

Inclusion

Unified Sports, Social Inclusion and Athlete Reported Experiences: A Systematic Mixed Studies Review --Manuscript Draft--

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UNIFIED SPORTS, INCLUSION & ATHLETE EXPERIENCES

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Abstract

Inclusive sports have emerged as a potential tool for building social inclusion within diverse populations. The Special Olympics Unified Sports programs are an example of inclusion initiatives specific to students with intellectual disabilities and sports that can be reevaluated with new understandings of inclusion. This systematic mixed studies review aimed to capture athlete Unified Sports experiences and identify what athletes reported about their participation. The systematic review identified nine original studies conducted by six unrelated research groups. Results across the studies are synthesized and suggestions for future research are presented. Athletes in all nine studies reviewed reported positive experiences with Unified Sports leading to increased social inclusion and/or self-concepts.

Keywords: intellectual disability, self-concept, Special Olympics, students, synthesis

Unified Sports, Social Inclusion and Athlete Reported Experiences: A Systematic Mixed Studies Review

In a post pandemic world as we face the effects of Covid-19 and systemic racism, schools worldwide are focusing on the importance of social inclusion for students with various intersecting socio-economic, religious, cultural, and linguistic backgrounds, sexual orientations, gender identities, and even immigrant status (Schwab et al., 2018). As we broaden the lens of inclusion initiatives to center disability, students become comfortable understanding disability as diversity. Meeting the social needs of students is a crucial aspect of inclusion initiatives (Siperstein et al., 2017). The Special Olympics Unified Sports programs (Baran et al., 2009) are an example of inclusion initiatives specific to students with intellectual disabilities and sports that can be reevaluated with new understandings of inclusion.

Social Inclusion

Inclusion is recognized as a dynamic process that involves navigating interpersonal relationships, environmental opportunities, as well as socio-political factors that change across various social contexts of life for each individual (McConkey et al., 2019). Social inclusion can be defined as an interaction between interpersonal relationships and community involvement, two major life domains (Simplican et al., 2015). Community-wide social inclusion is a significant priority for people with disabilities, their families, policymakers, and service providers (Simplican et al., 2015) as inclusion reduces the stigma associated with disability and provides opportunities for social development (Lopes, 2015). Social inclusion enables all members of the community to acquire vital skills, develop a sense of belonging, and build independence (Kiuppis, 2018). In terms of social inclusion, centering disabled¹ students' voices and

¹ We use the terms "with a disability" and "disabled" interchangeably throughout this paper to show acceptance of both professional use of person-first language and the preference of many members of the disability community for identity-first language.

perspectives in the conversation about what works for them is essential to capture their needs and priorities (Connor et al., 2008).

Inclusive sports have emerged as a potential tool for building social inclusion within diverse populations. Sports are considered important within society. Involvement in sports may help eliminate social exclusion within the community (Haudenhuyse, 2017) and promote marginalized groups' social inclusion (Grandisson et al., 2019). Sports have been found to empower disabled people by helping them realize their full potential and their ability to advocate for societal changes (Kiuppis, 2018). Social inclusion through sports is regarded internationally as a means for people with disabilities to increase their social networks (McConkey & Menke, 2020). Through the involvement of school-age students with intellectual disabilities in sports, stigma and discrimination associated with their status may be reduced. A good example of an approach that centers social inclusion through sports is Special Olympic Unified Sports, which has exemplified the popularity of inclusive sports on an international scale.

Special Olympics Unified Sports

The Special Olympic Unified Sports program is built on the premise that active involvement as part of a sports team provides natural opportunities for friendship formation (Baran et al., 2009). Unified Sports teams are formed of individuals with and without disabilities of similar sporting ability and age who train and play together (Siperstein & Hardman, 2001; Baran et al., 2009). While the program was founded on the principle of promoting friendship and understanding, it has shown to have many other benefits such as providing young people with disabilities the opportunity to play sports, and to interact with other kids and have fun (Unified Sports, n.d.). Unified Sports provides a selection of indoor and outdoor sports such as basketball, bowling, golf, softball, and volleyball. Through participation in Unified Sports, individuals with intellectual disabilities are provided opportunities to enhance their sports skills and to encounter new experiences and challenges which have been found to

lead to improved self-esteem and the development of friendships (Baran et al., 2009; Castagno, 2001; Roswal, 2007; Siperstein & Hardman, 2001).

The Special Olympics organization launched Unified Sports in 1989, and today Unified Sports has an international presence (Special Olympics Unified Sports, 2012, p. 1). According to the Special Olympics website, Unified Sports are played in more than 4500 elementary, middle, and high schools in the United States and the program has also expanded to universities. Moreover, a large number of influential organizations such as Lions Club international have become strong global supporters in expanding Unified Sports by partnering with Special Olympics. Major sports organizations and leagues such as the National Basketball Association (NBA), Major League Soccer (MLS), Union of European Football Associations (UEFA), National Collegiate Athletic Association, D-III, ESPN's X Games Aspen, National Federation of High Schools (NFHS), and National Intramural-Recreational Sports Association (NIRSA) are also supporting the program by presenting it as a mean to show the power of Unified Sports (Unified Sports, n.d.). In addition, several major corporations and foundations such as The Coca-Cola Company and the Samuel Family Foundation are partners in these efforts (Special Olympics, n.d.).

