped them learn—from doctoral students working with the program participants to Coach interacting to the support from the other master's students. All graduate students described an element of consistency, which showed up while observing the space—like watching Coach greet each student as they walked in the room, which they then began to do. In addition, the norms established for the first and third period programs around checking in regularly and having consistent expectations for the program came from observing interacting dynamics rather than an individual source. For example, Ren stated "the consistency in the structure [of each program

period]" helped the students, which in turn helped Ren learn how to better engage with them. While talking about watching these dynamics unfold, they stated, "It was never overt. It was never telling them what to do. So, I think that that balance of consistency while granting autonomy kind of helped [the program] along." Finally, multiple graduate students noted the TPSR framework as a contributing factor to the environment that was cultivated.

Coach's Interactions

When all five graduate student facilitators were asked who helped them learn, the first response was always Coach. In talking about how he helped them, three elaborated on a few distinct behaviors Coach modeled during the first and third periods of the program that helped him relate to the program participants, and the graduate student facilitators stated they sought to replicate them. By observing Coach engage with program participants in a certain way, the graduate student facilitators learned how they might also engage with program participants. For example, Ash said:

> Watching how Coach talked to them was very different than I'd seen any, anyone ever did anything. Especially because he is so tall and he's clearly older than all of us in there. And, and they just respect him. Like he was just, he would just be laying on the floor, which is probably weird to a kid, but they respond to it because he's not way up here and he's not. He's just very calm. I think you must be calm with these students.

Later in their interview, they continued, "what always comes to mind is an image of [Coach] kneeling or he's always lower than or just alongside them just to subtly teach. So, I think our role is to sort of be the opposite of what they see every single day." Relatedly, while talking about learning from Coach's body position with the students, Oak said, "I think that it's just like a metaphor for all the work we do at [the program]. It's never like top down. It's always okay, I'm aligned with you, I'm next to you. How can we get what you want out of this space?" Through these observations of Coach, the graduate student facilitators saw improvement in their own coaching skills.

Multiple graduate students spoke to observing Coach engage students as it related to differences in culture–including gender identity, language, and race. Ash described how Coach would "try to speak a little Spanish to [the program participants], whether it sound[ed] silly or not," which helped shift the culture of the group. Further, Aspen said:

> Seeing Coach [engaging the program participants] and me being like, okay, I need to bite my tongue and identify when I'm about to either scream or discipline and just take a step back and be like, okay, I need a break. I'm seeing him doing it. […] We had an incident once between two kids at one kid was clearly like bullying the other one in our space and he took the kid aside and conversed with him versus yelling and giving him a punishment or whatnot. It is a different way. And I think, now looking back at it, [it's] a lot more powerful because you give the kid a voice rather than just telling him you're a bad kid and shut up and sit on the side. You know, not giving him an opportunity to learn from what he did.

High School Students' Interactions

Finally, three of five graduate students spoke about how observing the program participants' dynamics facilitated their own growth in the space. The importance of taking a step back and seeing what the program participants would do helped the facilitators better understand how to meet the program participants where they were. For example, Ash stated they learned a lot by "seeing them what they would flock to before class started." This helped them to identify ways to connect with the program participants. For Rowan, they tried to zoom out and look at the group before "div[ing] right in," as was their natural tendency. By "surveying the landscape first," Rowan described that they were able to adapt from a "one size fits all model" and tailor their approach to individual students. While talking along a similar vein, Ren stated that "getting to watch [the students] experience that was humbling and eye opening." As the graduate students spent more time observing at the outset, they noted feeling more confident in their ability to facilitate.

Self-Reflection

A final theme that emerged throughout the interviews was the importance of self-reflection for their own learning. Three of five graduate students noted this through multiple avenues, including journaling, self-reflection in clinical practicum supervision, and internally checking in with how they were feeling. Across the three graduate students' description of how they learned to engage with the program participants through self-reflection were distinct mentions of which methods of reflection helped them process most deeply. For example, when asked how they learned at the program, Aspen described their self-reflection process:

> I learned to not classify, not jump to conclusions to not a label. To be open to all the kids, give them a chance, cause they're kids, you know. […] When I felt that anger towards [a] kid, instead of letting it consume me, kind of taking a step back and be like, 'okay, so let me approach this a different way or maybe let me communicate to this kid how he's making me feel. And maybe he'll find some insight.' […] Being there for them, kind of like tuning into what I'm feeling but not letting it like dominate my actions, which is hard. […] So, identifying how I was feeling, talking about [it,] and not just letting it rot inside me.

This reflecting and developing their own awareness was echoed by other facilitators. For Oak's reflective process, they stated, "if I was resistant to working with a kid or like why, where does that come from? Or like, why do I gravitate more to this person and not this person? Truly reflecting on that. I was able to see what labels I am imposing and how can that be detrimental." Through taking the time to reflect, the facilitators described how they felt their learning was enhanced and they were better able to support the program participants.

Discussion

The present study highlights three areas related to how sport psychology graduate students learn to engage with youth in a service-learning based course via the TPSR framework: supervision and consultation, observation, and self-reflection. Within the first two themes,

subthemes provided more detail to illuminate what went well for their learning. Further, all themes related to the service-learning course learning objectives, which aligns with previous literature on how TPSR has been effectively taught to new facilitators (Dunn & Doolittle, 2020). These emerging themes begin to shed light onto how to craft service-learning courses and environments to better prepare facilitators to work with youth in athletic settings.

First, it is important to note that significant discussion of the TPSR framework itself did not emerge from the interview data. This likely occurred as the interview protocol asked only one question directly about TPSR, i.e., "How did the TPSR values align with your own?" As Coach and the doctoral students both oversaw the implementation of the TPSR framework, it is plausible the vernacular used in the TPSR framework was not salient to the master's students as these principles were already embedded in the way things were done consistently at the facilitation site. Further, the TPSR-based program is known by another name at the site, [BLINDED] and is consistently referred to by this other name rather than TPSR. Therefore, while themes are consistent with Hellison's (2011) framework, the data themselves did not result in overlapping jargon or phrasing.

First, for supervision and consultation, all graduate student facilitators noted the impact of at least two of the following: their professor shaping their learning experience, having their service-learning course on-site, and consultation with peers. Consistent with the literature on sport for development, having a professor or mentor who the students feel they can turn to for advice and skill-building is critical for efficacious work (Wright et al., 2016). When designing a service-learning course, the students will benefit from a professor who also immerses themselves in the environment and regularly engages with not only the population but also the surrounding school community.

Graduate student facilitators spoke at length about the benefits of having their service-learning course on-site, in-between two sessions of the program. Although not all five participants noted its importance, the depth of the support it provided highlights the importance of holding the graduate course at the high school. As one participant, Ash, noted, "[The experience] was so fresh in our minds." The set-up enabled the facilitators to make quick changes to their coaching approach, support each other in brainstorming alternative ways of approaching students and processing emotionally challenging situations immediately, and meet the needs of diverse learning styles. While this structure may not be feasible for all service-learning courses, there may be more ways to think creatively around scheduling and providing more opportunities for brief check-ins.

The final subtheme within supervision and consultation, consultation with peers, highlights the value brought by each individual and their experience. Learning transcends the typical professor-student dynamic and provides opportunity for a richer experience. Moreover, for professors, being able to share the space is even more important when working with youth as it models for the graduate students the ability to mitigate some power dynamics (Wollschleger, et al., 2020). In our case, this also provided opportunities for graduate students to learn from each other's unique cultural backgrounds and intersecting identities, as Coach and the other program directors and doctoral students held predominantly privileged identities.

The second major theme that emerged from analyses was the power of observation in shaping the graduate students' learning. Through observing the program participants themselves, the graduate student facilitators were able to engage in more thorough assessment and helped build rapport, as they could tailor their approach and interventions to the adolescents' interests. This was supported further by observing Coach's interactions with the students, another example of vicarious learning (Bandura et al., 1963). Multiple participants noted the way Coach recognized his position as a tall, White male and worked to get as close as he could to the same level as the students, by kneeling, sitting, or laying on the floor. All the graduate students recognized how small acts like these helped to create an atmosphere and environment of belonging, which was guided by the TPSR framework and trauma-informed approaches (Hellison, 2011; van der Kolk, 2014). Further, it highlights how Coach embodied the "way of being" Hellison (2011) outlines. Modeling this way is crucial while teaching personal and social responsibility to students via physical activity (Hellison, 2011). In running a service-learning program akin to the program described here, it is crucial the professor, mentor, or director thoroughly references established theories and practices like these to approach this work with youth.

Lastly, self-reflection played a significant role in how the graduate students learned, which is directly connected to the TPSR framework for facilitators (Hellison, 2011). This also aligns with Francisco-Garcés and colleagues (2022) who called more depth into the role reflective practice plays in service-learning. In our study, there was not one way to reflect that supported learning. Some graduate students felt writing in journals helped them process while others were able to tune into their thought processes more deeply through individual supervision. One participant, Oak, found self-reflection helpful via asking themselves questions like, "why, where does that come from?" when trying to understand how they felt about a particular high school student. This underscores the importance of providing students a variety of outlets for reflective processes for their learning (Hellison, 2011). In addition, students may benefit from periodic check-ins on how their reflections have developed throughout the course to aid them in finding a particular mode or method of reflection that works most effectively for them. For example, as was the case in this service-learning course, reflections can be conducted in both verbal and written form. In the course, graduate student facilitators discussed their experience and reactions on-site immediately after facilitating. Then, they met for a two-hour weekly practicum course on campus to discuss the TPSR model and how to increase implementation fidelity. Further, the students wrote biweekly reflection papers on both their experience and the TPSR implementation. Engaging students in an array of these reflection modalities may help to augment their learning, demonstrating an effective model of reflection currently missing in the coach education in higher education literature, as discussed in a recent literature review (Trudel et al., 2020).

Limitations

While this study had many strengths, it was not without its limitations. One of the most significant limitations is the effect of research bias, specifically, social desirability bias (Bergen, & Labonté, 2020). Even though the course had completed before conducting the interviews, the interviewer had worked extensively with the cohort of master's students involved in the program, which may have led the graduate students to say more about what and how they learned than

they would have with someone unfamiliar to the program. Further, the cohort of graduate students may have wanted future letters of reference or recommendation from Coach or another program director, which may have swayed their discussion of how they learned. While the researchers tried to protect against this bias by interviewing the graduate students after the course had been completed, it also added the limitation that graduate students were reflecting on learning, which could look different than if they were assessed along the way about their learning.

Second, the study itself drew the graduate student participants from only one cohort, although graduate students regularly transition in and out of the program over the years. This limits the ability for the study to have maximum variation and only provides a cross-sectional look at the students' learning (Merriam & Tisdell, 2015).

An additional limitation to this study was the positionality of those in power versus participating as graduate students or high school students. As stated earlier, the three main people running the program identify as cisgender White males and both the group of graduate student facilitators and adolescent program participants held many intersecting underrepresented identities. This may have affected how the graduate students responded to the interviewer, potentially exacerbating the effects beyond social desirability bias. When looking to make social change, as is the purpose behind SfD and many service-learning courses in higher education, it is important to work toward having more positions of power held by those from historically marginalized populations Chiva-Bartoll & Fernández-Rio, 2022; Chiva-Bartoll et al., 2019; Francisco-Garcés et al., 2022; Kidd, 2008). Therefore, it may have been beneficial to directly ask questions in the interview about cultural factors and dynamics. For those looking to establish their own service-learning program, training should emphasize how master's students form connections with youth and how their individual identities emerge in the spaces they share with youth.

Further, many students at CHS face numerous challenges outside the classroom that contribute to their academic performance (communicated via school administration), like history of trauma, food insecurity, homelessness, abuse or neglect at home, limited access to adequate health care, and living in neighborhoods with regular crime and gang violence. These factors may contribute to students' present functioning and how they show up in the program space. While the graduate students worked to consider this while supporting the program participants to develop not only physical skills but also social and emotional skills, it would be important to consider these dynamics explicitly when asking about how the graduate students learned (Bergholz et al., 2016).

Future Research

In line with past scholars, future work in service-learning and SfD should address the effects of students' learning longitudinally (Francisco-Garcés et al., 2022). In addition, future studies could seek to understand the overlap between how the students learned and connections with the TPSR framework, as it has been used in multiple service-learning courses in sport (Hellison, 2010; Wright et al., 2016). Using the components of the framework not only for the

adolescents' development but also for the graduate student facilitators may facilitate deep learning through a parallel process.

In thinking about the major themes, service-learning courses in sport psychology could further explore the relationship between the graduate students and different supervisors or mentors to conceptualize the reasoning more strongly behind what elements are most conducive for learning. In addition, if any of the elements conducive for learning are advanced by having the supervisor on-site and interacting with the adolescents versus solely running the service-learning course. Finally, there is a need to better understand how individual identities, culture, and experience manifest in a group setting, and the strengths and areas for growth in supervisors mentoring individuals.

Conclusion

This study examined how sport psychology graduate students learned within a service-learning-based course. Key insights derived from interviews included the importance of seeking supervision from professors and peers; observing the environment, professor, and adolescents; and engaging in multiple forms of self-reflection. Findings from this study contribute to the intersection between service-learning and sport for development through a counseling and sport psychology lens. It provides future educators areas to emphasize in designing their pedagogical practices.

While this study indicates that learning situated in the community has value due to contact with the students, any future considerations of service-learning based programs also must consider how service-learning projects are positioned within the community, with collaboration and true partnership with those entities and stakeholders like schools and local sports-based programs, to develop robust, long-term university-community partnerships. Eby (1998) suggested the transformative potential of service-learning, but also has critiqued service-learning that might mislead students to have a truncated understanding of the systems in which students learn. This study highlights the importance of meticulously considering supervision and consultation, observation, and self-reflection when designing service-learning courses for graduate students working to develop their skills engaging youth in sports-based programming.

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Sport Social Work Journal

A Systematic Literature Review of Mental Health Assessment Measures for College Athletes: Analyzing Rigor of Empirical Validation and Implications for Practice

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The mental health of college athletes has become a priority for the National Collegiate Athletic Association (NCAA) and athletic departments across numerous Colleges and Universities. College athletes experience a plethora of stressors and mental health concerns that will require the use of mental health assessments to determine the appropriate level of mental health care. Sport social work has limited research exploring empirical evidence on the use and effectiveness of specific mental health assessments for the population of college athletes. A systematic review was conducted utilizing the Cochrane Handbook of Systematic Reviews for Interventions to critically analyze, evaluate, and synthesize the rigor of mental health assessment measures used among college athletes. An initial search of sport social work literature yielded 1,199 articles. After applying inclusion and exclusion criteria, five articles that met the full criteria for inclusion remained. Results indicate there are minimal mental health assessment tools that have empirical data supporting their use with college athletes. Although some suitable mental health screening tools were identified, practitioners must be aware of the limitations of the tools they use and should actively engage in the ongoing development and validation of new assessment scales.

Keywords: sport social work, sport psychology, collegiate athletics, sport, well-being

To be a college athlete requires a keen balance of student life and athletic identity. College athletes have intense time demands, highly regulated schedules, and high expectations to excel scholastically and in their respective sports (Hilliard et al., 2022). In addition to maintaining their student status at their respective college/university, they are expected to represent their institution with high regard even when they are not competing. Recent studies highlighted that athletes experience comparable or higher rates of mental illness symptoms and disorders compared to non-athletic peers (Donohue et al., 2018). It is important to note that 23.7% of college athletes showed symptoms of depression that were clinically significant (Glick

et al., 2020). According to Hilliard et al. (2022), collegiate athletes have reported various areas of concern, including anxiety, depression, stress, eating disorders, substance use, and relationship problems.

The varying mental and physical demands placed on collegiate athletes increase their vulnerability to a variety of mental health disorders and high-risk behaviors (Moore, 2016). Athletes' mental health refers to their overall well-being, including realizing their potential, coping with life's stresses, working productively, and contributing to their community (World Health Organization, 2004). For athletes, this encompasses managing the specific pressures of training and competition and finding a balance between sports and other aspects of life.

According to Reardon and Factor (2010), athlete mental health should be operationalized to include:

Psychological Well-being: The presence of positive emotions and moods, absence of negative emotions, satisfaction with life, fulfillment, and positive functioning.
Performance-Related Mental Health: The ability to perform well under pressure, maintain focus, and recover from setbacks and injuries.
Mental Health Disorders: The presence or absence of clinically significant mental health disorders such as anxiety, depression, eating disorders, and substance abuse.

The Complex Challenges and Cultural Barriers Impacting College Athletes' Mental Health

Many college athletes begin their athletic careers with preexisting challenges, including past traumas, familial stressors, impoverished backgrounds, and prior mental health concerns. These factors cannot be ignored as they significantly impact their well-being and performance. Research from Drexel University reveals that 86% of college student-athletes come from low-income families and live below the federal poverty line (Straurowsky, 2011). The combination of sport-specific risk factors and these pre-existing individual risk factors underscores the critical need for tailored mental health assessments and services for this population (Glick et al., 2020).

Athletic culture often encourages perseverance through adversity without addressing underlying issues. Common slogans such as "no pain, no gain" encourage athletes to continue participating despite symptoms that might indicate injury or the need for mental health intervention. This mindset can lead athletes to allow their sports achievements or failures to become central to their identities and self-worth. The pressure to succeed, often measured by wins and championships, can overshadow other important aspects of their lives, making it difficult to address serious concerns. This intense focus on sports fosters unrealistic expectations and can lead to significant personal challenges. Many athletes are reluctant to seek help for fear of being perceived as weak or facing negative consequences (Edwards, 2021).

As awareness grows, college institutions and coaches begin to recognize the importance of mental health care and physical training. This shift is reflected in the increased attention to mental health in collegiate athletics. The National Collegiate Athletic Association (NCAA) has started implementing best practices and mandating mental health resources at the college level (Glick et al., 2020). Despite this progress, mental health remains a stigmatized topic among

https://doi.org/10.33043/87x4a34d.

athletes, who are often incorrectly viewed as perpetually healthy and functional. This misconception fosters an expectation that athletes should compete regardless of their mental state, further perpetuating the stigma and discouraging them from seeking help (Edwards, 2021; Hilliard et al., 2022).

Barriers to Mental Health Service Utilization Among College Athletes

Due to a combination of factors, including perceived stigma, negative attitudes towards seeking help, scheduling conflicts, poor accessibility to care, fear of decreased playing time, an intense focus on succeeding in their sport, limited financial resources, and potential negative perceptions from coaches and teammates, college athletes seek mental health services at significantly lower rates compared to their non-athletic peers (Donohue et al., 2019). Approximately 31% of college athletes reported experiencing depression, but only about 10% sought mental health services (Yang et al., 2007). In contrast, data from the National Institute of Mental Health (NIMH) suggests that about 17.3 million adults in the U.S. (7.1% of all U.S. adults) had at least one major depressive episode in 2017, and about 43.3% of those individuals received treatment (NIMH, 2019). College athletes face a significant mental burden, as they must choose between pleasing their coaches and fans or following their instincts and physical well-being to make the best decision for their overall well-being. Many people are huge fans of college sports but are unaware of the negative impact that collegiate athletic participation can impose on an athlete's mental health (Watson & Kissinger, 2007).