Unified Sports Perspectives

Much of what is known about athletes' experiences in sports comes from the perspectives of nondisabled athletes (Harada & Siperstein, 2009). Within the literature focused on sports experiences of athletes with disabilities, research focuses on parasports (e.g., Allan et al., 2018), traditional Special Olympics programming as opposed to Unified Sports initiatives (e.g., Hamandi et al., 2019) and/or the perspectives of adult participants (e.g., Dailey, 2020). Even within literature specifically focused on the experiences of participants in Unified Sports, studies focus on attitudes of students without disabilities (e.g., Siperstein et al., 2017; Townsend & Hassell, 2007). Other research has reported on the impacts of Unified Sports programs across a variety of stakeholders, including athletes and partners (Castagno et al., 2001; McConkey et al., 2019; McConkey & Menke, 2020; Ozer et al., 2012; Wilski et al. 2012), as well

as coaches and parents (Baran et al., 2009; Hassan et al., 2012; McConkey et al., 2013). This literature offers a broad perspective on the impacts of Unified Sports across stakeholder groups, and highlights the reciprocal benefits of these inclusive sports activities.

Student Reported Experiences

As a team of researchers newly connected to Unified Sports through a University-state partnership, we set out to understand the comprehensive published research literature on Unified Sports and social inclusion with a focus on prioritizing the existing research eliciting athlete reported Unified Sports experiences in response to the dearth of research centering their perspectives. The decision was made to focus on student athletes participating in school-age Unified Sports programs as we aimed to gain an understanding of the impact of Unified Sports Experiences within K-21 education communities, specifically the experiences of children and young adults with disabilities. Gathering students' perspectives results in a "more holistic evaluation of the inclusion in school" (Schwab et al., 2018, p. 38). In terms of social inclusion, centering disabled students in the conversation about what works for disabled students is essential, so we felt it important to prioritize the research literature in which student athletes themselves share their perceptions of Unified Sports participation. Throughout this paper we use the term "athlete" to refer to students with intellectual disabilities participating in Unified Sports programs, which is consistent with the language used in Special Olympics Unified Sports programs.

No identified review has systematically analyzed student athlete reported experiences in connection to Unified Sports involvement. The purpose of this review was to consider the extant data reported by school-age students with intellectual disability participating in Unified Sports. Specifically, we aim to explore the focus of the research capturing athlete Unified Sports experiences and to identify what athletes report about participation in Unified Sports through the following broad questions:

1. What is the focus of the research capturing athlete experiences with Unified Sports? (stated

research objective; research questions)

2. What methods have been used to gather athlete experiences? (research and data collection methods)

3. What do the researchers report about athletes' experiences participating in Unified Sports?

Methods

To answer these research questions, a convergent systematic mixed studies review was conducted to synthesize the research on student athlete voice. A mixed methods approach to synthesis was deemed essential to our aim of uncovering both the focus of existing research studies on student athlete experiences as well as the various tools and methods that have been used to capture student experience data. Twelve steps in conducting a systematic mixed studies review (Ferguson et al., 2020) were followed, with data collected in both quantitative and qualitative forms and analyzed in a qualitative content and thematic analysis to synthesize the data and answer the research questions (Clarke, et al., 2019; Stemler, 2000).

Literature Search Procedure

The Preferred Reporting Items for Systematic Review and Meta-Analyses Protocols (PRISMA-P) guided the search procedures and reporting within this review (Moher et al., 2015). First, a search of academic journals was conducted across nine databases: Academic Search Complete, Academic Search Premier, CINAHL, ERIC, PsychInfo, PubMed, SAGE, SPORTDiscus and Web of Science Core Collection in March 2021 using the key terms (“Special Olympics” OR “Unified Champion” OR “Unified Sport”) AND (athlete OR students OR disability). Second, a hand search was conducted of the reference section of select recent reviews focused on inclusive sports (Grandisson et al., 2019; Scifo et al., 2019). Figure 1 presents a flow chart of the study search process.

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Inclusion and Exclusion Criteria

For inclusion in this review, articles were required to: (a) be an original study using qualitative, mixed methods, and/or quantitative methods; (b) focus on Unified Sports defined as an inclusive sports program in which people with and without intellectual disabilities join together on the same team (SpecialOlympics.org); (c) include school-age athletes with intellectual and/or developmental disabilities; and (d) include data reported by athletes participating in Unified Sports that can be parsed out of the larger sample (if other participants are included such as coaches, parents, typical peers, etc.). To maintain a focus on student experiences, studies including data not reported by athletes were excluded (e.g. physical health measurement data). Articles that did not conduct an original study, such as practitioner pieces, research briefs and articles in which authors mention athletes participating in Unified Sports but do not elicit original student voice data were also excluded.

Data Extraction and Analysis

A data extraction table was developed with consideration of the study research questions and Cooper's (2010) recommended categories for systematic review. Data was extracted from each article in the eight categories of report characteristics, focus of the study, program details, participants, data collection, study features, results, and quality appraisal. Three authors read each study and completed the data extraction independently. The full group of authors then met with discrepancies reviewed and discussed to 100% agreement.

Analysis of the data from the systematic review used two forms of qualitative analysis: content analysis and thematic analysis. Qualitative content analysis was used to describe the key study features, summarizing information on the study samples, data collection methods, and quality indicators (Stemler, 2000). Then, thematic analysis was used to synthesize the findings across the included studies related to the study focus and the athlete experiences (Clarke, et al., 2019). Findings sections of the original articles were extracted, including provided themes and representative athlete quotes, and analyzed using a thematic analysis process to create initial codes that were then collapsed into themes

in a collaborative and iterative process. These two qualitative analysis approaches addressed the systematic review research questions in the present study and allowed for integration across both types of data and across all the included studies.

Quality Appraisal

The methodological quality of each included study was assessed by three authors using the systematic review tool QualSyst (Kmet et al., 2004). Qualitative studies were scored using a 10-item checklist and quantitative studies were scored using a 14-item checklist resulting in a percentage range of 80% or above indicating strong quality and less than 50% as limited quality (see Table 1). The full group of authors then met and quality appraisal discrepancies were reviewed and discussed to 100% agreement.

Results

Database searches resulted in 60 studies after duplicates were removed. After inclusion and exclusion criteria were applied, 11 articles were identified to include student athlete reported data. Two additional articles were eliminated during full article coding as data was found to not be specific to school age athletes (McConkey & Menke, 2020; Pan & Davis, 2019). Nine articles remained for systematic review, including five qualitative studies: Briere and Siegle (2008); Hassan et al. (2012), McConkey et al. (2013), McConkey et al. (2019), Wilski et al. (2012), and four quantitative studies: Baran et al. (2009), Castagno (2011), Elsisy (2013), and Ozer et al. (2012).

Descriptions of Included Studies

Study Quality

Overall study quality was found to be adequate to strong (see Kmet, 2004) with only one study receiving a limited score likely due to the aim of publication in a practitioner journal (Briere & Siegle, 2008). The quality of the four remaining qualitative studies ranged from 60% (adequate) to 85% (strong) with researchers consistently reporting research objectives, context/setting, systematic data collection

procedures, and conclusions supported by results. Partial reporting of study design and theoretical framework, and absent reporting of potential influence of researcher bias, emerged as patterns across studies. The quality of the four quantitative studies ranged from 75% (good) to 96% (strong) with all studies reporting subject selection strategy, analytic methods, some estimate of variance, and details of outcomes. A noted pattern detracting from quality scores was a lack of reported control for confounding variables. A frequent partial reporting of participant characteristics emerged along with a need to collect and report data beyond athlete age (e.g., participant gender, ethnicity, socioeconomic status, etc.) as well as a need to include replicable questionnaire/interview content and response options in published studies.

Study and Sample Characteristics

The reviewed studies were published between 2001 and 2019 and reflected research conducted across Germany (n=4), Hungary (n=3), Poland (n=3), Serbia (n=3), Ukraine (n=3), USA (n=3), Turkey (n=2), Egypt (n=1), and India (n=1) with four of the nine studies spanning multiple countries. Three studies were found to use the same data set (Hassan et al., 2012; McConkey et al., 2013; Wilski et al., 2012). Overall 289 athletes participating in Special Olympics Unified Sports basketball, football and soccer were represented across studies. Sample size varied and ranged from 4 to 156 athletes (M=41). In terms of demographics, 86% of the sample (where reported) was male and athletes were most commonly reported as high school aged. Only the author groups using the same data set (Hassan et al., 2012; McConkey et al., 2013; Wilski et al., 2012) provided athlete socioeconomic status, reported as low when compared to partners. While beyond the scope of this systematic review focused on athlete experiences, 7/9 studies reported on other participants including a total of 240 partners (players without intellectual disability) and 65 coaches.

Focus of the Research

All included studies focused on program evaluation. Studies aimed to identify the impact of Unified Sports participation on student athletes and to understand related factors. In terms of a theoretical foundation provided within studies, a literature review of social inclusion and the history of Special Olympics and Unified Sports emerged as the foundation for research aims (e.g., Castagno, 2001; Hassan et al., 2012; McConkey et al., 2013; McConkey et al., 2019; Ozer et al., 2012) as well as a review of foundational research on self-concept (Briere & Siegle 19067; Elsisy, 2013). In relation to social inclusion, contact theory (Allport, 1958) was identified as undergirding the research of Baran et al. (2009).

The focus of stated research objectives and/or research questions of each original study specific to capturing athlete experiences were reviewed and found to group into two overlapping categories: (1) the impact of Unified Sports on social inclusion, and (2) the impact of Unified Sports on athlete self-perceptions and personal development. See Table 1.

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Social Inclusion

A primary focus of three qualitative studies reviewed was the impact of Unified Sports to further athlete social inclusion, for example, to assess the perception of Unified Sports participation to increase social inclusion opportunities for athletes with intellectual disability. Two articles authored by related research teams using the same data set focused on Unified Sports organizational factors and how they were perceived (Hassan et al., 2012; McConkey et al., 2013). The third study (McConkey et al., 2019) aimed to understand the meaning of social inclusion to Unified Sports participants as well as benefits to participation and perceived feelings related to inclusion. An overarching goal was to use findings to inform coaching and Unified Sports policies and procedures.

Athlete Self-Perceptions/ Personal Development

The second primary focus of studies reviewed was athlete self-perceptions and personal development. Specific areas explored include self-esteem, physical, social, and global self-concept. In the article authored by Wilski et al. (2012) reporting on the same qualitative data set used in the Hassan et al. (2012) and McConkey et al. (2013) studies, the team focused on the impact of Unified Sports participation on athlete physical, mental and social development. Similarly, Briere and Siegle (2008) focused on understanding the impact of Unified Sports on athlete physical, social and global self-concept.