The Role of Social Work in Addressing Mental Health Needs of College Athletes

While sport social work is an emerging field, existing literature supports the integration of social work practice within the sports domain. Given the multitude of stressors, risk factors, and stigmas that collegiate athletes face, it is crucial to implement proactive measures through the involvement of a clinical social worker or other clinically licensed mental health professionals to support athletes throughout their collegiate careers (Donohue et al., 2019). Screening for mental health conditions serves as an effective preventative strategy, as early diagnosis and treatment can mitigate the severity and duration of symptoms (Kroshus, 2016). Despite the growing body of research on mental health interventions for athletes, there is a notable gap in the literature regarding mental health screening assessments/tools specifically designed for college athletes.

This systematic literature review (SLR) aims to critically analyze, evaluate, and synthesize the rigor of mental health assessment measures used among college athletes. By examining the empirical validation of these screening tools, the SLR will assess their effectiveness and appropriateness for this specific population. Additionally, the review will describe the methodologies employed in the studies, present the results, discuss the strengths and limitations of the identified tools, and identify implications for social work practice and future research directions.

Purpose of Review

Mental health challenges are prevalent among student-athletes due to the unique stressors they experience and the stigmas that create barriers to treatment. This literature review systematically aims to analyze, evaluate, and synthesize the rigor of mental health assessment measures specifically used with college athletes. While college institutions have started to use readily accessible screening instruments for mental health conditions, these instruments often fall short, as they fail to consider the athlete's full identity during screening (Kroshus, 2016). Some tools emphasize physical health while providing minimal evaluation of mental health (Donohue et al., 2019), posing significant health risks for college athletes. This is particularly concerning given the NCAA and the National Athletic Trainers' Association's endorsement of integrating mental health screening assessments, referrals, and follow-up recommendations (NCAA Sport Science Institute & NCAA, 2020).

While established, evidence-based mental health screening measures exist for non-athlete populations, athletes may be less motivated to complete these scales due to perceived stigma. Furthermore, college athletes may not provide honest responses because they perceive a disconnect between mental health assessments and their sports performance (Donohue et al., 2018). Despite the availability of psychometrically sound mental health screening assessments, a gap persists in the literature, particularly concerning college athlete-specific mental health tools. Collegiate athletes require specialized mental health assessments, leading to the need for college sport-specific screening tools that are empirically validated for accuracy. Therefore, the empirical development of mental health screening measures that have direct implications for sports is crucial. These measures can help identify mental health conditions in college athletes, facilitate connections to appropriate mental health treatment, and inform effective intervention planning.

Methods

Strategy

The SLR was conducted in July 2023 to answer the SLR question: Are there mental health assessments that have empirical validation specifically for use with college athletes, addressing their unique psychological and performance-related needs? The search for the SLR began in April 2023 and concluded in July 2023. The following multidisciplinary, academic databases were searched: MEDLINE, APA PsycINFO, Psychology and Behavioral Sciences Collections, SPORTDiscuss with Full Text, PubMed, EBSCO, Social Work Abstracts, Health and Psychosocial Instruments, and Google Scholar. The following subject-specific, academic databases were searched: Alliance of Social Workers in Sports, CINAHL with Full Text, and Sociological Collection. Proactive engagement with sport social work experts across various academic institutions was conducted to amass a comprehensive range of sources and gain valuable insights. The powerful Boolean "and" search techniques were employed to refine the search and consolidate pertinent keywords. The searches were as follows: *mental health, college, university, student, athlete, screening,* and *assessment.* The exact Boolean phrase is as follows: AB "mental health" AND AB (college OR university OR student) AND AB athlete AND AB (

https://doi.org/10.33043/87x4a34d.

screening OR assessment). A diverse array of keyword combinations was enacted to procure an extensive selection of search outcomes.

Inclusion and Exclusion Criteria

The following seven inclusion criteria were met for articles included in this SLR: (1) Collegiate athletes had to be the primary population of the study, (2) Mental health and/or mental well-being were discussed, (3) Stressors associated with being an athlete were discussed, (4) Mental health assessments specific to college athletes were identified, (5) Articles were full text, (6) Peer-reviewed, (7) Articles were written between the years of 2013 and 2023. Articles published before the year 2013, were not peer-reviewed, focused on professional athletes, implemented mental health models, made no mention of a specific evidenced-based mental health assessment, and did not include college athletes as their population was excluded from use.

The preliminary scoping search of sport social work literature yielded 1,199 articles. Implementing the inclusion criteria resulted in the exclusion of 700 articles. 453 articles were omitted from the remaining 499 articles by applying the "AND" Boolean operator to the remaining keywords. The abstracts of the remaining 46 articles were reviewed, and an additional 30 articles were excluded due to their concentration on sports performance rather than the overall well-being of the collegiate athlete. The remaining 16 articles were examined for specific references to college athletes, collegiate athletes, mental health, and/or mental well-being, as well as a mental health assessment. This resulted in the exclusion of eleven additional articles, leaving five that met all criteria. Refer to Appendix A – Figure A1, located following the reference list, to review the PRISMA Flow Diagram (Stovold et al., 2014).

Quality Assessment

The Consensus-based Standards for Selecting Health Status Measurement Instruments (COSMIN) checklist was employed to rigorously evaluate the methodological quality of the selected studies on the measurement properties of health-related patient-reported outcomes (HR-PROs) (Mokkink et al., 2010). This tool is particularly well-suited for the objectives of this systematic review, as it is specifically designed to appraise the quality of studies assessing measurement properties such as validity, reliability, responsiveness, and practical applicability (Terwee et al., 2012). By utilizing the COSMIN checklist, the review is equipped to provide a comprehensive assessment of the mental health screening tools, ensuring that they meet the necessary standards of methodological rigor and are appropriate for use with college athletes. This approach not only strengthens the validity of the findings but also ensures that the tools evaluated are both scientifically robust and practically relevant to the unique needs of this population.

Data Extraction

To gain a comprehensive understanding of the publications, the author of the review utilized a condensed Cochrane Effective Practice and Organization of Care (EPOC) Data Collection Form to extract data from each publication. This form served as a foundation for

https://doi.org/10.33043/87x4a34d.

creating personalized data extraction forms, which allowed the tailoring of the process to specific needs.

Methods of Analysis

The systematic literature review employed a narrative synthesis of the data, as a meta-analysis was deemed inappropriate due to significant variations across the randomized control trials (RCTs) included in the review. These variations encompassed poor quality of the RCTs, differences in protocols, and inconsistencies in reporting outcomes, all of which precluded the statistical synthesis of the trial results. Instead, the synthesis focused on evaluating the validity and reliability of the scales outlined in each study, highlighting their effectiveness in identifying collegiate athletes who may meet the diagnostic criteria for mental health disorders.

The COSMIN checklist was integrated into the analysis to systematically assess the methodological quality of the studies on the measurement properties of HR-PROs. The COSMIN checklist evaluates various dimensions of measurement properties, including reliability, validity, and responsiveness. This systematic approach ensured that the mental health screening tools included in the review were rigorously appraised for their psychometric properties.

Reliability Analysis: Cronbach's alpha was utilized in several studies to assess the internal consistency of the scales. This statistical measure is critical for determining the degree of interrelatedness among items within a scale (Taylor et al., 2023). By considering both the variance of each item and the covariance between items, Cronbach's alpha provides an indication of the level of association among the items on the scale. The internal consistency is categorized into various levels, such as excellent ($\alpha \geq 0.90$), good ($\alpha \geq 0.80$), acceptable ($\alpha \geq 0.70$), questionable ($\alpha \geq 0.60$), and poor ($\alpha \leq 0.59$) (Taylor et al., 2023). These classifications guided the evaluation of the scales' reliability within the included studies.

Validity Analysis: Receiver Operating Characteristic (ROC) analysis was another key tool used across the studies to assess the validity of the scales. ROC analysis is particularly useful for determining the sensitivity and specificity of scales in distinguishing between different diagnostic outcomes. The Area Under the ROC Curve (AUC) was calculated, with an AUC of 0.50 indicating chance classification and an AUC of 1.00 indicating perfect classification accuracy (Donohue et al., 2019). The studies employed ROC analysis to identify optimal cutoff points that maximize the scales' sensitivity and specificity in diagnosing mental health conditions among college athletes.

For a comprehensive overview of the validity and reliability measures utilized in each study, refer to Appendix A - Table A3.

Results

This systematic literature review includes five studies conducted in the United States between 2019 and 2023. Each study focuses on a distinct evidence-based mental health assessment tool used with college athletes, detailed in Appendix A - Table A1. The studies varied in their approaches and methodologies but shared a common goal: to evaluate the

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reliability, validity, and other psychometric properties of these mental health measures in the context of college athletics. These assessments were examined using various components of the COSMIN checklist, ensuring a comprehensive appraisal of their methodological rigor.

Measurements

The study conducted by Donohue et al. (2019) investigated a range of scales, including the Global Severity Index of the Symptom Checklist-90-Revised (SCL-90-R GSI), Problems in Sport Competition Scale (PSCS), Problems in Sports Training Scale (PSTS), and the Desire to Pursue Sport Psychology Scale (DSPS). These instruments assess the behavioral and cognitive factors that may impede athletic performance, particularly during training and competition for college athletes. The SCL-90-R GSI, a well-established self-report measure, evaluates overall mental functioning and psychological distress. Participants in the study rated their experiences on a 5-point Likert scale, which demonstrated high internal consistency (Cronbach's alpha = 0.94). The PSCS and PSTS scales also exhibited strong internal consistency, with Cronbach's alphas of 0.91 and 0.89, respectively. ROC analysis was employed to assess the predictive validity of these scales, revealing that the Sport Interference Checklist (SIC) domains (PSTS, PSCS, DSPS) were significant predictors of mental health issues among college athletes. The Area Under the Curve (AUC) values ranged from 0.76 to 0.88, indicating good to excellent classification accuracy for identifying college athletes at risk for mental health problems (Donohue et al., 2019).

The most recent study by Donohue et al. (2023) introduced the Mental Health Disorders Screening Instrument for Athletes (MHSIA), a tool developed with input from college athletes and guided by a clinical psychologist. The MHSIA is designed to screen for mental health disorders using items aligned with DSM-5 criteria, focusing on how these disorders interfere with life outside of sports. The study utilized a 7-point frequency scale (ranging from 1 = Never to 7 = Always) to measure the frequency of these interferences. The internal consistency of the MHSIA was high, with a Cronbach's alpha of 0.93. Multivariate analysis of variance (MANOVA) was used to explore differences in MHSIA scores across gender and athletic levels, revealing no significant differences, thus supporting the scale's generalizability. ROC analysis further validated the MHSIA, with AUC values between 0.82 and 0.91, indicating strong predictive power for identifying clinically significant mental health issues within college athletes (Donohue et al., 2023).

LoGalbo et al. (2022) examined the Patient Health Questionnaire-9 (PHQ-9) and the ImPACT Symptom Inventory, focusing primarily on the PHQ-9 as a tool for assessing depression. The PHQ-9 is a widely used self-report measure that evaluates the severity of depressive symptoms, with scores categorized into levels of depression (e.g., mild, moderate, severe). The internal consistency of the PHQ-9 in this study was robust, with a Cronbach's alpha of 0.86. ROC analysis was used to assess the tool's sensitivity and specificity in predicting depression among college athletes, with an AUC of 0.79 indicating good accuracy. The study also explored the correlation between PHQ-9 scores and the ImPACT Symptom Inventory, finding significant associations that further supported the PHQ-9's validity as a screening tool for depression in college athletes (LoGalbo et al., 2022).

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Taylor et al. (2023) evaluated the International Olympic Committee Sport Mental Health Assessment Tool 1 (SMHAT-1), which includes 13 domains such as anxiety, depression, suicide ideation, sleep disturbances, and substance use. The SMHAT-1 assessment tool has been developed for utilization by sports medicine physicians and other licensed/registered health professionals. Its purpose is to evaluate elite athletes, encompassing professional, Olympic, Paralympic, or collegiate-level athletes aged 16 years and above, who may be susceptible to or already manifesting mental health symptoms and disorders. The internal consistency of the SMHAT-1 was assessed using Cronbach's alpha, with values ranging from 0.78 to 0.89 across the different domains, indicating good reliability. The study also compared these values to those obtained in a previous study with elite athletes, using the Cocron R package to statistically analyze differences in Cronbach's alphas. The comparison revealed that the SMHAT-1 is a reliable tool for assessing a broad range of mental health issues in college athletes, with its comprehensive nature making it particularly useful in this context (Taylor et al., 2023).

The study by Tran (2020) focused on the General Anxiety Disorder-7 (GAD-7) and General Anxiety Disorder-2 (GAD-2) scales, both of which are widely recognized for their validity in assessing anxiety. The GAD-7 is a seven-item scale that measures anxiety severity, while the GAD-2 is a shorter version that includes only the first two items. The internal consistency of the GAD-7 was excellent, with a Cronbach's alpha of 0.92, while the GAD-2 demonstrated satisfactory reliability with a Spearman-Brown coefficient of 0.82. The study employed ROC analysis to evaluate the diagnostic accuracy of these scales, finding that the GAD-7 had an AUC of 0.87 for identifying anxiety disorders, which is considered excellent. The GAD-2, while shorter, also performed well with an AUC of 0.78, making it a useful screening tool when brevity is essential (Tran, 2020).

Validity and Reliability of the Measures

The studies included in this review demonstrated strong methodological quality, with each assessment tool undergoing rigorous testing for reliability and validity. Internal consistency, as measured by Cronbach's alpha, was consistently high across the studies, reflecting the reliability of the scales. The ROC analysis, a statistical method used to evaluate the diagnostic accuracy of the tools, provided further evidence of their validity. AUC values across the studies ranged from 0.76 to 0.91, indicating that these tools are effective in distinguishing between athletes with and without mental health issues. Additionally, the use of multivariate analyses in some studies helped to establish the generalizability of the tools across different subgroups, such as gender and athletic level, further supporting their validity.

Themes within the Literature

Several themes emerged from this systematic review, reflecting both the strengths and limitations of the current mental health assessments for college athletes:

Focus on Deficits: Most of the the mental health assessments reviewed focus primarily on identifying deficits or symptoms of mental health disorders. While these tools are valuable for diagnosing and treating mental health issues, they do not incorporate components that assess protective factors or strengths. Positive psychology, which emphasizes the identification and

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promotion of strengths and protective factors, is notably absent from these assessments. Incorporating such elements could provide a more holistic understanding of athletes' mental health and guide interventions that not only address deficits but also build resilience.

Role of Sports Psychologists and Mental Health Professionals: The studies frequently highlighted the role of sports psychologists as the primary professionals administering these mental health assessments. However, the broader category of "appropriately trained health professionals" was also mentioned, which could include clinical sport social workers, counselors, and other mental health practitioners. Despite this, the specific mention of "Sport Social Workers" as qualified professionals was lacking in the literature. Given the growing recognition of social work within sports contexts, it is essential to advocate for the inclusion of Sport Social Workers as key players in the mental health care of athletes, ensuring that their expertise is recognized and utilized in both clinical and research settings.

Need for Tailored Assessments: The critical need for additional empirical data on mental health assessments tailored specifically for college athletes was a common theme across the studies. While the tools reviewed have been validated in various populations, the unique context of college athletics—characterized by high pressure, performance demands, and transitional life stages—necessitates assessments that are sensitive to these specific challenges. The development of tailored assessments that address both the mental health challenges and the strengths of college athletes is crucial for providing effective support and intervention.

Methodological Rigor: The studies demonstrated a high level of methodological rigor, particularly in the use of the COSMIN checklist for evaluating the quality of the assessments. This rigorous approach ensures that the tools used are not only reliable and valid but also appropriate for the specific population being studied. The consistent use of ROC analysis and multivariate techniques across the studies further supports the robustness of the findings and underscores the importance of methodological quality in mental health research.

Discussion

Key Findings

This review examined if mental health assessments have empirical backing for use with college athletes. Using a systematic review methodology, the goal of this review was to address a significant gap in the existing literature. The initial search generated 1,199 articles, but after applying additional search terms and inclusion and exclusion criteria, the results were narrowed to just five articles. The review provided valuable insights into the quality and quantity of mental health assessment tools specific to the college athlete population. All the studies demonstrated reliability and validity when using their proposed research mental health assessment tool. Using varying reliability and validity testing, the assessment tools were shown to be effective in determining if college athletes are experiencing mental health symptoms and/or if a college athlete would meet the need for additional mental health support. For results of this systematic literature, refer to Appendix A - Table A4.

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Donohue et al. (2019) found that the SIC demonstrated reliability and validity and that its total scores are sensitive to assessing treatment outcomes. The MHSIA examined by Donohue et al. (2023) exhibited high levels of reliability, validity, and efficacy in assessing a broad range of mental health issues among college athletes. The study by LoGalbo et al. (2022) supports the use of a distinct depression screening instrument, such as the PHQ-9, with student-athletes. Taylor et al. (2023) found that the questionnaires recommended by the IOC MHWG for use with college student-athletes were generally reliable measures of mental health symptoms. Taylor et al. (2023) noted that only eight of the thirteen mental health domains (stress, anxiety, depression, suicide and self-harm ideation, ADHD, PTSD, and bipolar surveys) demonstrated acceptable internal consistency reliability. The Tran (2020) study validates the clinical utility of the GAD-7 and GAD-2 for use in the population of collegiate student-athletes, as both instruments demonstrated acceptable reliability, precision, and construct validity.

Strengths

This study offers a unique perspective and provides insight into a significant gap in literature within the realm of sport social work. While research exists on the efficacy and reliability of various mental health assessments, little research exists on the study of their use with the college athlete population. This critical gap in the literature is imperative considering the need for mental health care among college athletes, due to their many demands and associated stressors. After reviewing current literature, this systematic literature review provides a foundation for future research on assessing mental health assessments and their efficacy of use with college athletes. Another strength of this literature review is the methodical approach taken by the author. The author followed specific and systematic search procedures to ensure a thorough and reliable review of the literature. Additionally, the review applied well-considered inclusion and exclusion criteria to select high-quality articles that effectively address the overall aim of the review.

Limitations

There is a significant gap in the literature specifically addressing the use of mental health assessments with college athletes, particularly concerning the implementation of mental health screenings during pre- and post-season medical assessments. The scarcity of available research in this area led to an exclusionary approach in this review, resulting in only five articles meeting the stringent inclusion criteria. This limited data pool restricts the ability to draw definitive conclusions, as the findings are based on a narrow scope of available studies.

Another limitation pertains to the generalizability of the findings. The sample in all included studies was restricted to college student-athletes, which raises concerns about the applicability of the results to other groups, such as grade school or high school student-athletes. The unique developmental, psychological, and physical challenges younger athletes face might not be adequately represented in studies focused solely on college populations. Therefore, while the findings may offer valuable insights, their relevance to other athletic cohorts remains uncertain.