All four quantitative studies reviewed also focused on the impact of Unified Sports on athlete self-concepts and personal development. For example, Elsisy (2013) compared the impact of Unified Sports and segregated sports participation on athlete sense of self, and Castagno (2001) considered changes in self-esteem occurring in athletes with and without intellectual disability participating in Unified Sports (p. 195). Most commonly, researchers explored athlete social self-concept (Baran et al., 2009; Briere & Siegle, 2008; Castagno, 2001; Ozer et al., 2012; Wilski et al., 2012), physical self-concept (Baran et al., 2009; Briere & Siegle, 2008; Elsisy, 2013; Wilski et al., 2012) and global self-concept (Elsisy, 2013; Ozer et al., 2012).

Data Collection Methods

Two primary data collection methods were identified and used to gather student athlete experiences: interviews and questionnaires.

Interviews

Athlete interviews were the main method of all five qualitative studies. The data set collected by Hassan et al. (2012), McConkey et al. (2013) and Wilski et al. (2012) captured athlete experiences through both one-on-one and group interviews. The research group conducted interviews that were semi-structured and followed a topic guide with suggested trigger questions. An average of four team interviews were conducted in each of five countries (N=125 athletes) in addition to 5 individual athlete

interviews per country (N=25). Interviews were conducted using an informal style with care taken to elaborate upon the shared responses of each participant (McConkey, 2013). Coding methodology was reported as interpretative phenomenological analysis (McConkey et al., 2013).

McConkey et al. (2019) conducted eight group interviews with athletes (N=49) using a structured interview schedule with pictures. First athletes were shown pictures of youth taking part in activities together (e.g. gathering in a café) and asked structured questions around if a person was being included or excluded. Next, athletes were shown pictures of Unified Sports participants and asked similar structured questions. Findings were coded using Braun and Clarke's (2006) framework for thematic content analysis. Moreover, Briere and Siegle (2008) conducted one-on-one interviews with athletes (N=4). No information was provided regarding coding procedures.

Questionnaires

Five questionnaires/ inventories were identified as data collection methods to elicit the self-perceptions and personal development of athletes: the Friendship Activity Scale (Siperstein, 1980); the Adjective Checklist (Siperstein, 1980); the Katz-Zigler Self-Esteem Questionnaire (Zigler, 1994); the Piers-Harris Self-Concept Scale II (Piers, 1969); and the Special Olympics Unified Sports Questionnaire (Siperstein et al., 2001).

Both the Friendship Activity Scale (Siperstein, 1980), a 10 question Likert inventory of behavior intention regarding friendship with people with intellectual disability, and the Adjective Checklist (Siperstein, 1980), a validated inventory with 34 adjectives across four dimensions (affective feelings, physical appearance, academic appearance and social behavior) were used in two reviewed studies (Castagno, 2001; Ozer et al., 2012). Reliability estimates for the Friendship Activity Scale were not provided for the original validity study, but for the Turkish version validation they were reported as Cronbach's alpha = 0.86 (Ozer, et al, 2012). For the Adjective Checklist, reliability estimates were provided as Cronbach's alpha = 0.81 from the original validation study (Siperstein, 1980) and 0.62 in the

validation of the Turkish version of the scale (Ozer, et al., 2012). Neither study using these measures reported reliability estimates for the data they collected. A third validated inventory, the Katz-Zigler Self-Esteem Questionnaire (Zigler, 1994), was used by Castagno (2001) to measure self-esteem via 12 items with a yes/no response format. Reliability estimates were provided from the original validation study as test-retest correlations of 0.75-0.79 and split-half reliability estimates of 0.81-0.85. No reliability estimates were provided for the data collected using this measure in Castagno (2001).

A measure of self-concept was used in Elsisy (2013) across groups to elicit athlete self-perception data. The Piers-Harris Self-Concept Scale II (Piers, 1969) is a scale assessing six Domains: behavioral adjustment, intellectual and school status, physical appearance and attributes, freedom from anxiety, popularity, and happiness and satisfaction, and was given to both athletes participating in Unified Sports as well as athletes participating in segregated sports as a comparison. No reliability estimates were provided for this scale from prior studies or from Elsisy (2013) data collection. Finally, the Special Olympics Unified Sports Questionnaire (Siperstein et al., 2001) was used by Baran et al. (2009) to gather information on athlete relationships and self-perceptions. Baran et al. (2009) include a statement in their Methods that “no reliability or validity estimations have been calculated” (p. 37), and they do not report estimates in their own results either. Collected data was assessed with nonparametric measures and included a pre and post Unified Sports participation comparison.

Athlete Reported Experiences

A primary aim of this systematic mixed studies review was to synthesize what student athletes report as their experiences participating in Unified Sports. Athlete experiences are reported in alignment with two areas identified as the focus of reviewed studies: (1) social inclusion, and (2) athlete self-perceptions and personal development.

Athlete Reported Experiences and Social Inclusion

Considering social inclusion as the interaction between the two major life domains of

community involvement and interpersonal relationships (Simplican, 2015), the research teams of Briere and Siegel (2008), Hassan et al. (2012), McConkey et al. (2013), McConkey et al. (2019) and Wilski et al. (2012) report athletes experiencing strengthened social inclusion through Unified Sports participation.