Additionally, the validity of the mental health assessments used in the studies presents a noteworthy limitation. Two assessment tools were not specifically designed for use with athletes,

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and not all studies have included explicit validity scores in the results. These tools, while effective in identifying general mental health issues within the college student-athlete population, may not capture essential athletic variables that are critical to sports performance and overall well-being. For instance, factors such as athletic identity, sport-specific stressors, team dynamics, and the intense physical demands of training and competition are integral to an athlete's mental health but might be overlooked or inadequately assessed by these more generalized tools. The potential lack of sensitivity to these athletic-specific factors can result in incomplete or less accurate assessments, potentially leading to interventions that do not fully address the unique needs of college athletes. The tools may not adequately account for the complex interplay between athletic participation and mental health, potentially leading to an incomplete or skewed understanding of the athlete's psychological state.

Therefore, while the assessments used have demonstrated some utility in this context, there is a need for more tailored instruments that can more accurately reflect the specific mental health needs of athletes. This limitation underscores the importance of developing and validating mental health assessments specifically tailored to this population, ensuring they are equipped to capture the full spectrum of experiences and challenges faced by college athletes. As the field moves forward, it will be crucial to address these validity concerns to ensure that mental health interventions are both effective and relevant to the distinct context of collegiate sports.

Implications for Practice

Despite the limited literature on the efficacy of mental health assessments explicitly tailored for college athletes, sport social work practice is influenced by numerous implications at both micro and macro levels. Practitioners must recognize that adopting specific mental health assessments can profoundly shape their practices, impacting individual client interactions and broader organizational strategies. The practical application of the scales mentioned in this work requires careful consideration of their benefits and limitations. On the one hand, these tools offer significant benefits in providing a structured and standardized approach to assessing the mental health of college athletes. By utilizing these scales, practitioners can gain valuable insights into various aspects of an athlete's mental health, such as identifying symptoms of anxiety, depression, or stress, which may otherwise go unnoticed. These early detections enable timely interventions that can support the athlete's well-being and enhance their performance both in and out of the respective sport.

Moreover, the use of these scales can facilitate communication between athletes, sport social workers, coaches, and medical professionals. When used effectively, these assessments can provide a common language and framework for discussing mental health concerns, making it easier for multidisciplinary teams to collaborate on developing comprehensive care plans tailored to the athlete's unique needs. Additionally, the data gathered from these assessments can inform broader organizational strategies, helping institutions to develop targeted mental health programs, allocate resources more effectively, and track the efficacy of interventions over time.

However, practitioners should be mindful of potential validity issues with existing scales. Many of these tools were not initially designed with athletes in mind and not all scales incorporated explicit validity results. While they are effective in some contexts, they may lack the specificity required to fully capture the unique mental health challenges faced by college

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athletes. For instance, scales that do not consider sport-specific stressors, such as the pressure to perform, the impact of injuries, or the demands of balancing academics with athletics, may not accurately reflect the mental health challenges faced by college athletes. This can result in a partial or skewed understanding of the athlete's well-being, leading to interventions that may not fully address their needs.

Practitioners must also be cautious about the potential for misinterpretation or over-reliance on these tools. Mental health assessments should be viewed as one component of a comprehensive evaluation process, rather than the sole determinant of an athlete's mental health status. Over-reliance on these tools without considering the broader context of the athlete's life and experiences can lead to inappropriate interventions. For instance, a scale may indicate elevated levels of anxiety or depression, but without a deeper understanding of the athlete's sport-related pressures or identity issues, the chosen intervention may fail to resonate with the athlete or address the root cause of their distress.

To mitigate these limitations, it is essential for practitioners to use these scales in conjunction with other assessment methods, such as qualitative interviews, observations, and collaboration with coaches. This holistic approach allows for a more comprehensive understanding of the athlete's mental health and ensures that interventions are tailored to their specific circumstances. Additionally, practitioners should advocate for the development and use of mental health assessments that are specifically designed for athletes, considering the unique stressors, identity factors, and demands of collegiate sports.

While the use of existing mental health scales can provide valuable insights and support for college athletes, it is crucial for practitioners to remain aware of their limitations and interpret the results within the broader context of the athlete's experience. By doing so, sport social workers and other professionals can ensure that their interventions are both effective and relevant, ultimately contributing to the holistic well-being of the athletes they serve. The practical application of the scales mentioned in this work requires careful consideration of all their benefits and limitations.

Next Steps for Scale Development

Given the current state of the literature, there is a pressing need to develop more robust and athlete-specific mental health assessment tools. Future research should focus on creating scales that incorporate the unique stressors and challenges college athletes face, such as the pressures of competition, the demands of balancing academics and sports, and the psychological impact of injuries. These tools should be rigorously tested for validity and reliability within the college athlete population to ensure they accurately reflect the mental health status of college athletes.

Additionally, the development of these tools should be a collaborative effort involving sport social workers, psychologists, athletes, and other stakeholders. Such collaboration can help ensure that the tools are practical, user-friendly, and tailored to the specific needs of athletes. By integrating feedback from practitioners who work directly with athletes, these tools can be refined to better capture athletes' mental health nuances, leading to more effective interventions.

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Conclusion

While pre- and post-season mental health screenings for college athletes are not universally implemented across all institutions, existing literature underscores their importance. These screenings are vital for helping athletes achieve peak performance in their sports, academic pursuits, and personal lives. However, the current assessment tools have limitations, particularly regarding their validity and applicability to athletes.

To better support the mental health and overall well-being of college athletes, there is a clear need to develop assessment tools tailored specifically to this population. This includes incorporating variables unique to athletes, such as performance-related stress and injury-related psychological impacts. By addressing these gaps, the field can progress toward more comprehensive and effective mental health care for college athletes.

Furthermore, practitioners must be aware of the limitations of the tools they use and should actively engage in the ongoing development and validation of new assessment scales. Through collaboration and continued research, sport social workers can contribute to the creation of more effective mental health interventions, ultimately enhancing the performance and quality of life of college athletes.

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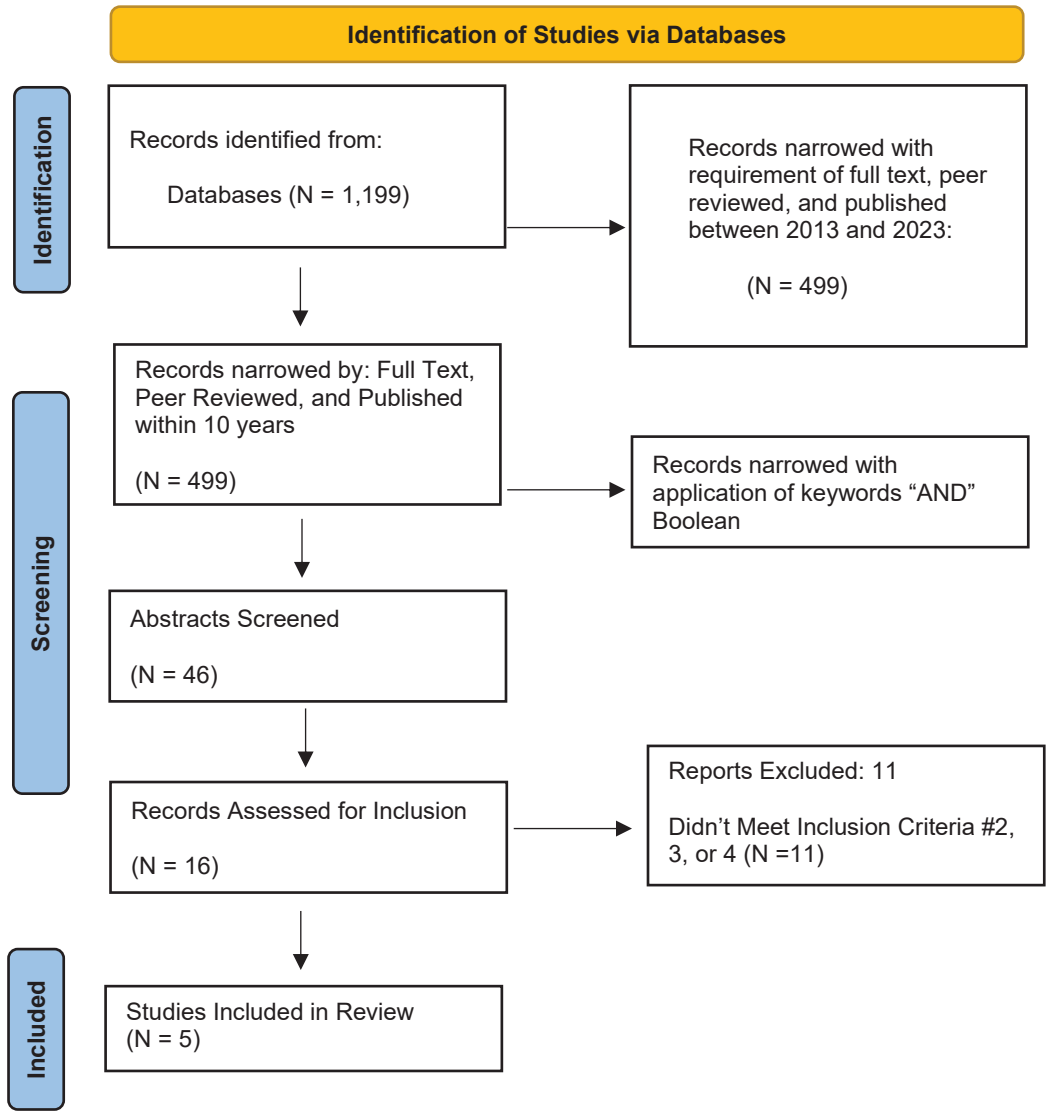
Appendix A

Figure A1. PRISMA Flow Diagram



Adopted From: Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

Table A1

Study Characteristics Table

Study Authors	Study Population	Mental Health Screening Tool Used	Outcomes
Donohue et al., 2019	NCAA Division I College Athletes	Global Severity Index of Symptom Checklist-90-Revised (GSI), Problems in Sport Competition Scale (PSCS), Problems in Sports Training Scale (PSTS), and Desire to Pursue Sport Psychology Scale (DSPS).	PSCS and PSTS are appropriate for identifying college athletes suitable for mental health interventions.
Donohue et al., 2023	NCAA Division I College Athletes (NCAA, Club, or Intramural Sports/ Undergraduate)	The Mental Health Disorders Screening Instrument for Athletes (MHSIA)	Each item on the MHDSIA had a significant loading on a single component. Additionally, the MHDSIA exhibited a robust level of convergent validity with the Symptom Checklist-90-Revised Global Severity Index (SCL-90-R GSI), which is a well-established measure of psychiatric symptoms, as anticipated.
LoGalbo et al., 2022	NCAA Division II College Athletes	Patient Health Questionnaire -9 (PHQ-9) and ImPACT Symptom Inventory	Using a stand-alone depression measure like the PHQ-9 with college athletes at baseline assessment is supported.

https://doi.org/10.33043/87x4a34d.

Taylor et al., 2023	NCAA Division I College Athletes (Pacific Athletic Conference -12)	International Olympic Committee Sport Mental Health Assessment Tool 1 (13 Mental Health Domains)	Eight mental health surveys demonstrated good internal consistency reliability. The suggested mental health surveys for collegiate athletes were credible.
Tran, 2020	Intercollegiate Varsity College Athletes (Undergraduate and Graduate Student Status)	General Anxiety Disorder-7 (GAD-7) and General Anxiety Disorder-2 (GAD-2)	The findings of this study provide evidence for the reliability, accuracy, and construct validity of the GAD-7 and GAD-2 instruments when used with a sample of student-athletes at a national level.

Table A2

Description of Mental Health Measures Used in IOC Sport Mental Health Assessment Tool 1

Measure	Description
Athlete Psychological Strain Questionnaire (APSQ)[20]	The APSQ is a 10-item measure that asks participants to indicate '…how you have been feeling over the past 30 days…' on a Likert-type scale ranging from 1 (none of the time) to 5 (all of the time) on items related to athletic distress. Total scores range from 10 to 50, and cut-offs are based on severity level: moderate ≥15, high ≥17 and very high ≥20. These cut-offs were tested in three Australian national sports teams,[20] and the current study used a cut-off of ≥17.[6]
Generalized Anxiety Disorder-7 (GAD-7)[7]	The GAD-7 is a 7-item anxiety measure that asks participants to indicate how often they have been bothered by specific anxiety symptoms 'over the last 2 weeks' on a scale ranging from 0 (not at all) to 3 (nearly every day). Total scores range from 0 to 21. In one study, a cut-off of ≥10 provided optimal sensitivity (89%) and specificity (82%) when compared with Structured Clinical Interview for DSM-IV.[24 25]
Patient Health Questionnaire-9 (PHQ-9)[8]	The PHQ-9 is a 9-item depression measure that asks participants to indicate how often they have been bothered by depressive symptoms 'over the last 2 weeks' on a scale ranging from 0 (not at all) to 3 (nearly every day). Total scores range from 0 to 27. A cut-off of ≥10 provides optimal sensitivity (99+%) and specificity (92%) in primary care patients, although it is unclear how the comparator diagnosis was determined in the original study. A cut-off of ≥10 was used in the present study.[6]
Athlete Sleep Screening Questionnaire-Sleep Difficulty Score subscale (ASSQ-SDS)[21 22]	A short version of the 15-item ASSQ consisting of 5 items was used to detect clinically significant sleep disturbances and daytime dysfunction. Respondents rate their sleep characteristics using scales ranging from 0 to 3 and 0 to 4 with ratings differing for each item. The scores for key sleep factors (total sleep time, insomnia, sleep quality, chronotype) are summed to obtain a total severity score, ranging from 0 to 17. The short version of the ASSQ was used by Gouttebarge and colleagues[6] with a cut-off of ≥8, which was used in this study. The short 5-item version of the ASSQ has not yet been validated.
Alcohol Use Disorders Identification Test-Consumption (AUDIT-C)[9]	The AUDIT is a 10-item measure designed to identify people with hazardous or harmful patterns of alcohol consumption with three subscales: alcohol consumption, drinking behaviour and alcohol-related problems. In the current study, only the 3-item consumption subscale[9] was used, which asks participants to indicate on a scale ranging from 0 to 4, 'How often do you have a drink containing alcohol?', 'How many standard drinks containing alcohol do you have on a typical day when you drink?' and 'How often do you have six or more drinks on one occasion?'. Total scores range from 0 to 12. The cut-off score was ≥4 for men and ≥3 for women and other genders.[6]
Cutting down, Annoyance by criticism, Guilty feeling, and Eye openers-Adapted to Include Drugs (CAGE-AID)[26]	The CAGE-AID is a 4-item measure on 'substance misuse' that asks participants about their drug use and their feelings surrounding it. Participants respond to each item with 'Yes' or 'No', and total sores range from 0 to 4. The cut-off was ≥2 in this study, as used by Gouttebarge *et al.*[6]
Brief Eating Disorder in Athletes Questionnaire (BEDA-Q)[23]	The BEDA-Q is a 9-item self-report measure on eating habits and thoughts about food, eating, weight and body image. Respondents indicate to what extent they have been bothered by each statement (eg, 'I felt extremely guilty after overeating') over the 'past 2 weeks' on a scale ranging from 0 to 3. Total scores range from 0 to 18, and a cut-off of ≥4 was used based on as used by Gouttebarge *et al*'s[6] recommendations.
Eating Disorder Examination–Questionnaire Short (EDE-QS)[27]	The EDE-QS is a 12-item self-report questionnaire on eating disorder symptoms and behaviours. Individuals indicate the frequency of the symptoms and behaviours over 'the past 7 days' on a response scale ranging from 0 to 3. Total scores range from 0 to 24. A cut-off score of ≥15 used in the study provides optimal sensitivity (83%) and specificity (85%) with good positive predictive value (37%).[28]
Adult ADHD Self-Report Scale (ASRS-v1.1) Screener[29 30]	The abbreviated version of the 18-item ASRS-v1.1 screens for attention deficit hyperactivity disorder (ADHD) in adults using 6 items that were found to be the most predictive of symptoms consistent with ADHD.[30] Respondents rate the frequency of each symptom over 'the past 6 months' on a scale ranging from 0 to 1. Total scores for the 6-item ASRS-v1.1 range from 0 to 6, and a cut-off of ≥4 was used in the current study.[6]
Mood Disorder Questionnaire (MDQ)[31]	The MDQ is a 15-item self-report measure that screens for bipolar disorder, particularly for bipolar I and to a lesser extent bipolar II. A cut-off point of ≥7 provides optimal sensitivity (69%) and specificity (67%) when applied to patients with mood disorders.[32] A cut-off of ≥7 plus a positive endorsement of items 2 (temporality) and 3 (impairment level) was used in the current study.[6 33]
Primary Care PTSD Screen for DSM-5 (PC-PTSD-5)[34]	The PC-PTSD-5 is a 5-item self-report screen that asks participants to indicate if they have been through a traumatic event. Participants who indicate such an event are then asked if they have experienced specific PTSD symptoms 'in the past month' with answer choices 'Yes' or 'No'. Total scores range from 0 to 5. The PC-PTSD-5 is designed to identify individuals with probable PTSD, and a cut point of ≥3 provides optimal sensitivity (95%) and specificity (85%).[34]
Problem Gambling Severity Index (PGSI)[35 36]	The PGSI is a 9-item measure on gambling severity that asks participants to indicate if they have engaged in certain gambling activities in 'the past 12 months' on a scale ranging from 0 (never) to 3 (almost always). Total scores range from 0 to 27, and a cut-off of ≥8 was used in this study.[6]
Prodromal Questionnaire (PQ-16)[37]	The PQ-16 is a 16-item measure assessing 'psychosis risk', which asks individuals to note 'Yes' or 'No' to having experienced specific psychosis symptoms. For each psychotic symptom noted, respondents indicate the severity of the symptom on a scale ranging from 0 (none) to 3 (severe). Severity items are summed to yield a total score, ranging from 0 to 16. A cut-off of ≥6 was found to provide high sensitivity (87%) and high specificity (87%).[37]

DSM-IV, Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition; PTSD, post-traumatic stress disorder.

(Taylor et al., 2023)

https://doi.org/10.33043/87x4a34d.

Table A3

Validity and Reliability Tools

Article	Reliability and Validity Tool	Values
Donohue et al., 2019	Cronbach Alpha	• PSTS Total Scale α = .93, • PSCS Total Scale α = .93 • DSPS Total Scale α = .96
Donohue et al., 2023	Cronbach Alpha	• MHDSIA Total Scale α = 0.86
LoGalbo et al., 2022	Receiver Operating Characteristic (ROC) Analysis	• Analysis demonstrated that an ImPACT affective symptom cluster score of 0.5 had the highest classification accuracy compared to PHQ-9 categorization using a cutoff of 5. • However, sensitivity was low (0.44), and specificity was high (0.84), indicating that over half of individuals above the PHQ-9 depression cutoff would be missed (false negatives).
	Linear Regression	• Results demonstrated that PHQ-9 total score was significantly predicted by all four ImPACT symptom clusters. • The sleep cluster was the best predictor of PHQ-9 total score $R^2 = 0.20,\ p < .001$, followed by the affective cluster $R^2 = 0.15,\ p < .001$, cognitive cluster $R^2 = 0.15,\ p < .001$, and physical cluster $R^2 = 0.12,\ p < .001$. • Additionally, the single ImPACT symptom of "fatigue" accounted for the most individual variance in PHQ-9 total score $R^2 = 0.16,\ p < .001$.
Taylor et al., 2023	Cronbach Alpha	• Refer to article (Table Four, pg. 599)
Tran, 2020	Cronbach Alpha	• GAD-7 α = .91
	Spearman-Brown coefficient	• rsB = .85
	ROC Analysis	• All the AUC values were considerably higher for the GAD-7 than the GAD-2 through all indicators

https://doi.org/10.33043/87x4a34d.

Table A4

Results

Study Authors	Mental Health Screening Tool Used	Useful for use with College Athletes during a Pre and Post Season Mental Health Screening?
Donohue et al., 2019	Global Severity Index of Symptom Checklist-90-Revised (GSI), Problems in Sport Competition Scale (PSCS), Problems in Sports Training Scale (PSTS), and Desire to Pursue Sport Psychology Scale (DSPS).	Yes - PSCS and PSTS are appropriate for identifying college athletes suitable for mental health interventions.
Donohue et al., 2023	The Mental Health Disorders Screening Instrument for Athletes (MHSIA)	Yes - The MHDSIA exhibited a robust level of convergent validity with the Symptom Checklist-90-Revised Global Severity Index (SCL-90-R GSI), which is a well-established measure of psychiatric symptoms, as anticipated.
LoGalbo et al., 2022	Patient Health Questionnaire -9 (PHQ-9) and ImPACT Symptom Inventory	Yes - Using a stand-alone depression measure like the PHQ-9 with college athletes at baseline assessment is supported.
Taylor et al., 2023	International Olympic Committee Sport Mental Health Assessment Tool 1 (13 Mental Health Domains)	Yes - Eight of the 13 mental health surveys demonstrated good internal consistency reliability.

https://doi.org/10.33043/87x4a34d.

Tran, 2020	General Anxiety Disorder-7 (GAD-7) and General Anxiety Disorder-2 (GAD-2)	Yes - The findings of this study provide evidence for the reliability, accuracy, and construct validity of the GAD-7 and GAD-2 instruments when used with a sample of student-athletes at a national level.

https://doi.org/10.33043/87x4a34d.

Sport Social Work Journal

Examining Factor Structure of a Widely Used Measure of Psychiatric Symptoms in Collegiate Athletes

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The Symptom Checklist 90 – Revised (SCL-90-R; Derogatis, 1994) is one of the most widely utilized measures of general psychiatric distress. However, its factor structure varies across populations, and psychometric properties of this scale have yet to be investigated in athletes. In this study several frequently reported factor structures of the SCL-90-R were examined in 311 collegiate athletes. None of the tested models were a good fit based on Confirmatory Factor Analysis (CFI) criteria, although the bi-factor model was reasonable using RMSEA (.06) and AIC (55951) criteria. The explained common variance of the global factor was 73%, reflecting a stronger general factor relative to specific construct factors. Indeed, several items did not significantly load on previously identified factors. Results suggest the SCL-90-R is a good tool to determine general symptom severity of mental health disorders in collegiate athletes.

Keywords: SCL-90-R, athlete mental health, assessment, CFA

Historically, the mental health of athletes has been overlooked due to assumptions that athletes are not at the same risk of experiencing mental health challenges as non-athletes (Hughes & Leavey, 2012). Although some aspects of student-athletes' unique culture prove beneficial, such as protective effects of exercise and perceived higher levels of resilience, other aspects present a more detrimental impact on athletes' mental health (Despres et al., 2008). For instance, sport competition may contribute to unique stressors, placing athletes at higher risk for binge drinking alcohol use, eating, gambling, and sleep disorders (Breslin et al., 2018; Brown et

al., 2014; Castaldelli-Maia et al., 2019; Kimball & Freysinger, 2003). Generally, there is evidence to suggest athletes may present, experience, and report symptoms of mental health differently than their non-athlete counterparts (Castaldelli-Maia et al., 2019; Despres et al., 2008; Giannone et al., 2017). Indeed, there are inherent factors that may lead collegiate athletes to under-report mental health symptom severity, relative to non-athlete peers, including loss of playing time and negative perceptions from others.

Mood Disorders

Some studies have indicated that athletes' rates of depression are higher than those of the general population (Wolanin et al., 2015), while others suggest athletes experience similar rates of depressive disorders (Donohue et al., 2004; Rice et al., 2016). Athletes may underreport their symptoms (Brown et al., 2014) due stigma, fears of jeopardizing one's position on the team, and perceptions of weakness (Watson, 2006). Appaneal et al., (2009) recommend the use of easy to complete, self-report depression measures for athletes during preseason physical examinations.

Athletes tend to endorse fewer depressive symptoms as compared to non-athlete peers (Proctor & Boan-Lenzo, 2010). However, some important gender differences regarding depression symptomatology have been reported (Storch et al., 2005). Specifically, female athletes demonstrate significantly higher rates of social anxiety and depression as compared to male athletes, and all non-athletes (Storch et al., 2005). It is important to appreciate, however, that athletes may under-report their symptoms due to stigma (Brown et al., 2014; Watson, 2006).

Anxiety Disorders

Rates of anxiety disorders for collegiate athletes are varied and inconclusive. Some research shows no difference in anxiety between athletes and non-athletes (Rice et al., 2016), some shows athletes typically report lower levels of anxiety as compared to non-athletes (Tahtinen & Kristjansdottir, 2018), and other study results suggest athletes experience more performance and competition anxiety than non-athletes (Patel et al., 2010).

Alcohol Use Disorders

Alcohol use disorders are the most prevalent substance use disorders in athletes. In comparing athletes and non-athletes in their consumption of alcohol, intramural athletes display more frequent drinking and alcohol-related consequences (Barry et al., 2015; Marzell et al., 2015). Indeed, athletes engage in more binge drinking and endorse more alcohol related negative consequences as compared to non-athlete peers (Barry et al., 2015; Ford, 2007; Yusko et al., 2008). Similar findings show that intramural and club athletes consume more than three drinks in one sitting at higher rates than non-athletes (Marzell et al., 2015).

Eating Disorders

Some investigators have found collegiate athletes are at an increased risk for eating disorders (Martinsen et al., 2014), while others have found no difference in the frequency of

eating disorders between athletes and non-athletes (Somasundaram & Burgess, 2018). Athletes tend to show less body dissatisfaction, disordered eating, and body image disturbance as compared to the general population (DiBartolo & Shaffer, 2002; Reinking & Alexander, 2005). However, multiple studies highlight the role of specific sport types (i.e., lean sports) in elevated rates of disordered eating (Reinking & Alexander, 2005). Additionally, much of the current literature only examines differences in disordered eating between female athletes and non-athletes.

Sleeping Disorders

Research indicates increased likelihood of insufficient sleep, sleep disturbance, and poor sleep practices among student-athletes as compared to their non-athlete counterparts (Brown et al., 2014; Castaldelli-Maia et al., 2019; Driller et al., 2017). Athletes generally report more difficulties with sleep as compared to non-athlete peers (Brown et al., 2014; Castaldelli-Maia et al., 2019; Driller et al., 2017).

General Psychiatric Symptoms

Some measures examine multiple psychiatric domains, which offer greater utility as screens than single domain questionnaires, such as those reviewed above. These measures are also more parsimonious in providing broad-based assessments of intervention outcomes than mental health symptom specific measures. The results of studies in which researchers have examined general mental health of athletes and non-athletes are mixed. Some researchers found no significant differences between female athletes and non-athletes on the measure of general emotional distress (Davis & Strachan, 2001). Others, however, have found that athletes (NCAA and recreational combined) report less severe psychiatric symptoms as compared with their non-athlete peers (Donohue et al., 2004).

NCAA, Club, and Intramural Athlete Comparisons of Mental Health

Annually in the United States approximately eight million athletes are involved in high school sports (NFHS, 2019), approximately half a million students participate in the NCAA (NCAA, 2019), about two million collegiate students participate in club sports (Pennington, 2008), and over eight million collegiate students are engaged at the intramural level (Dugan et al., 2014). Student-athletes evidence a distinct culture (Carless & Douglas, 2013) and may experience mental health symptomology differently than their non-athlete counterparts (Castaldelli-Maia et al., 2019; Despres et al., 2008; Giannone et al., 2017). Collegiate athlete types in the U. S. (i.e., NCAA, Club, intramural) differ in their competitiveness, levels of commitment, and requirements for sport participation. Moreover, NCAA athletes participate in one of three divisions. Division III represents the largest number of schools (40%), while Division I include the most athletes (nearly 9000; NCAA, n.d.). To participate in NCAA sports, an athlete must comply with clearly specified academic standards (i.e., minimum GPA, course load requirements), ethical standards (i.e., honesty and sportsmanship), financial aid standards, and practice standards (i.e., maximum of 20 hours of training per week during a playing season

https://doi.org/10.33043/24xzdzbb.

and while school is in session; NCAA, 2009). Additionally, NCAA athletes are limited to four seasons of intercollegiate competition in any one sport (NCAA, 2020).

According to the National Intramural-Recreational Sports Association (NIRSA), club sports involve students that are voluntarily organized to promote their common interests in an activity through participation and competition (Lifschutz, 2012), and contrary to NCAA sports, club sports do not have a formally defined organizational structure. In the United States, club sports may be attractive to athletes pursuing nontraditional sports that are not offered at the NCAA level (e.g., cycling, martial arts, Beidler et al., 2018). Although some clubs remain solely recreational, most are highly competitive. Club sports do not have consistent regulations for participation regarding academic or practice requirements. However, to be eligible to compete, club sport athletes in most colleges and universities in the United States, must be undergraduates with a minimum of half full-time enrollment status. Additionally, some limitations regarding competing at both, NCAA and club levels exist (NIRSA, 2016). Outside the U.S., competitive athletes across the world participate in club sports and do not have amateur athletic leagues that pay college tuition, such as the NCAA, thus club sports outside the United States are often recognized as "elite" or intramural depending on location or setting (Swann et al., 2015).

In the United States, intramural sports originated as student-led and sponsored athletic competitions (Stewart, 1992). Intramural sports are bound to compete within the university setting, as opposed to interinstitutional (i.e., occurring between universities) NCAA competitions. NIRSA established guidelines for the intramural sports, including traditional formats, staffing, rules, and variations (NIRSA, n.d). However, intramural sports are not bound to follow the NIRSA intramural sport rules. It is, of course, important to emphasize the extent of competitiveness varies across and within athlete types.

There are extant studies that have compared mental health symptoms among athlete groups, including club, intramural, NCAA, and professional athletes (Barry et al., 2015; Donohue et al., 2004; Marzell et al., 2015; Wilson, 2016). When looking at various athlete types we know that some substance use differences exist. Two studies previously examined patterns of alcohol consumption among club, intramural, and NCAA level athletes (Barry et al., 2015; Marzell et al., 2015). In these studies, intramural athletes displayed higher risk drinking (i.e., higher frequency drinking and blood alcohol concentration) as compared with athletes from other sport participation levels. Additionally, NCAA athletes report less use of tobacco as compared with club and intramural athletes (Primack et al., 2010). Other differences in addiction patterns have been found. Martin et al. (2016) demonstrated that males who participated in club and intramural sports evidenced higher rates of gambling, as compared with NCAA male athletes.

Reinking and Alexander (2005) suggest athletes participating in lean sports (i.e., sports that place a competitive or aesthetic worth on leanness, such as cross-country, swimming, gymnastics, and dance) display higher rates of disordered eating as compared to non–lean-sport athletes. Additionally, athletes participating in weight-class sports (i.e., wrestling) may be particularly at risk for development of eating psychopathology (Bratland-Sanda & Sundgot-Borgen, 2013).

https://doi.org/10.33043/24xzdzbb.

Wilson (2016) found no differences between NCAA athletes and intramural athletes in depression and anxiety, and Donohue et al. (2004) found NCAA athletes and recreational athletes evidence similar severity of psychiatric symptoms. Donohue et al. (2019) found intramural athletes reporting significantly more problems in sport competition as compared to NCAA athletes, while there were no significant differences found between club and NCAA, and club and intramural athlete groups.

As evident by the lack of literature in this area, there is still much to learn about what differences may exist between NCAA, club, and intramural athletes. Some argue that these groups are inherently different from one another, while others consider all three groups to be a part of the unique athlete culture. In Europe, for example, there is no equivalent to the NCAA. As a result, researchers examine mixed samples of regional, national, and international level athletes (Araujo & Scharhag, 2016; Gomes et al., 2011; Nicolas et al., 2014). Araujo and Scharhag (2016) recommend researchers clearly describe their athlete samples to permit adequate comparisons across athlete types and non-athletes, thus, informing mental health practice.

Need to Psychometrically Examine the SCL90R in NCAA, Club and Intramural Athletes

The SCL-90-R (Derogatis et al., 1994) is a commonly used inventory of general psychiatric functioning, and a primary focus in the current study. Although psychometric properties of the SCL-90-R in collegiate athletes are unknown, Davis and Strachan (2001) compared Global Severity Index (GSI) scores between female athletes with non-athlete peers and Donohue et al. (2004) utilized SCL-90-R GSI scores to assess general psychiatric symptomatology in a sample of athletes and non-athletes, showing collegiate club and NCAA athletes demonstrated lower Global scores than the normative population. Previous studies examining the SCL-90-R in non-athlete samples have found mixed factorial structure. For instance, although scale developers originally proposed nine-factor model (Derogatis et al., 1994), others have determined single factor (Ardakani et al., 2016; Ronan et al., 2000; Smits et al., 2014), eight factor (Arrindell et al., 2006; Arrindell & Ettema, 2005), and bi-factor models to be optimal fits (Urbán et al., 2016) in non-athlete samples.

In their original examination of the SCL90R, the authors performed confirmatory variation of factor analysis in a sample of 1,002 psychiatric outpatients (an orthogonal Procrustes procedure as well as varimax rotation), binding items to theoretically postulated structure (Derogatis & Cleary, 1977). Out of 90 items, Derogatis et al. (1994) proposed nine subscales (i.e., Somatization, Obsessive Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism) and one global scale (Global Severity Index). The proposed nine factors accounted for 53% of the variance. Seven out of 90 items were not included under any of the primary symptom subscales and, in fact, loaded on several of the dimensions. However, Derogatis and Cleary (1977) justified their inclusion due to clinical relevance. Orthogonal Procrustes procedure results showed that all postulated items loaded significantly on Somatization, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism dimensions, while one item did not significantly load on Obsessive Compulsive and Interpersonal Sensitivity dimension each. Eight items loaded on additional, non-

https://doi.org/10.33043/24xzdzbb.

postulated factors, with moderate correlations between anxiety and phobic anxiety dimensions. It is important to note that there were significant differences between the results of an orthogonal Procrustes procedure and varimax rotation, with varimax results showing 14 items that failed to significantly load on the proposed dimension.

Ardakani et al. (2016) conducted Confirmatory Factor Analysis (CFA) on the Malaysian version of the SCL-90-R in 660 Malaysian normal male adults and patients with chronic disease. CFA failed to support the nine-factor structure of the SCL-90-R. Therefore, questioning the proposed multidimensional nature of the scale. The authors concluded that SCL-90-R is best utilized as a unidimensional measure of the overall psychological distress. Similar results were found in adult inpatient sample utilizing principal component analyses (Ronan et al., 2000) and Dutch psychiatric outpatient sample using a two-layer confirmatory hierarchical factor model (Smits et al., 2014). These studies suggest that much of the variance of the SCL-90-R is accounted by a strong general factor.

Arrindell and Ettema (2005) published the Dutch version of the SCL-90-R. Upon initial examination using a varimax rotation in a general population sample of 2,368 adults, factor analysis resulted in eight instead of the original nine dimensions. Those were defined as Anxiety, Agoraphobia, Somatic Symptoms, Depression, Inadequacy of Thinking and Acting, Obsessive-Compulsive, Distrust and Interpersonal Sensitivity, Hostility, and Sleeping Problems (Arrindell & Ettema, 2005). Another study utilizing multiple group method of confirmatory analysis found that 93% of all items loaded on theoretically proposed subscale, with eight factors explaining 46% of the total variance (Arrindell et al., 2006). The Dutch version of the SCL-90-R has since been utilized in a variety of samples, including female lumbopelvic pain patients (Arrindell et al., 2006), adults undergoing gender-affirming surgery (van de Grift et al., 2018), adult patients presenting to neurological outpatient clinic (Ruis et al., 2014), as well as adult patients with DSM-V anxiety disorders (Kunst et al., 2021).

Lastly, Urbán et al. (2016) found that a bi-factor model best fits the SCL-90-R multidimensional nature. The authors conducted CFA examining one-factor, nine-factor, second-order factor, and bi-factor models in two independent samples of 972 Hungarian inpatient adults and 1,902 Dutch inpatient and outpatient patients. In both samples, the bi-factor model with correlating nine specific factors resulted in best fit across chi-square, CFI, and RMSEA indices. Results confirming bi-factorial model of the SCL-90-R suggest that scores are influenced by at least two factors, general distress and a specific dimension factor.

Results of the studies suggest samples may demonstrate unique SCL-90-R factor structures, necessitating further investigation of this scale in unique populations, such as collegiate athletes. The primary aim of the current study was to determine an ideal factor structure for the SCL-90-R in collegiate athletes.

https://doi.org/10.33043/24xzdzbb.

Method

Participants

The current study includes 311 collegiate student-athletes from a Division I southwestern university who were interested in participating in goal-oriented psychological programming within the context of controlled clinical trial aimed at improving sport performance and performance in life. As can be seen in Table 1, participants represent diverse ethnic backgrounds, half are women, and they were approximately 20 years old. Most are freshman (36%) and NCAA athletes (48%). Approximately half of the participants entered the study through a departmental research subject pool. To enhance external validity, participants were not required to evidence psychiatric diagnoses. Inclusionary criteria were (a) full or part-time enrollment in the university; (b) at least 18 years of age; and (c) formally participating in sports (i.e., NCAA, club, intramural).