Community Involvement. The reviewed studies indicate that developing an identity as part of a group or sports team provides meaningful access for athletes to community involvement. Researchers in multiple studies report athletes valuing the opportunity to join a group within the community, with themes including ideas of identity and group membership, forming inclusive bonds, recognition in the community, and benefits of competition and group travel (Briere & Siegel, 2008; Hassan et al., 2012; McConkey et al., 2013; McConkey et al., 2019; Wilski et al., 2012). Reflecting a desire for community sports involvement, Hassan et al. (2012) report an athlete as saying, “I like playing sports and I wanted to be a member of group sports and this is the best way I knew how” (p.9). Suggesting the ability of Unified Sports to expand community social networks, McConkey et al. (2013) report another athlete as stating, “When I walk around town ... people say hello to me, people that I did not know before but now I do because I met them through this team or have played against them in some other competitions” (p. 931).

Through community involvement, researchers report athletes experiencing new found pride in not only themselves but in their teammates along with a growing feeling of positivity and connectedness (Hassan et al., 2012; McConkey et al., 2013; McConkey et al., 2019). McConkey et al. (2013), reporting a theme of *Inclusive and Equal Bonds*, quote an athlete who shared feelings of connection to their teammates, “We are all needed on the team, there are no star players, we are a great team and the team is the star” (p.929). Similarly, McConkey et al. (2019) share an athletes’ strong connection to their team to represent a theme of *Inclusion=Togetherness*, “I like being in the group of peers, it’s my life, and these guys are like my family...” (p.237). The theme of community involvement emerging from the reviewed studies reflects a common experience shared by athletes. The experience of developing a

positive identity as a member of a team leading to increased community involvement and feelings of togetherness.

Interpersonal Relationships. Researchers report athletes' positive experiences in relation to community/team involvement result in improved interpersonal relationships and social connections. Interpersonal relationships were reported by research teams as equality and friendship, sharing interests, increasing communication with peers, and learning from each other (Briere & Siegel, 2008; Hassan et al., 2012; McConkey et al., 2013; McConkey et al., 2019; Wilski et al, 2012). Throughout the literature, researchers spotlight athletes sharing their experiences forming relationships with Unified Sports partners. Hassan et al. (2012) report growing relationships between athletes and partners over a *Shared Interest in Sports*, McConkey et al. (2019) note a theme of *Equality* emerging among players, and researchers consistently spotlight increased communication and friendship among players (Briere & Siegel, 2008; Hassan et al., 2012; McConkey et al., 2013; McConkey et al., 2019; Wilski et al, 2012).

With an emphasis on building interpersonal relationships, McConkey et al. (2013) report upon a theme of *Personal Development of the Athletes and Partners*, sharing an athlete quote, "I am not shy to talk to people. I will hold my head up and speak out loud. I got more used to people in playing on my team and I am not afraid..." (p. 928), McConkey et al. (2013) provide another example of how interpersonal relationships among athletes and partners become strengthened over time through a theme of *Inclusive and Equal Bonds*,

We all like sport and we ask each other have you seen the game last night, and do you know the latest results and things like that. Sometimes there is a girl that one of us likes and we talk to each other about the best way that one of us can ask her out, we share some of that type of information, personal information with each other. It wasn't like that from the beginning, but it is now because we have been playing together for more than a year and we have become good friends. (p. 929)

The emergent theme of strengthened interpersonal relationships across studies reflects a common athlete experience reported by researchers as well as an important finding in relation to social inclusion. Building on the initial theme of community involvement, it appears the opportunity to engage in community involvement as part of a Unified Sports team leads to a common athlete experience of developing strengthened interpersonal relationships.

Barriers to Inclusion. In addition to shared positive social inclusion experiences, researchers report obstacles to social inclusion, specifically noting program costs (Hassan et al., 2012), as well as time, location and travel (McConkey et al., 2013; Wilski et al., 2012) as barriers to social inclusion. Hassan et al. (2012) report a theme of *Individual and Programme Financial Costs* and suggest finances needed for participation and related travel emerge as problematic for many athletes. McConkey et al. (2013) report athletes having limited time as a result of other responsibilities, such as helping their family after school, as a barrier to social inclusion. An athlete quote shared by McConkey et al. (2013), "...lots of us live on a different side of the city and it is not so easy for us to hang out after training – we have to catch a bus or train...that is what makes it difficult" (p. 930), illustrates the location of athletes as a potential barrier to building social relationships. Of note, while resources of money, time, location and travel were identified as barriers to inclusion, social obstacles such as attitudes, biases and stigma within the community were beyond the analyses of included research studies.

Athlete Experiences, Self-Perceptions and Personal Development

In addition to a focus on social inclusion, original studies reviewed focused on athlete self-perceptions and personal development. Athlete perceptions of personal development from Unified Sports participation were elicited through quantitative approaches with multiple inventories in relation to social self-concept, self-esteem, and global self-concept as well as through qualitative interviews (see Table 1).

Social Self-Concept. Athlete responses to the Friendship Activity Scale (Siperstein, 1980),

showed increased perceptions of friendship across two different studies. Results of both a pretest-posttest design study and an experimental-control group comparison suggest significant increases in athlete perceptions of friendships. Athlete friendship scores significantly increased after participation in Unified Sports, $t(23) = 4.38, p < .01$ (Castagno, 2001). Similarly, athletes scores were significantly higher than peers in a nonparticipating athlete control group (Ozer et al., 2012).