Measure

The Symptom Checklist 90 – Revised (SCL-90-R; Derogatis, 1994) was used as a measure of a broad range of psychological problems and symptoms. The SCL-90-R is a 90-item self-report measure that assesses overall psychological distress over the past seven days. Participants are asked to rate the degree to which they have experienced each of the symptoms on the distress Likert scale from zero to four (0 = Not at all, 1 = A little bit, 2 = Moderately, 3 = Quite a bit, and 4 = Extremely) with higher scores indicating greater distress. The SCL-90-R can be interpreted at the symptom, dimension (i.e., across nine subscales), and/or global (i.e., Global Severity Index; GSI) levels. The SCL-90-R assesses symptoms across nine dimensions, including Somatization, Obsessive Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. The SCL-90-R is frequently utilized as a global measure of psychological distress, which is computed by summing all items and dividing them by 90, creating GSI. The SCL-90-R demonstrated acceptable convergent-discriminant validity, internal consistency, and test-retest reliability in non-athlete samples (Derogatis et al., 1994). The SCL-90-R requires 12 to15 minutes to complete and its psychometric properties are good in non-athlete populations (see review of SCL-90-R above).

Procedures

Participants were recruited through the university research participation pool (n = 163; 52%), promotion of goal-oriented programming for student athletes via classroom presentation (n = 97; 31%), coaches and teammates (n = 38; 12%), and athletic department (n = 13; 4%). First, an initial intake was conducted. In this intake athletes were engaged in an interview designed to determine their interest in participating in goal-oriented programming. Athletes were screened for inclusionary criteria and completed an assessment battery after consent was determined. A large battery of psychological measures was administered during three times points (baseline, 4-months post-baseline, and 8-months post-baseline). In this study, only baseline SCL-90-R scores were utilized. The study was approved under exempt review by the university's Institutional Review Board.

https://doi.org/10.33043/24xzdzbb.

Statistical Plan and Approach

Data Screening

Descriptive statistics for demographic variables (i.e., age, gender, ethnicity, sport status, year in school, and referral type) were performed. Prior to addressing study aims, the data was inspected for univariate and multivariate outliers by examining high leverage points. Data was evaluated for normality and linearity, Mardia's multivariate kurtosis test and multivariate skewness test were performed (Mardia, 1970). Multicollinearity of the data was assessed through a correlational matrix. Correlation values above .85 were considered multicollinear, which tends to indicate problematic discriminant validity (Kline, 2015).

Primary Analyses

Confirmatory factor analysis (CFA) was performed on the SCL-90-R inventory. CFA was assessed to determine the best fitting factor structure of the SCL-90-R using Maximum Likelihood as an estimator. The purpose of CFA is to identify factors that account for the variation and covariation among a set of indicators (Brown, 2015). CFA requires a priori hypotheses about factor-indicator correspondence and the number of factors (Kline, 2015). CFA was chosen due to the validated factor structure of the SCL-90-R in other populations (Ardakani et al., 2016; Ronan et al., 2000; Smits et al., 2014). Additionally, CFA analysis is preferred for measurement models that have well-established underlying theory (Hurley et al., 1997).

To identify adequacy of model fit, goodness-of-fit evaluation, comparative fit index (CFI; Bentler, 1990), root mean square error of approximation (RMSEA; Steiger, 1980), and Akaike information criterion (AIC; Akaike, 1987) were performed. These indexes examine important aspects of the model fit. CFI values above .95 represent good fit (Hu & Bentler, 1999). RMSEA values at or below .05 are indicative of close fit, values at or below .08 indicate reasonable fit, and values at or above .10 represent unacceptable fit (Browne & Cudeck, 1992). AIC allows for direct comparison of competing models. Since AIC is not scaled between 0 and 1, relative model fit is determined by smaller value.

It is typically recommended that studies examining factor analysis collect a sample size of 300 or more (Tabachnick & Fidell, 2007). The current study meets this requirement. Finally, given potential preexisting differences between different sport levels (i.e., NCAA, club, and intramural) one-way analyses of variance (ANOVAs) were performed to compare response patterns on the SCL-90-R across these groups. Post-hoc analyses were performed to further examine significant differences.

Hypotheses

The current study extends previous work of the SCL-90-R psychometric properties by examining the factorial structure of the SCL-90-R in collegiate athletes. It was hypothesized that (a) the SCL-90-R factor structure in collegiate athletes will differ from that of the general population with athletes reporting less psychological problems and symptoms. Given the

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inconsistent findings of the SCL-90-R factor structure in different populations, a single-factor loading was hypothesized to occur due to some previous studies finding unidimensional one-factor model being the best fit and GSI consistently being most supported in the literature. Other frequently reported factor structures were evaluated to determine the best fit in this population, including the original nine factor, eight-factor, and bi-factor models. Next, it was hypothesized that (b) NCAA, club, and intramural athletes will differ in their reports of mental health symptomatology as measured by the SCL-90-R. It is hypothesized that intramural and club athletes will report more psychological problems and symptoms on the SCL-90-R as compared to NCAA athletes, which is consistent with previous research (Donohue et al., 2004).

Results

Data Screening and Descriptive Analyses

Data screening revealed no significant outliers. Participant demographic information is presented in Table 1. Additionally, means and standard deviations of the SCL-90-R GSI *t*-scores for total sample and across athlete types can be found in Table 2.

Primary Analyses

Hypothesis 1:

It was hypothesized that the SCL-90-R factor structure in collegiate athletes will differ from that of the general population with athletes reporting less psychological problems and symptoms. We also proposed that the one-factor model will result in the best fit. Mean raw score responses of the SCL-90-R were gathered from literature across different sample populations to examine if athletes generally report less psychological problems. Table 3 shows the SCL-90-R mean raw scores for the current sample of athletes in comparison to other populations, i.e., original SCL-90-R manual data for the USA Nonpatients (Derogatis, 1994), USA Outpatients (Derogatis, 1994), Danish community adult sample (Olsen et al., 2004), and German normal healthy adults (see Schmitz et al., 2000). Overall, mean subscale values are higher in the collegiate athlete sample as compared to the other samples.

Table 4 presents a correlational matrix for the SCL-90-R original subscales. All the correlations were significant (ps < .01) and ranged between .26 and .80. CFA for one-factor, eight-factor, original nine-factor, and bi-factor models was performed. To measure overall model fit for CFA, multiple indices were used, including comparative fit index (CFI; Bentler, 1990), root mean square error of approximation (RMSEA; Steiger, 1980), and Akaike information criterion (AIC; Akaike, 1987). The results of these fit indices for each of the four models can be found in Table 5.

One-Factor Model. CFA results indicate that the one-factor model provided a poor fit for this sample of data. Although the overall chi-square was significant χ^2 (3915, N = 311) = 10043, p < .001, CFI did not meet the accepted value indicative of good fit (CFI = .54). As seen

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in Table 5, the one-factor model had the largest RMSEA and AIC values, suggesting poor fit (RMSEA = .07; AIC = 62918).

Eight-Factor Model. Based on the CFA results, the eight-factor model showed significant chi-square value χ^2 (3131, N = 311) = 7359, p < .001. CFI did not meet the accepted value indicative of good fit (CFI = .63). RMSEA criteria demonstrated reasonable fit (RMSEA = .07). While AIC demonstrated a second-largest value (AIC = 56721), suggesting that eight-factor model fit is worse than the original nine-factor and bi-factor models.

Original Nine-Factor Model. Results of the CFA on the originally proposed nine-factor model showed a significant chi-square value χ^2 (3284, N = 311) = 7598, p < .001. However, CFI value revealed inadequate fit (CFI = .64). RMSEA criteria demonstrated reasonable fit (RMSEA = .06). AIC comparison of competing models revealed the nine-factor relative model fit was larger than the bi-factor model (AIC = 56166).

Bi-Factor Model. Like other models, the bi-factor model chi-square test was significant χ^2 (3237, N = 311) = 7289, p < .001. As shown in Table 5, none of the examined models reached CFI value above .95, which is indicative of good fit. However, the bi-factor model demonstrated the largest CFI value (CFI = .66). RMSEA criteria value was indicative of reasonable fit (RMSEA = .06). The bi-factor model was also closest to approaching close fit (>.5). When comparing relative model fit based on the AIC, the bi-factor model demonstrated the smallest value (AIC = 55951). Based on the results of fit indices, the bi-factor model was determined to be the best fitting model.

Factor loadings for the bi-factor model are presented in Table 6. Apart from item 16, all other items significantly load on the general distress factor (i.e., global factor). The significant factor loadings of the general global factor ranged from .05 to .88. As shown in the table, most of the items had strong loadings on their respective specific factors, with twenty-four items that did not significantly load on the relevant construct (item numbers 3, 6, 8, 14, 15, 16, 21, 22, 23, 26, 31, 32, 33, 41, 65, 71, 72, 73, 77, 78, 80, 85, 86, 88). Variance explained (sum of squared loadings) can be found in the bottom portion of Table 6. These values are used to determine explained common variance (ECV) index. The ECV is defined as the "ratio of variance explained by the general factor divided by the variance explained by the general plus the group factors" (Reise, 2012). In this data, ECV of the global factor is 73%, reflecting that the SCL-90-R has a stronger general global factor relative to the specific construct factors. The ECV for specific factors is also reported at the bottom of Table 6. Specific factors' ECV values ranged from 6.4% to 1.3%, with psychoticism factor displaying least explained common variance.

Hypothesis 2:

Next, it was hypothesized that NCAA, club, and intramural athletes will differ in their reports of mental health symptomatology as measured by the SCL-90-R. It was proposed that intramural and club athletes will report more psychological problems and symptoms on the SCL-90-R as compared to NCAA athletes.

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Given little support for the presence of nine unique dimensions, only SCL-90-R GSI mean *t*-scores for the whole sample, as well as NCAA, club, and intramural groups are reported in Table 2. Results of analysis of variance (ANOVAs) yielded significant differences in response patterns across groups. Post-hoc analyses were performed to further examine those differences. Overall, results indicate significant group differences on Global Severity Index (NCAA: M = 53.95, SD = 10.33 vs. intramural: M = 59.78, SD = 8.71 and Club: M = 61.97, SD = 9.04), $F(2, 297) = 16.80$, $p < .001$, such that NCAA athletes endorsed significantly less symptoms than club and intramural athletes. Club and intramural athletes did not significantly differ in their SCL-90-R GSI *t*-scores.

Discussion

The purpose of this study was to examine the SCL-90-R factor structure in the NCAA, club, and intramural student athletes, as consistent with scientists who have indicated the need to psychometrically examine mental health measures in sport populations. In this study, we wanted to first explore whether the currently recommended nine-factor model of the SCL-90-R scale is appropriate for athletes. To our knowledge, this is the first study to investigate confirmatory factor analysis (CFA) of the SCL-90-R in collegiate athletes. Conducting this study advances what is known about collegiate athlete endorsement of global psychiatric symptomatology on the SCL-90-R, and provides mental health providers and researchers with a validated measure of the general psychiatric functioning.

Several of the SCL-90-R factor models were examined for fit, including the original and currently published nine-factor model, as well as other models found by researchers investigating the SCL-90-R (i.e., one global factor, eight-factor, and bi-factor models). In line with the most stable finding from previous research, we hypothesized that one global factor will result in the best fit (Ardakani et al., 2016; Ronan et al., 2000; Smits et al., 2014). Findings revealed the bi-factor model outperformed alternative models of the SCL-90-R across RMSEA and AIC criteria. However, none of the tested models reached reasonable (.90) or good (.95) fit based on CFI criteria (Hu & Bentler, 1999). This suggests that none of the tested models provided a good fit for the data. One possible explanation of these inconsistent findings could be examination of a non-clinical sample in the present study. Previous research supporting the bi-factorial structure of the SCL-90-R involved inpatient and outpatient samples (Urbán et al., 2016).

Several reasons may explain why the bi-factor model exhibited higher fit indices than other models. First, bi-factor modeling allows each item to load on a general global factor and only one specific construct factor, suggesting the SCL-90-R items demonstrate both, a single common factor (i.e., general psychological distress) and specific construct factors (i.e., depression, somatization, etc.) to some extent. Recently, the scientific community investigated multidimensional complexity of psychometric scales (Reise, 2012), suggesting that bi-factor modeling can resolve some of the important problems in conceptualizing and measuring psychological constructs that appear multidimensional in nature (Reise, 2012). This implies that the scores of some psychometric self-report scales, including the SCL-90-R, are influenced by at least two factors, general distress and a specific construct factor. In our data, the bi-factor model is likely to display a better fit to the general one factor model due to a relatively small degree of

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multidimensionality. Specifically, the general factor explained roughly two thirds of the common variance, whereas specific construct factors accounted for roughly one third of the explained common variance.

Additionally, inconsistencies in the SCL-90-R factor structure may be reflective of differences in population samples. Indeed, collegiate athletes are a unique population which has been found to be qualitatively different from the general sample control group (Darcy et al., 2013; Sundgot-Borgen et al., 2004). As extensively reviewed in the literature review section, athletes may deny or minimize symptoms on the SCL-90-R due to a variety of reasons, including stigma and worries related to jeopardizing their athletic career, even though those symptoms may be interfering with their performance and life in general. Collegiate athletes may also differ from other populations in the kinds of symptoms they report. Thus, unique sample differences may have contributed to inadequate fit of the bi-factor model compared to previous findings by Urbán et al. (2016).

Results of the best-fitting model show that all but one item (#16, hearing voices) loaded on the general distress factor. Notably, item 16 did not load on either the general distress factor or the designated psychoticism construct factor. This could be due to low psychoticism construct validity, as four out of ten items in this subscale did not show significant factor loadings. The psychoticism subscale also accounted for the least amount of explained common variance (1.3%). Notably, nearly identical results were found by the scale developers, with only four of the ten items loading significantly on this factor (Cyr et al., 1985). The authors proposed an item alteration which has not been conducted to date. Other studies additionally raised questions regarding the uncertain validity of the SCL-90-R psychoticism symptom dimension. One exploratory factor analysis study yielded re-organized psychoticism and paranoid ideation dimensions into “schizotypal signs” and “schizophrenia nuclear symptoms” (Rössler et al., 2007), while Bakhshaie et al. (2011) reports the paranoid ideation and psychoticism subscales remain separated though some items were removed to improve construct validity. In another study, items from the original subscales of interpersonal sensitivity, paranoid ideation, and psychoticism were reformulated and combined to comprise a new Distrust and Interpersonal Sensitivity subscale (Ruis et al., 2014). In addition, authors concluded that psychoticism and paranoid ideation dimensions should be reformulated (Rief & Fichter, 1992). On one hand, these inconsistent findings raise concerns regarding the validity of the psychoticism symptom dimension and prompt the need for re-analysis. On the other hand, these discrepancies may also be reflective of the considerable sample differences across studies (i.e., age, socio-cultural background, and socioeconomic status).

Results of the CFA analyses also suggest that the anxiety subscale may be unstable. While some initial research supported anxiety subscale as a unique construct (Derogatis, 1994), the results of the present study show a high number of items that did not load on the designated factor. Six out of ten items in the anxiety subscale did not reach statistical significance and accounted for 2.15 percent of the explained common variance. These findings are consistent with Rief and Fichter (1992) who examined the ability of the SCL-90-R to identify and discriminate between anorexia nervosa, dysthymia, and anxiety disorders. In their study, as well as some earlier studies (e.g., Holcomb et al., 1983), the authors encountered difficulty reproducing

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anxiety factor, suggesting it be merged with phobic anxiety factor. Holcomb et al. (1983) also noted that some of the SCL-90-R items could be related to multiple constructs (i.e., anxiety and interpersonal sensitivity), and thus would not emerge as separate factors in their analyses. Therefore, researchers should be cautious when interpreting anxiety and psychoticism subscales in athletes as valid constructs of specific and unique dimensions.

The nine-factor model that was initially proposed by the scale developers (Derogatis, 1994) demonstrated second-to-best fit in our study, outperforming one-factor and eight-factor models. Other studies similarly failed to confirm the nine-factor structure, raising concerns about the SCL-90-R postulated dimensions. Many reached consensus that the SCL-90-R is a measure of general distress, rather than distinct dimensions of psychopathology (Cyr et al., 1985). Contradicting those studies, Rief and Fichter (1992) confirmed different profile shapes of the SCL-90-R in different diagnostic groups (i.e., dysthymia, anxiety, and anorexia nervosa). Overall, these inconsistencies may suggest an outdated conceptualization of mental health used in the SCL-90-R. Published in 1994, the scale is yet to be updated. Moreover, current gold standard self-report measures, such as The Achenbach System of Empirically Based Assessment (ASEBA) or the PROMIS, tend to reflect the DSM-V criteria to assist with diagnostic clarity (Rescorla & Achenbach, 2004; NIH).

Results of this study support the idea that the general distress global factor remains of clinical value as it has accounted for roughly two thirds of the explained common variance. Consequently, the subscale scores contributed to one third of the explained common variance. This may suggest that the SCL-90-R is best to be utilized as a unitary screening tool, a measure of severity of symptoms, or as a measure of change over time, rather than a diagnostic tool with distinct dimensions (Schmitz et al., 1999; Urbán et al., 2016). Indeed, the SCL-90-R may be useful at highlighting problem areas, such as elevated negative affect, which could signal to the provider to further evaluate those concerns for the purposes of a clear diagnosis (i.e., differential diagnosis of major depressive disorder vs. adjustment disorder with depressed mood).

Although the ANOVA results indicate significant differences between NCAA, club, and intramural athletes across the SCL-90-R GSI, it is unlikely that combining these subgroups affected results of the confirmatory factor analysis. It is reasonable to assume that there would be some variation between NCAA athletes and recreational sport athletes, as described in earlier sections of this paper. Separate examination of the NCAA, club, and intramural athlete subgroups may be an area of focus in future research.

In summary, we present the confirmatory factor analysis on the SCL-90-R in collegiate student athletes. To our knowledge, there have been no studies examining the SCL-90-R factorial structure in this unique population. In this study, the SCL-90-R demonstrated a small degree of multidimensionality explaining the better fit of the bi-factor model over the hypothesized one-general factor model. The difficulty reproducing at least two constructs, prompts a revision of the SCL-90-R, which has also been suggested by other researchers (Bakhshaie et al., 2011; Holcomb et al., 1983; Rief & Fichter, 1992; Rössler et al., 2007). Although the SCL-90-R remains to be clinically useful as it covers a wide range of psychological symptoms, is relatively easy to complete, and is a good tool for repeated measurement and

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symptom severity, future studies should examine revised symptom dimensions of this scale. An exploratory factor analysis, followed by a confirmatory factor analysis, post item reformulation is needed to determine if the bi-factor model is robust and if more variance is explained by the specific constructs (i.e., increased multidimensionality) after the revisions. Another implication of these results is that more research is needed on the factor patterns of symptoms with collegiate athletes, since the current bi-factor model differs from previously proposed factor structures in the general population.

Limitations

Although there is a plethora of literature around CFA and its use in measurement development and examination, it is important to note that the nature of CFA is of finding "good fit" which does not by definition equivalent to a "correct" or "true" model, but only a plausible model. This study examined a limited number of models, therefore other models that fit the data better or approximately the same level of goodness-of-fit may exist.

Overall, results of the CFA analyses provide some support for the multidimensional nature of the SCL-90-R. However, some items failed to load significantly on their proposed construct, with psychoticism factor explaining the least amount of common variance. Given past factor analysis findings of the SCL-90-R in non-athlete samples, this study only examined previously found factor structures (i.e., one factor, nine-factor, eight-factor, and bi-factor models). Future research may examine other factorial models in this population, as well as explore anxiety and psychoticism subscale validity. Furthermore, examination of NCAA, club, and intramural athlete subgroups may be an area of focus in the future research. Replication of the bi-factor model of the SCL-90-R in other athlete samples will be needed to provide further support for the validity of this structure. It is a limitation that there was no data on previous or current mental health treatment or conditions of participants in this study, and whether mental health conditions varied among the groups. Lastly, results of the current study suggest other mental health scales that have been explicitly developed in athlete samples, such as the Sport Interference Checklist (Donohue et al., 2020; Donohue et al., 2007), Athlete Psychological Strain Questionnaire (Rice et al., 2020), Sport Mental Health Continuum Short Form (Foster & Chow, 2019), and Mental Health Disorders Screening Instrument for Athletes (Donohue et al., 2023), may offer distinct advantages over the SCL-90-R, both psychometrically and clinically.

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Table 1

Participant Demographic Characteristics with Numbers Shown as Mean (SD; Range) or Frequency (%), (N = 311)

Demographics	Total ($N = 311$)		
	M	*SD*	*Range*
Age in Years	19.87	1.92	(18-33)
	λ	*%*	
Gender			
Female	156	50.2	
Male	155	49.8	
Ethnicity			
White/Caucasian	129	41.5	
Black/African American	54	17.4	
Other (multiple or not listed)	51	16.4	
Hispanic/Latino	39	12.5	
Asian/Asian American	26	8.4	
Pacific Islander	12	3.9	
Level of Sport Participation			
NCAA	150	48.2	
Intramural	125	40.2	
Club	36	11.6	
Year in School			
Freshman	112	36.0	
Sophomore	92	29.6	
Junior	66	21.2	
Senior	41	13.2	
Referral Type			
Class Credit/Subject Pool	163	52.4	
Presentation	97	31.2	
Coach/Teammate	38	12.2	
Athletic Department	13	4.2	

https://doi.org/10.33043/24xzdzbb.

Table 2

SCL-90-R Global Severity Index t-Scores across Sport Level in Athletes with Numbers Shown as Mean (SD), (N = 300)

SCL-90-R Subscale	All Athletes *n* = 300 mean *(SD)*	NCAA *n* = 147 mean *(SD)*	Intramural *n* = 121 mean *(SD)*	Club *n* = 32 mean *(SD)*	Statistic (One-way ANOVA)	*p*	Group differences
GSI, Global Severity Index	57.16 *(10.07)*	53.95 *(10.33)*	59.78 *(8.71)*	61.97 *(9.04)*	*F* = 16.80	.00	NCAA vs. Club NCAA vs. Intramural

Note. NCAA = National Collegiate Athletic Association; GSI = SCL-90-R Global Severity Index. Estimated *t*-scores are based on Derogatis, 1994 for individuals in the community who are not currently patients. *t*-scores for 11 participants were not available.

Table 3

SCL-90-R raw scores in Athletes Compared to Other Samples with Numbers Shown as Mean (SD), (N = 311)

SCL-90-R Subscale	Athletes *n* = 311 mean *(SD)*		Norms, USA Nonpatients[1] *n* = 974 mean *(SD)*		Norms, USA Outpatients[2] *n* = 1002 mean *(SD)*		Norms, Danish[3] *n* = 1153 mean *(SD)*		Norms, Germany[4] *n* = 1006 mean *(SD)*	
1. Somatization	.60	*(.46)*	.36	*(.42)*	.87	*(.75)*	.49	*(.53)*	.35	*(.30)*
2. Obsessive-compulsive	.94	*(.71)*	.39	*(.45)*	1.47	*(.91)*	.63	*(.61)*	.47	*(.38)*
3. Interpersonal Sensitivity	.64	*(.61)*	.29	*(.39)*	1.41	*(.89)*	.54	*(.56)*	.41	*(.38)*
4. Depression	.78	*(.68)*	.36	*(.44)*	1.79	*(.94)*	.59	*(.63)*	.40	*(.38)*
5. Anxiety	.41	*(.44)*	.30	*(.37)*	1.47	*(.88)*	.44	*(.51)*	.29	*(.32)*
6. Hostility	.51	*(.53)*	.30	*(.40)*	1.10	*(.93)*	.34	*(.41)*	.31	*(.34)*
7. Phobic anxiety	.19	*(.35)*	.13	*(.31)*	.74	*(.80)*	.13	*(.34)*	.14	*(.22)*
8. Paranoid ideation	.68	*(.65)*	.34	*(.44)*	1.16	*(.92)*	.46	*(.59)*	.35	*(.37)*
9. Psychoticism	.34	*(.47)*	.14	*(.25)*	.94	*(.70)*	.22	*(.32)*	.18	*(.24)*
GSI, Global Severity Index	.60	*(.45)*	.31	*(.31)*	1.26	*(.68)*	.45	*(.43)*	.33	*(.24)*

Note. [1]Derogatis, 1994 Raw Score Mean and Standard Deviations for adult individuals in the community who are not currently patients, mean age = 46.0; [2]Derogatis, 1994 Raw Score Mean and Standard Deviations for adult psychiatric outpatients, mean age = 31.2; [3]Olsen et al., 2004 Raw Score Mean and Standard Deviations for adult Danish citizens, age range = 20–79; [4]see Schmitz et al., 2000 Raw Score Mean and Standard Deviations for German normal healthy college students, mean age = 34.0.

https://doi.org/10.33043/24xzdzbb.

Table 4

SCL-90-R Construct Correlation Matrix (N = 311)

SCL-90-R Subscale	1	2	3	4	5	6	7	8	9
1. Somatization	-								
2. Obsessive-compulsive	.55**	-							
3. Interpersonal Sensitivity	.49**	.67**	-						
4. Depression	.51**	.73**	.80**	-					
5. Anxiety	.59**	.67**	.67**	.74**	-				
6. Hostility	.42**	.48**	.51**	.53**	.56**	-			
7. Phobic anxiety	.26**	.35**	.39**	.41**	.53**	.33**	-		
8. Paranoid ideation	.47**	.61**	.69**	.67**	.62**	.50**	.49**	-	
9. Psychoticism	.48**	.65**	.73**	.80**	.69**	.47**	.39**	.70**	-

Note. SCL-90-R = Symptom Checklist-90-Revised. N = 311. ** p < .01 (2-tailed).

https://doi.org/10.33043/24xzdzbb.

Table 5

Results of Fit Indices (N = 311)

Models	χ2 (df)	CFI	RMSEA [90% CI]	AIC
1	10043 (3915)	.54	.071 [.069, .073]	62918
8	7359 (3131)	.63	.066 [.064, .068]	56721
9	7598 (3284)	.64	.065 [.063, .067]	56166
B9*	7289 (3237)	.66	.063 [.062, .065]	55951

Note. χ2 = chi-square statistic. df = degrees of freedom. CFI = comparative fit index. RMSEA = root mean-square error of approximation. RMSEA [90% CI] = root mean-square error of approximation 90% confidence interval. AIC = Akaike's information criterion; B = bifactor with a general factor, and numbers represent the number of specific factors.

***** indicates the best fitting model

Table 6

Standardized Factor Loadings of the Bifactor Model of SCL-90-R in Athletes (N = 311)

Item number & Short descriptor	λ SOM	λ O-C	λ I-S	λ DEP	λ ANX	λ HOS	λ PHOB	λ PAR	λ PSY	λ General
1. Headaches	**.38**									**.21**
4. Faintness	**.35**									**.15**
12. Pains in heart/chest	**.30**									**.24**
27. Pains in lower back	**.30**									**.44**
40. Nausea	**.22**									**.34**
42. Soreness of muscles	**.36**									**.20**
48. Trouble getting breath	**.34**									**.28**
49. Hot/cold spells	**.21**									**.19**
52. Numbness	**.24**									**.18**
53. Lump in throat	**.21**									**.18**
56. Weakness of body	**.39**									**.44**
58. Heavy arms/legs	**.24**									**.28**
3. Unpleasant thoughts		-.02								**.77**
9. Trouble remembering		**.58**								**.47**
10. Worried about sloppiness		**.42**								**.51**
28. Feeling blocked		**.42**								**.71**
38. Doing things slowly		**.35**								**.46**
45. Having to double-check		**.43**								**.53**
46. Difficulty deciding		**.34**								**.68**
51. Mind going blank		**.48**								**.42**
55. Trouble concentrating		**.55**								**.63**
65. Repeating same actions		.09								**.27**
6. Feeling critical of others			.13							**.41**
21. Feeling shy opposite sex			.05							**.40**
34. Feeling easily hurt			**.20**							**.59**
36. Others are unsympathetic			**.21**							**.58**
37. People dislike you			**.60**							**.55**
41. Feeling inferior to others			.06							**.59**
61. Uneasy when people are watching			**.32**							**.66**
69. Self-conscious with others			**.29**							**.77**
73. Uncomfortable eating/drinking in public			.03							**.10**
5. Loss of sexual interest				**.10**						**.27**
14. Low energy/slow				-.14						**.64**
15. Thoughts of ending life				.04						**.19**
20. Crying easily				**.19**						**.48**

22. Feeling trapped	.03				**.52**
26. Blaming yourself	.08				**.85**
29. Feeling lonely	**.65**				**.88**
30. Feeling blue	**.41**				**.72**
31. Worrying too much	-.03				**.80**
32. No interest in things	-.10				**.71**
54. Hopeless about future	**.23**				**.73**
71. Everything is an effort	.03				**.59**
79. Feeling worthless	**.11**				**.76**
2. Nervousness		**.51**			**.43**
17. Trembling		**.10**			**.12**
23. Suddenly scared		.04			**.27**
33. Feeling fearful		-.02			**.45**
39. Heart pounding/racing		**.45**			**.39**
57. Feeling tense		**.25**			**.51**
72. Spells of terror/panic		.06			**.24**
78. Can't sit still/restless		.02			**.45**
80. Something bad is going to happen		-.07			**.59**
86. Frightening thoughts		-.07			**.21**
11. Easily annoyed			**.19**		**.58**
24. Temper outbursts			**.35**		**.37**
63. Urges to harm someone			**.34**		**.23**
67. Urges to break things			**.40**		**.32**
74. Arguing frequently			**.39**		**.20**
81. Shouting/throwing			**.33**		**.18**
13. Afraid on the street				**.44**	**.14**
25. Afraid to go out alone				**.31**	**.12**
47. Afraid of public transport				**.17**	**.05**
50. Having to avoid things/places/ activities				**.33**	**.26**
70. Uneasy in crowds				**.12**	**.33**
75. Nervous when alone				**.26**	**.27**
82. Afraid to faint in public				**.06**	**.06**
8. Others are to blame				.04	**.35**
18. Most people can't be trusted				**.33**	**.54**
43. Feeling watched				**.13**	**.60**
68. Having beliefs that others do not share				**.20**	**.41**
76. Not getting enough credit				**.22**	**.47**
83. People will take advantage				**.77**	**.60**

7. Someone can control your thoughts									**.33**	**.37**
16. Hearing voices									-.00	.01
35. Others knowing your private thoughts									**.11**	**.41**
62. Thoughts not your own									**.38**	**.28**
77. Feeling lonely with others									-.02	**.76**
84. Thoughts about sex that bother you									**.15**	**.24**
85. You should be punished									.08	**.25**
87. Something is wrong with your body									**.11**	**.44**
88. Never feeling close to another person									-.06	**.59**
90. Something is wrong with your mind									**.16**	**.71**
$(\sum\lambda^2)$	1.10	1.65	0.65	0.74	0.55	0.70	0.51	0.81	0.34	18.62
Explained common variance %	4.27	6.44	2.55	2.89	2.15	2.71	2.00	3.15	1.31	72.54

Note: SOM: Somatization; O-C: Obsessive-Compulsive; I-S: Interpersonal Sensitivity; DEP: Depression; ANX: Anxiety; HOS: Hostility; PHOB: Phobic Anxiety; PAR: Paranoid Ideation; PSY: Psychoticism. **Boldfaced** factor loadings are significant at least $p < .05$. λ is a factor loading.

Sport Social Work Journal

The Ecological Map of Adolescent Athletes: Examining Integrated Care Approaches

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This retrospective study explores the role of an integrated care approach when examining the lived experiences of adolescent athletes living with physical illness. The researcher recruited nine participants, ages 18-35, to participate in the study. Following the online interviews, the interpretive phenomenological analysis was applied to analyze the data and interpret the findings. Through the participants' sharing of consciousness, several significant themes emerged including the importance of relationships, the role of helping professionals, the effects of medical trauma and post-traumatic stress disorder, and the benefits and barriers of implementing integrated treatment approaches. The findings are supported by the ecological systems theory as they indicate the value of integrated and collaborative care approaches. Ultimately, this preliminary study serves as a framework for social workers who are engaged with adolescents in private practice, hospitals, and community-based settings. Through these stories, social workers and other helping professionals learn the power of connection and the importance of safeguarding the dignity and worth of the adolescent athlete.

Keywords: Adolescent athlete, physical illness, social work, integrated care, ecological systems

The psychological and psychosocial ramifications of illness can have lasting effects on adolescents; though these effects can be minimized with the support of an integrated team (Shao et al., 2022; Stewart et al., 2011). Adolescence is marked by an increased need for autonomy, agency, and control; yet despite this reach for independence, adolescents are dependent on their caregivers to provide a sense of safety and security throughout these tumultuous years. These normative processes become increasingly complex when adolescents encounter adverse life events that challenge developmental markers (Marjo et al., 2021; Shao et al., 2022). Specifically, adolescent athletes encounter unique challenges when they incur a physical illness that interrupts their ability to participate in sports. Engaging in sports demands high levels of physical and mental energy and adolescent athletes tend to make multiple academic, familial, and social sacrifices to compete and excel on the field (Datoc et al., 2022; Edmonds et al., 2021). The sudden loss of sports often leads to a fracture in their identities, resulting in secondary losses that

impact psychological and psychosocial functioning (Gabay, 2019; Stewart et al., 2011). To properly meet the needs of these adolescent athletes, social workers and other helping professionals need to work collaboratively in support of their healing processes. Thus, this exploration aims to understand the systems that encompass the ecological network of the adolescent. By understanding the benefits and barriers on the individual and communal level, social workers could address current issues and advocate for the development of integrated care approaches. Ultimately, the exploration of this phenomenon contributes to social work on the micro, macro, and meso levels.

Adolescent Identity Development

Adolescence is a period marked with psychological, biological, social, and emotional changes (Schwartz et al., 2011). These transitional components lead to the first point in development where individuals maintain physical, sexual, cognitive, social, and moral reasoning development. It is a period by which another layer of the self emerges as adolescents expand their physical, psychological, and moral identities. According to developmental psychologists, this process is known as identity formation (Schwartz et al., 2011; Sokol, 2009). Erik Erikson (1994) theorizes this process as "identity vs. role confusion" and proposes the core task of this stage is to resolve the conflicts between *identity* and *identity confusion*. He explains adolescents need to develop a clear and stable sense of identity to navigate the impending challenges and uncertainties of life and that a person's identity cannot exist in isolation of the external structures of their environment. This translates into one's social, cultural, and political settings, playing a significant role in the formation of their identity (Edison et al., 2021; Erikson, 1994).

The construct of identity formation was further studied by Marcia (1980, 2001, & 2022) who proposed adolescents develop their identities based on critical life factors, like crises and other momentous events. This perspective holds that identities are constructed *and* discovered, and that life domains are important to consider as long as the individual assigns importance to them (Marcia, 2001). Marcia (2002) suggests that when a circumstance challenges a person's identity, there is often a dramatic shift in being, and the individual begins to question and explore new sets of meaning to reach an alignment with self. In context, Marcia (1980) and Erikson (1994) hold the same perspective using different terminology. That is, both concur there are two vital components to the formation of an identity: exploration (formerly referred to as crises) and commitment (Erikson, 1994; Marcia, 1980). The exploration component refers to the rethinking processes and exploratory period of late adolescence, and the commitment element refers to the "degree of personal investment the individual expresses in a course of action or belief" (Schwartz et al., 2011, p. 33). The literature suggests this could actualize in the adolescent athlete's response to physical illness from an interpersonal or intrapersonal perspective.

The Adolescent Athlete's Identity and Physical Illness

The normative stressors of the transitionary period of adolescence are often exacerbated by a medical diagnosis or physical illness (Gabay, 2019). In accordance with this study, a medical diagnosis is operationalized as a classification tool of medicine and a physical illness is defined as "a significant change in the functionality of an organ or entire organism" (Rovesti et al., 2018, p. 163). The research shows one in six adolescents (ages 13-17) suffer from a mental

https://doi.org/10.33043/2r584554.

health condition with a prevalence of comorbidity for those with physical illnesses ranging from 7% to 40% (National Alliance on Mental Illness, n.d.; U.S. Department of Health and Human Services, n.d.). When assessing for treatment approaches in the face of physical illness, it is important to concurrently examine preexisting conditions. For instance, while mental health conditions might have been premorbid, being diagnosed with a physical illness presents with significant adjustment challenges that could lead to serious mental health conditions when failed to be addressed (Nibras et al., 2022; Zheng et al., 2022). Understandably, adolescents with medical conditions report higher rates of psychological distress in comparison to their healthy peers (Zheng et al., 2022). Consequently, it is imperative for caregivers to understand the psychological components of illness so they can identify their child's need areas and access support for themselves, their child (the patient), and the family system. Likewise, health providers need to understand the comorbidities between medical and psychiatric conditions so they can implement integrative care approaches and work collaboratively with the families. With these efforts, we can collectively minimize the rates of psychological distress and developmental disturbances among our youth.

Understanding the experiences of athletes who incur illnesses lends insight into the struggles of those enduring a changing identity. The research shows as athletes become more invested in their sport, their athletic identity strengthens (Edison et al., 2021; McGinley et al., 2022). For instance, a study examining the correlation between athletic identity and psychosocial measures in the aftermath of anterior cruciate ligament (ACL) injury suggests the athletic identity is strongly correlated to the amount of time spent on the playing field. Further studies have shown that the stronger the identification with sports, the more likely it is for adolescents to negotiate their treatment when instructed to stay off the playing field (Edison et al., 2021; Lyons et al., 2018). This overidentification with athletics limits their capacity to develop other dimensions of their identity and in turn impacts their health, social network, and societal expectations (Edison et al., 2021). Of course, when life evolves in alignment with their athletic goals, this single-focused identity marker does not impede their development; however, when an adolescent athlete is faced with a diagnosis of physical illness, they are at risk of experiencing anxious and depressive symptoms as they grapple with premature identity foreclosure (Johnson et al., 2022; McGinley et al., 2022; Monaco et al., 2021).