Athlete scores on the Adjective Checklist (Siperstein, 1980), also increased across multiple studies, representing an increased use of positive adjectives toward people labeled with intellectual disability. Results of both a pretest-posttest design study and an experimental-control group comparison suggest increases in athlete perceptions of disability. Athlete scores significantly increased after participation in Unified Sports, $t(23) = 5.22, p < .01$ (Castagno, 2001) in one study. However, an increase in athlete positive and total adjective scores posttest was not found to be significant ($p > .05$) in a second study (Ozer et al., 2012).

Finally, in relation to social self-concept, the Special Olympics Unified Sports Questionnaire (Siperstein et al., 2001) was used to gather information on athlete relationships and self-perceptions. Results of a pre and post Unified Sports participation comparison show a significant increase only in athletes' willingness to recommend Unified Sports to a friend ($p < .05$). Of note, however, there was no significant change in athletes' reporting of time spent with peers outside of Unified Sports participation (Baran et al., 2009). In alignment with the inventory results, Briere and Siegle (2008) conclude that athletes' reported social self-concept increased through participation in Unified Sports (Briere & Siegle, 2008; Wilski et al., 2012). However, Wilski et al. (2012) report athletes' increased awareness of social dynamics may not result in increased social time outside of structured Unified Sports activities. For example, Wilski et al. (2012) report an athlete's perception of Unified Sports partners having so much to do that they have little free time to spend together with peer athletes outside of the program.

Self-Esteem. In addition to increased social confidence, athlete self-esteem was captured as an

indicator of personal development. Athlete responses to the Katz-Zigler Self-Esteem Questionnaire (Zigler, 1994) resulted in significant results in a study using a pretest-posttest design. Athletes reported significantly higher self-esteem after participation in Unified Sports, $t(23) = 4.94, p < .01$ (Castagno, 2001). In alignment with the inventory results of Castagno (2001), Wilski et al. (2012) shared athlete reported perceptions of increased self-esteem elicited through interviews. For example, Wilski et al. (2012) shared an athlete quote, "I believe in myself, I worked hard to be part of this team, and now I believe that if I work hard I can achieve many things" to represent the positive impact of Unified Sports participations on athlete *Mental Aspect* or growth in positive feelings of self (p. 275).

Global Self-Concept. In terms of global self-concept, a comparison of three groups, Unified Sports athletes, non-athletes, and athletes participating in segregated sports, Unified Sports athletes reported significantly higher self-concept. Athlete responses to the Piers-Harris Self-Concept Scale II (Piers, 1969) show a significant increase in self-concept of Unified Sports athletes across all six domains: behavioral adjustment, intellectual and school status, physical appearance and attributes, freedom from anxiety, popularity, and happiness and satisfaction, when compared to a control group not participating in sports (Elsissy, 2013). Moreover, athlete responses showed a significant increase in self-concept of Unified Sports athletes in one domain, happiness and satisfaction, when compared to peers participating in segregated sports (Elsissy, 2013). In contrast to the positive findings reported by Elsissy (2013), however, Wilski et al. (2012) and Briere and Siegle (2008) shared inconsistent findings in relation to athlete reported perceptions of global self-concept. Briere and Siegle (2008) identified inconsistent patterns of athlete physical self-concept as well as inconsistent increases in athlete global self-concept, with self-concept remaining unchanged for many athletes pre and post Unified Sports participation. Wilski et al. (2012) reported perceived increases in global self-concept including physical ability across some athletes but not others, for example in physical skills related to ball play.

Discussion

This systematic mixed studies review aimed to identify the focus of existing research capturing athlete experiences in Unified Sports as well as the methods used to collect student experiences, and to identify what athletes report about their participation in Unified Sports. Unified Sports' success should rely heavily on capturing athletes' experiences to better serve them and increase their involvement and participation, yet throughout our search across nine databases for studies with data reported by school-age athletes participating in Unified Sports, we found only nine original studies, three of which used the same dataset, conducted by only six unrelated research groups. Despite the research spanning nine countries, this reveals an overall dearth of research capturing Unified Sports athletes' voices which is surprising as Unified Sports was initiated in 1989. This suggests access to Unified Sports programming may be limited and/or the experiences of athletes may not be prioritized by researchers. This also suggests researchers may be relying on other methodologies and participants when studying community and inclusive sporting.

The focus of the synthesized research was the impact of Unified Sports on social inclusion and athlete self-perceptions and personal development. This focus supports the wider research on disability and inclusion and aligns with social justice initiatives to center disability as diversity in inclusion initiatives across the lifespan (e.g., Shea et al., 2020). While studies synthesized were overall of appropriate methodological quality, several patterns of need emerged to increase our understanding of student athletes, specifically the need for research teams to value and capture participant characteristics beyond age, such as gender, ethnicity and socioeconomic status. It appears that Unified Sports athletes are primarily male, yet that conclusion stems from only seven of the nine studies reporting on gender. Beyond a concern as to why more females are not involved in Unified Sports, provided participant data did not allow for a clear understanding of Unified Sport athlete demographics. In terms of data collection methods, both qualitative and quantitative methods were used to elicit athlete experiences with a reliance on quantitative interviews and validated inventories developed

between 1969 and 1994.