Best Practices of Integrated Care in Physical Illness

Adolescents with physical illnesses often present with comorbid mental health conditions which result in complex treatment challenges that do not constitute a single intervention model or healthcare provider (Summer et al., 2024; Zheng et al., 2022). Physicians are trained to treat physical ailments; however, they are not trained to provide enhanced psychological interventions to address mental health disorders. Aside from incidences where the need for psychological interventions is ambiguous and uncertain, there are numerous times when psychological concerns are overlooked because of a lack of accessibility to care, the normalization of pain in the management of physical illness, and the adaptation of a specialist-led approach to treatment (Bright et al., 2024; Summer et al., 2024). Nonetheless, the research shows a high percentage of psychological distress among patients and suggests the implementation of treatment approaches that cover mental and physical conditions (Ee et al., 2020).

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Integrated care is a healthcare approach that adopts a holistic perspective to meet the varying needs of an individual (Bright et al., 2024; O'Brien et al., 2022). There are varying interpretations of this phenomenon, but this study refers to integrated care as "the extent to which professionals coordinate services across various disciplines" (Valentijn et al., 2013, p. 3). This is because integrated care approaches are most effective when considering the relationship and collaboration between the various healthcare providers and the patient (O'Brien, et al., 2022; Valentijn et al., 2013). Patients often maintain multi-morbidities or a combination of psychiatric and medical health conditions; and thus, input and collaboration from all the professionals on the team is essential to a successful outcome. Aside from ensuring the implementation of appropriate treatment plans, the research shows that the mind and body function interdependently and are not isolated systems. For example, myocardial infarctions pose higher risks of social isolation and depression than somatic risk factors (Smolderen et al., 2009). Adolescent athletes with medical conditions are often more consumed by their depressive and anxious symptoms than their cancer, diabetes, or other physical ailments. Unfortunately, failing to recognize and address these conditions could lead to increased rates of depression, anxiety, and suicide among our youth.

While there are numerous models of integrated care, the Chronic Care Model (CCM) is a biopsychosocial framework in healthcare that adopts a multidimensional approach when treating individuals living with chronic illnesses (Kalav et al., 2022). This framework aims to focus on integrating an approach that encompasses the individual's multilayered functioning, the community, and the healthcare system (Nair et al., 2021). It is reliant on inter-professional collaboration and is therefore conducive for various forms of chronic diseases and healthcare settings (Kalav et al., 2022; Nair et al., 2021). Family centered interventions is another approach in treating adolescent athletes living with physical illnesses. Family centered interventions involves parental participation and the development of a trusting partnership between the parents and helping professionals on the team (Ispriantri et al., 2023). This model has been shown to improve the physical and psychological well-being of young people with physical illnesses (Bright et al., 2024; Ispriantri et al., 2023).

Despite the establishment of integrated care models, there still continues to be a general lack of interprofessional collaboration within the healthcare system. A narrative analysis conducted across three continents discovered the primary treatment suggested to adolescent athletes in need of medical services is a decrease in sport engagement. This model was applied to cases irrespective of the athlete's diagnosis which varied between overuse injuries, traumatic injuries, mental illnesses, and acute and long-term physical illnesses (Timpka et al., 2021) While researchers assert compromised treatment primarily stems from a lack of education (Almquist et al., 2008; Novak & Ellis, 2022; Timpka et al., 2021), further research is needed to better understand these gaps in training and the subsequent barriers of implementing integrated treatment models.

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https://doi.org/10.33043/2r584554.

The Interconnection Between Theory and Practice

Evidence-based practice implications are often better understood through theoretical frameworks. The ecological systems theory provides perspective on the lack of integration between healthcare providers and the adolescent athlete's multilayered experience with illness. This theory supports the need for a multidisciplinary approach and provides a framework to conceptualize the adolescent athlete's experience with physical illness and the interconnecting social systems and environments surrounding them. Ultimately, this theoretical framework can provide social workers and health professionals with a guide for treatment as it highlights the significance of societal structures and underscores the importance of integrated models of care.

Ecological Systems Theory

The ecological systems theory provides a perspective on human development by explaining the interplay between the individual and larger society (Bronfenbrenner, 1979). This theoretical perspective provides a framework by which to understand how adolescent athletes who incur physical illnesses are influenced by the societal structures and environments in which they interact. According to Bronfenbrenner (1979), there are four main interconnecting subsystems: the microsystem, mesosystem, ecosystem, and macrosystem. While the structures in the inner circles seem most influential to human development, the factors occupying the wider concentric circles of an adolescent athlete's world are impactful as well (Bronfenbrenner, 1979; Moore & Gummelt, 2019; Tümlü & Akdoğan, 2021).

The ecological map emphasizes the importance of acknowledging the social systems that encompass an adolescent athlete's environment (Moore & Gummelt, 2019). At the innermost layer, the microsystem, is the intimate containers that hold the individual. This might include the home, school, religious, and social environments (Bronfenbrenner, 1979). The next layer, the mesosystem, takes us further away from the individual settings and includes the interplay between these inner structures, while the third layer, the exosystem, is where an individual is influenced by the events that occur in a setting where the person is absent. The outermost layer of the ecological framework is the macrosystem which represents the ideological perspectives and attitudes of a given culture (Bronfenbrenner, 1979). By understanding these ecological systems and interconnecting societal factors, social workers could recognize the need areas and conflicts of adolescent athletes who incur physical illnesses (Moore & Gummelt, 2019). More specifically, it lends insight into the relationships that adolescent athletes have inside and outside of sports, and the role these interactions have on their healing, recovery, and ability to respond to adversity on and off the playing field (Coward, 2005; Lininger et al., 2019; Saxe et al., 2022).

The ecological systems theory also provides insight into human development and the outer structures that influence the cognitions, behaviors, and attitudes of an adolescent athlete as they cope with physical illness. It supports the notion of individualized care in social work practice and the importance of recognizing each person's unique ecological system when developing a treatment plan (Moore & Gummelt, 2019). For instance, while some athletes might have stronger relationships with their coaches, others might primarily seek support from their parents or mental health providers. Nonetheless, all of these individuals are imperative team players who have the most influential impact when working in a collaborative unit. By

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understanding these relationships and the adolescent athlete's support network, social workers could provide individualized care in an integrated manner (Moore & Gummelt, 2019).

The immediate relationships and environmental events in a child's life have a profound impact on their psychological development (Bronfenbrenner, 1979). Family dynamics, stressors, role demands, and support influence a person's understanding of their internal self and worldview (Levine & Sher, 2020). Moreover, the people involved in the adolescent athlete's everyday activities, like teachers, coaches, medical providers, and mental health professionals, could either hinder or encourage their psychological growth (Bronfenbrenner, 1979). This theoretical concept helps explain the significant impact relationships and external environments have on the well-being of adolescent athletes who incur physical illnesses that interfere with their sports involvement. It further suggests environmental events, unresolved family conflicts, and poorly trained practitioners and trainers could create obstacles for the adolescent and impede their potential for healing and growth. Because the structures of a person's environment are all interconnected, the adolescent's relationship with these features impacts their capacity to process their losses and restructure their identities (Bronfenbrenner, 1979; Moore & Gummelt, 2019). Consequently, this theoretical construct provides a framework by which social workers could understand the adolescent's psychological and psychosocial needs and how their interconnecting structures might impede or encourage their ability to access internal and external resources in the face of illness.

As seen in the literature, the complexities of adolescence are exacerbated in the face of illness and loss (Bright et al., 2024; Erikson, 1994; Ispriantri et al., 2023). While the ecological systems theory provides a framework to understand the multidimensional experiences of adolescent athletes, there is minimal research exploring the effects of an integrated care approach for adolescent athletes living with physical illnesses. Further research is needed to understand how the interconnecting structures of the environment affect the intrapersonal functioning of the individual athlete and the difference an integrated care approach could have on adolescent development. This becomes of heightened importance as the rates of adolescent suicide are steadily increasing nationwide; and as the research shows, external environmental factors serve as strong predictors for suicidal risk factors (Clayton et al., 2021). Thus, this study aims to answer the overarching question of, "How does physical illness affect the psychological well-being of adolescent athletes?" As well as the sub-question, "What are the benefits and barriers to an integrated care approach?"

Methods

This study uses a qualitative design grounded in a phenomenological approach to explore the lived experiences of adolescent athletes who received a diagnosis of a physical illness from a retrospective lens. Qualitative inquiry "makes the world visible" by creating platforms for people to share their stories (Creswell & Poth, 2018, p. 7). Through connecting with people who experience a common phenomenon, qualitive inquiry lends space to recognize philosophical assumptions and to make meaning of these human experiences (Creswell & Poth, 2018). Thus, the researcher implemented a qualitative design to create a platform for the participants to share their stories and shed light on the nuanced experiences of adolescent athletes living with physical illness.

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Sample Recruitment

The researcher recruited nine participants between the ages of 18-35 who reside within the United States. The initial study proposal aimed to recruit 12-20 participants, however due to recruitment challenges the researcher was only successful in recruiting nine participants who met the eligibility criteria. At first, the inclusion criteria included participants within the emerging adulthood stage (18-29) but was later expanded to include individuals between the ages of 18-35. The inclusion criteria also consisted of individuals who reside within the United States, engaged in athletics as an adolescent, and who were diagnosed with a physical illness during adolescence. There were no limitations pertaining to gender, nationality, the specification of sport, physical illness, or geographic location within the United States. The researcher excluded individuals who exclusively presented with mental illnesses or who had a physical disability and currently engage in Paralympics. While some of the participants were able to continue engaging in sports, others were forced to cease sport participation. The researcher used snowball sampling to recruit the participants to connect with a greater network and to ensure the selected individuals were an appropriate fit for the study (Creswell & Poth, 2018). As soon as IRB approval was obtained, the researcher began to share the recruitment information on professional listservs and at college campuses, gyms, medical facilities, and physical therapy centers.

Procedure

Prior to scheduling the interview sessions, the researcher gathered demographic data through an online questionnaire via Qualtrics to ensure the participants met the eligibility criteria. Once the questionnaires were submitted, the researcher offered to meet with the participants at her office in Brooklyn, New York or online via Zoom. All of the participants chose to meet via Zoom and were informed of the risks involved in online interviewing as well as in the overall study. The researcher explained their right to withdraw from the study at any time and obtained informed consent and permission to record their interviews. The researcher was careful to protect technology usage by inputting passwords on her computer and software programs. There was also a password to gain access into the Zoom meeting and the share screen option was disabled prior to the interview sessions. The interviews were a duration of 60-90 minutes and were recorded and transcribed for data analysis purposes. While the researcher focused on maintaining an open-ended environment, a semi-structured interview was formulated to guide the interviews and to provide an analytic framework for the interpretation of the data. It is included in Appendix A.

Data Analysis

The researcher used ATLAS.ti, an online software program, to organize and store the data. Once the data was transcribed and organized, the researcher used interpretive phenomenological analysis (IPA) to analyze it. Interpretive phenomenological analysis was developed to create a qualitative method of inquiry that encourages the exploration of psychological phenomena without pathologizing the lived experiences of people (Smith, 2016). It provides an understanding of the participant's perceptions and perspectives, offering insight into how an individual makes sense of a given experience (Cuthbertson et al., 2020; Smith, 2016). It requires the researcher to move through a range of diverse ways of thinking and

reflection. The researcher chose this method of analysis to identify barriers to integrated care approaches and to respect and honor the lived experiences of the participants without pathologizing their stories.

The researcher began the process by conducting an analysis on the participants' interview responses to develop a sense of their conscious expressions. The researcher identified meaningful statements, also referred to as meaning units, within the transcripts which were relevant to the purpose of the research question. Then, the researcher interpreted these experiential statements into phenomenologically sensitive phrases that capture the essence of the participant's lived experience. This process occurred on a case-by-case basis to ensure there was an articulation of convergence and divergence within the findings (Smith, 2016). The researcher read and reread the transcripts, wrote notes, developed emerging themes, and searched for connections among the themes (Peat et al., 2019). Once the researcher identified and interpreted the meaning units for each case, she looked for patterns across the cases and engaged in thematic analysis to group the experiential statements into themes. The themes reflect the unique components of the phenomenon and help to synthesize the essence of the experience.

To minimize the threats of rigor and reflexivity, the researcher engaged in supervision throughout the data collection and analysis processes. The researcher utilized triangulation to ensure that the interpretations of the data provide a comprehensive and accurate overview of the phenomenon. In addition, the researcher engaged in peer debriefing and support by consulting with colleagues to minimize reflexivity and to prioritize self-awareness and perspective taking skills (Podlog, 2017). Lastly, the researcher engaged in member checking by engaging in reflection throughout the interviews. These actions were of particular importance since the researcher experienced a similar phenomenon as the participants. Through these efforts, the researcher intended to minimize reflexivity and maximize the accuracy of her interpretations. (Peat et al., 2019; Smith, 2016).

Findings and Discussion

This section provides the basic demographic data of the sample (*see Table 1*) and detailed descriptions of the participants' experiences. Within the sample, four of the participants identified as male and five identified as female. Seven participants identified as White, one identified as Black, and one identified as Hispanic/Latino. The participants were between the ages of 18-35 and were all diagnosed with a physical illness during adolescence. Two participants were diagnosed with cancer, one was diagnosed with hypothyroidism, one was diagnosed with celiac disease, one was diagnosed with Hashimoto's and celiac disease, one was diagnosed with gastroparesis and Hypermobile Ehler's Danlos Syndrome, one was diagnosed with Osgood-Schlatter Disease, one was diagnosed with rheumatoid arthritis in response to a life-threatening infection, and one experienced a bone infection that led to multiple medical complications.

All the participants reside in the United States and were engaged in elementary and high school athletics. While a few participants were focused on mastering a specific sport, the others played a variety of sports including basketball, football, volleyball, hockey, soccer, rugby, track racing, diving, and gymnastics. Of the nine participants, three played recreationally, six planned

to participate in collegiate athletics, and one also planned to compete in the Olympics. Despite the need to immediately cease sport participation upon receiving their diagnoses, five participants currently engage in sports as adults. Of these four participants, two became D1 athletes, one is a collegiate athlete, and two have expanded their sports interests so they can continue to be active while prioritizing their health.

Table 1. Participant Demographics

Gender	Age	Race/ Ethnicity	Diagnosis	Age at Diagnosis	Sport	Future Plan	Currently Participate
Female	18	White	Celiac Disease	17	Soccer	Collegiate	Yes
Male	21	White	Bone Infection	16	Rugby	Collegiate	Yes
Male	27	Black	Osgood-Schlatter Disease	12	Football	Collegiate	Yes
Male	27	White	Cancer	17	Multiple Sports	None	Yes
Female	27	Hispanic/ Latino	Hypothyroidism	14	Volleyball	Collegiate	No
Female	27	White	Gastroparesis, Hypermobile Ehler's Danlos Syndrome	15	Basketball	None	No
Female	31	White	Hashimoto's, Celiac Disease	17	Soccer	Collegiate	No
Female	35	White	Rheumatoid Arthritis/ Infection	15	Gymnastics /Diving	Collegiate/ Olympics	No
Male	35	White	Cancer	17	Hockey	None	Yes

The following subsection outlines the themes that emerged from the rigorous analysis process and includes descriptive, detailed quotations of the participants' reflections to emphasize the uniqueness of their experiences. These four main themes include 1) the significance of relationships, 2) the role of helping professionals, 3) medical trauma and post-traumatic stress disorder, and 4) benefits and barriers to an integrated care approach.

https://doi.org/10.33043/2r584554.

Theme One: The Significance of Relationships

The significance of relationships is threaded within each of the participant's narrative and subjective experience with illness and loss. While the adolescent athlete's attachment with primary caregivers seems to have the most powerful impact on their psychological development, their interactions with surrounding systems also influence their growth. This could be understood through the work of veteran researchers who explain the significance of attachment (Bowlby, 1988), and the primary tasks of adolescence (Erikson, 1994; Shwartz et al., 2011). Similar to their need for a secure attachment with an adult figure, adolescents need to feel a sense of connection and belonging with their counterparts.

Attachment with Parental Figures

The participants' responses seemed to indicate that their relationships with primary caregivers played a central role in their ability to cope and exercise resilience in response to their diagnoses. As a female participant shared, "I had hope because my parents believed me, but I also wondered if I would ever get better because no one else did. No one else was listening." Similar to her relationship with her parents, other participants described how their parental relationships influenced their confidence, optimism, and ability to access internal and external resources. For instance, a male participant reported higher levels of compassion towards others because of his mother's support. He stated, "It made me and my mom much closer; she spent weeks with me in the hospital. I just felt bad they had to go through that because it sucks for me, but it also sucks for them."

Conversely, participants who lacked a secure attachment with a primary caregiver struggled with their self-worth and ability to assert their needs and access resources. The experience of feeling misunderstood by their parents resulted in stronger feelings of anxiety, depression, and hopelessness. For example, one participant who felt dismissed by his mother reported resorting to substances to ease his pain, grief, and feelings of "not being good enough." Other participants internalized their pain which led to feelings of shame, isolation, and insecurities, like one female participant explained:

> I very much felt like I didn't have my parents because they were so focused on what the doctors were saying. It felt like they were against me; I was the one in the hospital and they literally weren't even there for me. I couldn't even walk, I couldn't even use my hands, and yeah, it just broke me. It broke me. I felt all alone.

This highlights the significance of secure attachments with parental figures and the impact it has on an individual's ability to cope with adversity. It is in alignment with the literature on attachment which emphasizes the significance of a secure base on adolescent development and later life functioning (Bowlby, 1988; Marjo et al., 2021; Shao et al., 2022). It is further supported by studies that suggest adolescents have better than expected outcomes in the presence of supportive relationships (VanBreda, 2018; Waller, 2001; Werner & Smith, 1982; Zimmerman, 2013).

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https://doi.org/10.33043/2r584554.

Connection and Belonging

The effects of athletic coaches on the adolescent athletes' psychological, psychosocial, and physical well-being were evident through their sharing of consciousness. Participants who felt supported by their coaches and athletic trainers also felt less isolated from their teammates. Their coaches' and trainers' compassion and support strengthened their confidence, sense of self, and resilience. As a male participant shared, "It was the only way I was able to believe in my potential and the possibility of returning to sports once I recovered." Another participant's story highlights the sense of empowerment and belonging she experienced in response to her coaches' sensitivity and support:

> I was still very much expected to do what everybody else was doing, I just couldn't get on the diving board, which was a huge testament to my coaches. They still treated me as if I was on the team and they tried to figure out what I *could* do.

On the other hand, the participants who felt misunderstood or judged by their coaches also struggled with deeper feelings of inadequacy and shame. As a female participant shared, "I would sit on the bench because I was too sick to play, and the coaches would be like "Why isn't she playing?" These participants questioned their ability to reengage in physical activities and were also uncertain about their future success as adults. For instance, a male participant painfully said, "I felt like there was no way I could get the coaches to actually like see me as a player and stuff." This lack of support added another dimension of grief and loss to his experience. These findings are consistent with previous studies that explore the significance of the relationship between trainers and adolescent athletes (Lininger et al., 2019), yet these accounts provide a nuanced understanding on the influence of these relationships on self-development.