Regarding the impact of Unified Sports participation on social inclusion, athlete experiences identified via the present review align with previous research reporting that participation in community sports brings enjoyment of sports to individuals with disabilities (Shogren et al., 2015) previously without access to team sports. Creating awareness of disability as diversity through sports builds social inclusion among nations and international groups as was the case in London 2012 where the Paralympics had a great influence on the attitudes and perspective of non-disabled people to change the way they think about peers with disabilities (Ferrara et al., 2015). In the studies reviewed, athletes highly valued the chance of joining a community group and stated it was a positive and proud experience that enabled them to nurture friendships and build healthier relationships (Hassan et al., 2012; McConkey et al., 2013; McConkey et al., 2019). Athletes expressed benefits of Unified Sports participation on community involvement, with multiple athletes sharing positive experiences resulting from being a member of a team, traveling with a team, and being supported by the larger community in the role of athlete (Hassan et al., 2012). Athletes also reported developing relationships with teammates, developing confidence and overcoming shyness (McConkey et al., 2013). In this regard, sporting activities provide an opportunity to celebrate diversity.

In terms of self-perceptions and personal development, athletes reported increased perceptions of friendships (Ozer et al., 2012) and self-esteem (Castagno, 2012). These findings align with previous research reports that participation in Unified Sports may increase athlete self-esteem and competence through interactions among athletes, coaches and nondisabled partners (Grandisson et al., 2019). Overall, however, inconsistent results emerged in relation to athlete self-perceptions and personal development. Multiple research teams reported increased athlete social self-concept (Castagno, 2001; Ozer et al., 2012) and self-esteem (Castagno, 2001; Wilski et al., 2012). However, Baran et al. (2009) report no significant increase in athlete reporting of actual time spent with peers outside of

Unified Sports events and both research teams of Briere and Siegel (2008) and Wilski et al. (2012) report inconsistent results in athlete global self-concept post Unified Sports participation. This indicates that additional research is needed to uncover the lasting impact of Unified Sports participation on athletes' personal development.

Despite inconsistencies, the findings of multiple researchers support the notion that Unified Sports increase the self-confidence of the athletes and their social networks (see McConkey et al., 2019). Participants of Unified Sports showed increased levels of happiness and satisfaction compared to those who have been playing segregated sports along with better physical abilities (Elsissy, 2013). Unified Sports also improved people's perception of intellectual disabilities with study participants using more positive adjectives to describe people with disabilities after program participation (Castagno, 2001). On the other hand, we have deduced from the review of the research several obstacles along with the positive outcomes for athletes to social inclusion. The program's time commitment and costs are two of the hurdles faced by participants, including the cost of travel. Along with this, athletes also faced a hurdle due to their residential location as it limited their social interaction with larger groups of Unified Sports peers. Also emerging for consideration, time spent with peers outside of Unified Sports was not identified as increasing in any of the related studies (e.g., see Baran et al., 2009). This finding holds important implications for true community inclusion initiatives.

Recommendations for Social Inclusion

Practical efforts to increase social inclusion outside of Unified Sports participation seem an important next step for Unified Sports athletes. Further exploration and development of strategies to promote community inclusion along with Unified Sports include initiatives to increase sports participation and access and to remove barriers through proactive outreach to targeted groups (Waring & Mason, 2010). First, existing Unified Sports athlete/ partner sporting opportunities can be expanded beyond competitive programming. For example, participants of all ability levels can be regularly invited

to participate in recreational activity groups. Second, participation in mainstream sporting activities with people of all ability levels interacting together as athletes or fans can be facilitated (Grandisson et al., 2019). Mainstream participation can be encouraged through outreach to local recreational group leaders in the community. Third, the importance of social inclusion among local communities, nations and international groups can be strengthened through continuous collaboration with the disability community. Inclusive interactions with individuals with intellectual disability leads to increased understanding of differences and positive attitudes of non-disabled peers.

Limitations

While this systematic mixed studies review provides insight into the extant research literature on Unified Sports and athlete experiences, it has several limitations. The decision to focus on studies which reported school-age athlete experiences excluded the voices of older athletes as well as the first-hand experiences of coaches, peer partners and family members of athletes. These groups may have meaningful insights to add to the Unified Sports experiences reported by athletes in the present review. In terms of search methodology, nine databases were used to search for studies to include in the synthesis. Unpublished studies and theses were not identified and studies that were not in English were not identified. Given the international scale of Unified Sports, international databases and related studies may be available that were not captured through our systematic search procedures. Finally, this review was limited due to the reporting by authors in the original included studies. Participant selection bias inherent in the original studies, as well as researcher bias due to varied affiliations of original research groups with Special Olympics Unified Sports, may have impacted the findings of this review.

Recommendations for Research

Special Olympics Unified Sports is a program focused on building the social inclusion of people with intellectual disability through sports and team participation. Athletes in all studies reviewed reported positive experiences with Unified Sports leading to increased social inclusion and/or self-

concepts. The present review identified next steps for research across areas including athlete characteristics, generalization and maintenance of Unified Sports impact, social barriers to community inclusion, expanding community sporting opportunities using the Unified Sports model, and expanding future studies to include measures of athlete self-perceptions beyond inventories used in existing studies. Specific research questions for exploration stemming from the present findings include: How do athlete and partner characteristics, including gender, ethnicity, and socioeconomic status, impact Unified Sports experiences, community inclusion experiences and participant outcomes and needs? What is the maintenance of athlete personal development gains post Unified Sports participation and do athletes generalize skills and experiences to other community interactions? How can the Unified Sports model be applied to community recreational activity groups, programs and events? And, what is the perspective of external community members regarding Unified Sports athletes and partners including attitudes of advocacy, strength and understanding as well as biases and stigma that may be pathways and barriers to expanding community inclusion?