The participants' relationships with their peers also had a significant impact on their recovery and reintegration processes. Since the primary tasks of adolescence are connection and belonging (Erikson, 1994), the invisibility of the participants' physical or emotional pain created a barrier between them and their peers. As one participant explained:

> It's really hard to go from being on the varsity team with all your friends to not. I think things would have gone better if someone on the team had reached out to me; I probably would have been a lot less angry in high school. It didn't seem like there was any real care at all from my teammates or friends.

A few of the participants shared the receival of support from their peers in the form of gifts was meaningful, but they still felt a degree of separation due to the uniqueness of their experiences. In fact, seven of the participants shared their peer relationships shifted because of their experiences and post-traumatic growth. As one male participant reflected on his cancer journey:

> I had a lot of great friends who came to visit me and stuff, but when I returned to school, I had a really hard time integrating with them. It's really, really hard to go back with your friends. You're in such a different place. It was lonely and challenging.

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These findings emphasize the importance of belonging and the value in helping our adolescent athletes connect with peers who are experiencing common struggles. They suggest teaching adolescent athletes the necessary skills to reintegrate with their peers to minimize their feelings of isolation. Overall, these emotional expressions speak of their need to be understood, seen, and supported by the interconnecting systems of their ecological map.

Theme Two: The Role of Helping Professionals

Participants shared their encounters with medical professionals including doctors, surgeons, nurses, physical therapists, and general hospital staff. While four participants acknowledged receiving patient-centered care, five reported incidents of abuse, neglect, and mistreatment on behalf of medical providers. Participants reflected on their subjective experiences with their primary doctors, as well as their relationships with specialists who provided patient-centered care with compassion and grace. These participants expressed their providers' attunement to their needs and prioritization of their autonomy were most impactful. As one participant shared, "He was spectacular, he listened to me. He tried to support my longing to return to sports as much as possible." Another female participant reflected about a nurse who was caring, compassionate, and attuned to her needs:

> I remember the one person that actually made my surgery amazing was the nurse and like I don't remember her name or anything. But I just remember wanting her to stay in the room, they really make a difference. It's been 10 years now and I still remember that.

One male participant described his appreciation and fondness for his physical therapist, particularly for the safety he felt in his presence. He shared,

> My PT, that's my guy. I became pretty close to him and like he's a hero for sure. He helped me to move again, but he also played sports, so he got that part of me.

Conversely, five participants shared negative experiences with medical providers. All of these participants experienced incidents where they felt discounted, misunderstood, or mistreated. Three of these individuals reported being accused of "faking it" or "having anxiety" because of the complexity and difficulties in their assessment and diagnosis processes. For example, a participant shared the doctors questioned her because the proper test to identify the underlying cause of her symptoms was not yet developed. She expressed, "I was told it was anxiety, that I made it up, there are a lot of really, really terrible doctors." The experience of being hurt by a medical provider was shared by a different participant who painfully stated, "Do you know how it is when you ask for help and the doctors don't want to deal with you, or they don't want to listen to that explanation and jump to 'she did this to herself'." She later added to this grievance by saying, "When all else fails, the doctors blame the patients."

In addition to the passivity that these participants experienced, a different participant bravely shared her account of being sexually assaulted by the primary doctor who was overseeing her care. She described the grooming process that occurred throughout her adolescent years, and her inability to notice the signs because of her desperation and relief at finally finding a doctor who was able to treat her. This statement speaks of the incongruence in her experience:

> You know when you see doctor after doctor, and they don't believe you. They're not listening, they're brushing you off, and then there's someone who finally has the answer and it's going to help, you think they're God. And so naturally you just put all your trust in them, right?

Similar to this survivor's experience, a female participant alluded to the power differentiation between doctor and patient and its influence on her healthcare as a minor.

> I had doctors who were incredibly dismissive and honestly like straight up rude, and that's really difficult as a teenager. Like you don't have confidence in yourself, and like you know, these are professionals. They are the people who are supposed to know everything, I'm not supposed to contradict them, and it was definitely tough to navigate as a teenager.

Indeed, these findings are consistent with previous studies that explore the detrimental effects of minimizing the adolescent's voice in their journey toward recovery (Behrman et al., 2018; Butcher, 2012). They highlight the vital role helping professionals play in the adolescent athlete's journey through illness and recovery, and the importance of safeguarding their autonomy, dignity, and sense of agency. Through their positive and negative reflections, we begin to understood the significance of the relationship between patient and provider.

This notion seemed consistent with the participants' experiences with mental health professionals. While five participants received care at the onset of their diagnosis, the others only sought out mental health support in adulthood. Participants explained their differing viewpoints on this phenomenon, describing their resistance to treatment or difficulties in accessing care due to their age, demographics, or socioeconomic statuses. The five participants who received psychotherapy as adolescents described different perspectives on their therapeutic relationship and the appropriateness of care for young athletes coping with illness and loss. In particular, one participant reflected on the meaningful relationship she had with her therapist as an adolescent athlete:

> He was the first clinician I worked with that believed that you could keep an athlete in there even if you're sick. He was instrumental in my sustained recovery and the most influential clinician I ever worked with. He really understood me.

To the contrary, the devastation of being misunderstood by clinicians was expressed by a participant who shared, "They didn't get my athlete strive; they didn't get me at all." This intensified her resistance to engage in mental health treatment; in fact, participants who declined mental health services as adolescents shared similar sentiments. They described their resistance in simplistic terms, they were sick children who wanted to recover and return to the playing field. As a male participant stated, "There was nothing he could do to help me. I just wanted to play hockey again." Another shared that when the social worker from the hospital came to assess his needs, he abruptly told her, "You're an idiot, what do you want to talk about?" He continued by saying that in retrospect, there really was nothing to discuss at the time because he wasn't ready for psychological help.

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https://doi.org/10.33043/2r584554.

Despite having these negative experiences as adolescents, eight of the participants believed in the value of mental health support and thereby accessed therapy in adulthood to process their experiences. As one male participant shared,

> I never wanted to see a therapist but my parents' kind of forced me. I always thought that if you went to a therapist then something is wrong, like you need help. I went for a couple of sessions, but I hated it. Then a few years later, when I was in college, I had a panic attack and went back to process what happened.

This provides insight into their resilient natures and their ability to integrate these experiences into their stories. Their accounts speak of the importance of connecting with the adolescent athlete from a place of compassion and empathy, and the need to address their concerns with sincerity, acceptance, and understanding. While it might seem imperative to process their illness from a clinical standpoint, it is likely inconsequential for the adolescent since their athletic loss might take precedence. As always, mental health professionals (i.e., social workers) need to meet the adolescent athlete where they are at. Like many of the participants expressed, they will always be athletes. With the clinician honoring this part, adolescents are more likely to feel seen and less inclined to engage in risky behaviors.

Theme Three: Medical Trauma and Post-Traumatic Stress Disorder

Many of the participants experienced primary and secondary trauma in response to their illness. This theme emerged based on six of the participants' reflections of their traumatic memories that led to symptoms of acute distress and/or post-traumatic stress disorder. One participant shared she developed an eating disorder, two of the participants expressed struggling with substance use, and three described the lasting effects of their medical trauma on their ability to seek the necessary healthcare. In particular, one participant shared:

> There were times when I would return to the playing field, but it became such a traumatic thing for me that I literally couldn't do any physical activity. It was about 12 or 13 years where I did almost nothing. When I finally began physical therapy, I started having panic attacks. I didn't realize what a scary place my body has become for me, there was so much stored trauma.

The significant impact of illness on the psyche was further explained by a participant who shared, "I still have a lot of trepidation around medical stuff. I'm really intense when I search for a new doctor… I have a lot more awareness of harm they could do." Similarly, a male survivor of cancer shared:

> It affects everything, it's not like the flu and then you recover and forget what happened. There's trauma, there's tremendous trauma. There's stuff that affect me every single day and we're talking about 17 and half years later.

While these traumatic memories continued to affect their development following their diagnoses, it is important to recognize the participants did not express being traumatized by their illnesses themselves. To the contrary, the findings suggest the trauma occurred in the absence of connection and a secure attachment with a primary caregiver. The participants who experienced

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symptoms of post-traumatic stress either experienced an attachment rupture with their primary caregiver (parent) or were abused and mistreated by helping professionals. For example, one participant who was sexually assaulted by her doctor developed PTSD and struggled to access healthcare for a significant amount of time. She stated, "I went through a period where I really just didn't want to go to doctors, and so my health got worse, and I got quite sick. Then I found a clinic that is trauma informed, and my doctor now is really, really phenomenal." A different participant who became afraid of moving her body and then developed of an eating disorder, reported feeling abandoned by her parents during her scariest moments at the hospital. These findings are in alignment with the first theme as they both imply the value of a secure attachment with a primary caregiver in relation to trauma and resilience. It further emphasizes that it is not *what* happened to these adolescent athletes, but *how* they perceived and processed their experiences.

Theme Four: Benefits and Barriers to An Integrated Care Approach

Many of the participants who had negative experiences with helping professionals expressed the implications of improving care and collaboration between health providers. In particular, one participant shared a painful encounter of being misdiagnosed with bulimia by her therapist because of her complex and confusing symptomology. Being that her condition caused her to frequently vomit and to rapidly lose weight, she was told, "You are trying to do this to yourself." She later shared that when she received the accurate medical diagnosis, she had the impulse to return to her former therapist to express her grievances and to convey the importance of integrated care. Had there been communication between the medical and mental health providers, then it is probable an eating disorder would have been ruled out. A different participant reflected on her negative experiences with helping professionals in the hospital, underscoring the consequences of a lack of collaboration between providers:

> I was really struggling after one of my surgeries and my parents asked the hospital staff a number of times for someone to come in to talk to me. When they finally did, they were very unreceptive, and I did not get the support I needed. I was completely dismissed. They wanted nothing to do with me. There was no form of any kind of support.

Through tears, she continued to share that she was chained to the hospital bed as the consensus was that she was a danger to herself because she was "making herself sick." She only experienced a reprieve when the clinician who was assigned to her case recognized the misdiagnosis and advocated on her behalf to receive the appropriate care on a medical and mental health front. Another participant shared his pain and longing for systematic change by saying, "I don't blame anyone for the way things were, I just wish they could have been better. I hope they're changing now; you know. I hope there are things they learn." These findings imply collaboration is needed between providers in conjunction with a more integrated care approach to meet the needs of adolescent athletes living with illness. Strategic advancements are needed to ensure adolescent athletes living with illness have access to adequate care to lessen the rates of depression, anxiety, and suicidality.

A lack of accessible support was mentioned by two participants who lacked access to mental health treatment. One participant explained there was minimal mental health awareness when she was an adolescent; the doctors didn't suggest it, and her parents were unaware it was an option for her. The second participant shared his parents were divorced and lacked the financial resources to access mental health support. Both participants reported feeling optimistic about the recent changes in awareness and accessibility, but still believe additional measures have to be employed to improve communication between providers and the accessibility of care. Like the literature, this infers there is a greater need for policy implications and educational workshops to expand the accessibility of care (Edmonds et al., 2021; McGuine et al., 2022; Reger, 2022). It also suggests enhanced strategic advancements where medical professionals are obligated to provide parents with mental health resources to increase awareness and accessibility of supports. The existing pattern of poor and fragmented treatment regiments could likely explain the rising number of suicides among adolescent athletes and will hopefully serve as a guide to implement preventative measures.

Implications and Contributions

The study provides vital implications for improving social work and inter-professional practice. By exploring the adolescent athletes' subjective experiences with helping professionals, the medical and mental health professions are given insight into this population's treatment needs. While helping professionals often collaborate with each other, the adolescents' accounts suggest integration is needed to support their recovery and healing processes. The more open communication there is between healthcare disciplines, the less likely it is for misdiagnoses and incidents of abuse, neglect, or maltreatment to occur. These efforts could help mitigate the rise in suicidal rates and health crises among adolescents, while also ensuring adolescents have the proper support to manage the physical and emotional aspects of illness. The psychological and psychosocial effects of physical illness follow adolescents into adulthood, and thus it is imperative for the social work profession to model interprofessional collaboration and to implement strategies on an educational, practice, research, and policy level.

Educational and Practice Implications

Currently, social workers provide services to adolescent athletes in hospitals, local schools, community-based settings, behavioral health clinics, and private practices. As the number of clinical cases continues to rise nationwide, social workers are called upon to provide more enhanced services to those most vulnerable. This study sheds light on the lived experience of adolescent athletes with physical illness. With a more nuanced understanding, social workers could advocate for their needs and deliver more appropriate clinical services. It implies the need for curated risk assessments and the naming of resources, services, and supports at the onset of treatment. The findings suggest the value of sport social work trainings and the importance of continuing to educate and inform social workers of the intricacies of the athlete population so we can better meet their needs. This maintains heightened significance as multiple participants stated there was a dissonance between the providers' conceptualization of their need areas and their actual needs at the time.

In addition, the study provides a framework by which to develop educational resources for caregivers, educators, helping professionals, and general athletes living with physical illness. Being that social workers provide services in school and community-based settings, they are in close contact with adolescent athletes, families, educators, and community members. With this

recent understanding of their isolation and pain, social workers can bring their knowledge and skillset into these arenas to better support these adolescents. By providing skill-based workshops in schools and community-based settings, adolescents will learn self-regulation, problem solving, and coping skills. Offering psychoeducation workshops for parents, educators, and helping professionals will succeed in empowering, educating, and supporting those working closely with this population. The more knowledge people have about a particular phenomenon, the better equipped they are to deliver services and access available resources.

Research Implications

There is minimal existing literature on this phenomenon and therefore this study contributes to the field by providing a preliminary perspective on the experience of athletes who incur physical illnesses during adolescence. By exploring their physical, psychological, and psychosocial needs, the researcher hopes to shed light on the intimate experience of being diagnosed with a physical illness during adolescence to generate further research and enhance clinical practice. The importance of an integrated care approach was introduced to this audience to prompt further discussion around social work involvement and its impact on adolescent development. Moreover, most of the research on this phenomenon was conducted in other disciplines like sports psychology and medicine. Social work literature has barely examined this phenomenon, especially through a qualitative lens. Thus, this study creates a platform for the adolescent athletes' voices to be heard so researchers can continue to explore their lived experiences from a social work perspective. It contributes to the current body of literature and provides perspective on the challenges that emerge in the face of pediatric illness.

Policy Implications

In addition to improving practice and expanding the scope of research, this study contributes to policy by raising awareness about the underlying needs of adolescent athletes who incur physical illnesses. The number of clinical and suicidal cases are continuing to climb across the country, and more services are needed to meet the needs of the adolescent population. The lack of access to care is impacting people of all ages, stages, sexual orientations, nationalities, and socioeconomic backgrounds (Newton et al., 2022), and it is of paramount importance that social workers advocate on behalf of this vulnerable subgroup to minimize harm.

While there are policies that address the individualized needs of those with mental health challenges and physical disabilities, few pieces of legislation address the needs of the person from a holistic, integrated healthcare perspective. This study creates space for social workers to advocate for policies that would streamline care provided by multiple health providers into one larger system. It calls for enhanced family services to ensure parents have the necessary supports to manage this unpredictable crisis. By understanding the lived experiences of these adolescent athletes, social workers can implement strategies for care to mitigate harm and hopefully prompt a similar change response in other health disciplines.

Limitations

There are several limitations of the study. Universally, the participants shared a sense of not being seen or heard by the adults in their lives. While some participants experienced this in extrafamilial relationships, others spoke about attachment ruptures within their parental relationships. These experiences speak to the implication of attachment with primary caregivers, as well as the significance of connection, attunement, and authenticity. It is recommended for

future studies to explore this phenomenon to better understand the impact of attachment on coping with illness during adolescence. Studying this through an attachment lens will likely provide valuable insight for medical and clinical social workers. In addition, participants shared incidents where they felt misheard or mistreated by medical and mental health professionals. Adolescence is a pivotal stage of development and proper treatment is essential to their healing, growth, and psychological maturity. Consequently, further research is needed to understand these issues from the perspective of parents and helping professionals. Understanding whether these incidents occurred from a lack of collaboration, integrated care, or education will provide invaluable insight and direction into resolving this issue. Moreover, it is important to note that while the participants share the benefits and consequences of an integrated care approach, the study does not address the *why* of this phenomenon. Further research is needed to better understand the barriers impeding health professionals from practicing from an integrated approach as well as effective ways to mitigate these issues.

Second, the study includes individuals who were and were not able to return to sports which blurs the unique distinctions of their experiences with illness. Further exploration could help to identify the nuances of these diverse experiences since it is likely adolescent athletes have different struggles when they face a permanent loss as opposed to a more ambiguous one. This opens the possibility of conducting a study with specific classifications of illness. As noted in the research, the experiences of the participants with terminal illnesses (i.e., cancer, life threatening infections) were somewhat different than those with chronic illnesses (i.e., celiac disease, hypothyroidism).

Lastly, the study explores the experience of adolescent athletes living with physical illness from a retrospective standpoint. This potentially minimizes the intensity of the participants' emotional responses and memory retrieval. The sample also includes a wide age range which possibly impacts the findings. The participants' memories and recollections might have been altered by their maturity, growth, or healing. Conducting a cross-sectional study with adolescents who were recently diagnosed might provide a deeper understanding of this phenomenon; or gathering data from the caregivers or healthcare team could provide insight into treatment barriers.

Conclusion

According to the ecological systems theory, adolescent athletes living with physical illnesses are influenced by the societal structures and systems with which they interact (Bronfenbrenner, 1979). Understanding their experiences from an ecological standpoint ensures their needs are met on a physical, psychological, familial, social, and spiritual level. As noted in the findings, the participants expressed varying needs ranging from intrapersonal to interpersonal. The participants also shared the influential forces of the different systems within their ecological network. While their parents seemed to have had the strongest impact on their psychological well-being, their relationships with coaches, athletic trainers, teachers, and peers also significantly impacted their sense of self and ability to cope with their losses. Additionally, healthcare providers, therapists, and community organizations played a pivotal role in their journey toward health and recovery. The participants alluded to the external influences of policy, research, healthcare, media, economy, culture, and societal norms. These findings suggest the implementation of an integrated treatment approach to meet the athletes' needs on an emotional

and physical level. Addressing these different components of treatment in isolation will only lead to greater disenfranchised care and poorer outcomes. These findings lend themselves to further exploration on how social workers can incorporate this form of treatment from an evidence-based practice approach. While collaboration between mental health professionals is often recognized and valued, there needs to be a greater focus on inter-professional practice to ensure that adolescents have the care and support they need. As noted previously, these efforts could help mitigate the rise in suicidal rates and health crisis among adolescents.

To conclude, this study sought to provide an understanding of the lived experience of adolescent athletes with physical illness and the benefits of an integrated care approach. Through a phenomenological lens, the researcher engaged in an exploratory study to better understand the experience of these adolescents from a retrospective standpoint. The findings highlight the significance of relationships, the important role of helping professionals, medical trauma, and benefits and barriers to integrated care. More importantly, it provides imperative contributions to the social work field and other healthcare professions by shedding light onto some of the key components of care for adolescent athletes living with physical illness.

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