Partnering with the Special Olympics Unified Sports organization, athletes and the wider disability community is a recommendation for researchers studying the interactions of sports and community inclusion. Future research valuing Unified Sports athlete experiences, including participatory research and research conducted by additional research teams, as well as research to facilitate increased community inclusion of Unified Sports teammates beyond program interactions is suggested to further social inclusion and awareness of disability as diversity.

References

References marked with an asterisk (*) indicate studies included in the systematic review.

Allan, V., Smith, B., Côté, J., Ginis, K. A. M., & Latimer-Cheung, A. E. (2018). Narratives of participation among individuals with physical disabilities: A life-course analysis of athletes' experiences and development in parasport. *Psychology of Sport and Exercise, 37*, 170-178.

<https://doi.org/10.1016/j.psychsport.2017.10.004>

Allport, G. W. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.

*Baran, F., Top, E., Aktop, A., Özer, D., & Nalbant, S. (2009). Evaluation of a unified football program by special olympics athletes, partners, parents, and coaches. *European Journal of Adapted Physical Activity, 2*(1), 34–45. doi: [10.5507/euj.2009.003](https://doi.org/10.5507/euj.2009.003)

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101. <http://dx.doi.org/10.1191/1478088706qp063oa>

*Briere, D. E., III, & Siegle, D. (2008). The effects of the unified sports basketball program on special education students' self-concepts: Four students' experiences. *TEACHING Exceptional Children Plus, 5*(1).

*Castagno KS. (2001). Special Olympics Unified Sports: changes in male athletes during a basketball season. *Adapted Physical Activity Quarterly, 18*(2), 193–206.

<https://doi.org/10.1123/apaq.18.2.193>

Clarke, V., Braun, V., Terry, G & Hayfield N. (2019). *Thematic analysis*. In Liamputtong, P. (Ed.), *Handbook of research methods in health and social sciences* (pp. 843-860). Springer.

https://doi.org/10.1007/978-981-10-5251-4_103

Connor, D. J., Gabel, S. L., Gallagher, D. J., & Morton, M. (2008). Disability studies and inclusive education implications for theory, research, and practice. *International Journal of Inclusive Education, 12*(5-6), 441–457. <https://doi.org/10.1080/13603110802377482>

- Dailey, S. L., Alabere, R. O., Michalski, J. E., & Brown, C. I. (2020). Sports experiences as anticipatory socialization: How does communication in sports help individuals with intellectual disabilities learn about and adapt to work? *Communication Quarterly*, *68*(5), 499-519.
<https://doi.org/10.1080/01463373.2020.1821737>
- *Elsissy, A. (2013). Effects of unified sports program on athlete self- concept. *Ovidius University Annals, Series Physical Education & Sport/Science, Movement & Health*, *13*, 740–745.
- Ferguson, S. L., Kerrigan, M. R., & Hovey, K. A. (2020). Leveraging the opportunities of mixed methods in research synthesis: Key decisions in systematic mixed studies review methodology. *Research Synthesis Methods*, *11*(5), 580-593. <https://doi.org/10.1002/jrsm.1436>
- Ferrara, K., Burns, J., & Mills, H. (2015). Public attitudes toward people with intellectual disabilities after viewing olympic or paralympic performance. *Adapted Physical Activity Quarterly*, *32*(1), 19-33.
<https://doi.org/10.1123/apaq.2014-0136>
- Grandisson, M., Marcotte, J., Niquette, B., & Milot, É. (2019). Strategies to foster inclusion through sports: A scoping review. *Inclusion*, *7*(4), 220-233. <https://doi.org/10.1352/2326-6988-7.4.220>
- Hamdani, Y., Yee, T., Oake, M., & McPherson, A. C. (2019). Multi-stakeholder perspectives on perceived wellness of Special Olympics athletes. *Disability and health journal*, *12*(3), 422-430.
<https://doi.org/10.1016/j.dhjo.2019.01.009>
- Harada, C. M., & Siperstein, G. N. (2009). The sport experience of athletes with intellectual disabilities: A national survey of Special Olympics athletes and their families. *Adapted Physical Activity Quarterly*, *26*(1), 68-85.
- *Hassan, D., Dowling, S., McConkey, R., & Menke, S. (2012). The inclusion of people with intellectual disabilities in team sports: Lessons from the youth unified sports programme of special olympics. *Sport in Society*, *15*(9), 1275–1290. <https://doi.org/10.1080/17430437.2012.695348>

- Haudenhuyse, R. (2017). Introduction to the issue "sport for social inclusion: Questioning policy, practice and research". *Social Inclusion*, 5(2), 85-90. <https://doi.org/10.17645/si.v5i2.1068>
- Kmet, L. M., Cook, L. S., & Lee, R. C. (2004). Standard quality assessment criteria for evaluating primary research papers from a variety of fields. *Alberta Heritage Foundation for Medical Research*, 13 <https://doi.org/10.7939/R37M04F16>
- Kiuppis, F. (2018). Inclusion in sport: Disability and participation. *Sport in Society*, 21:1, 4-21, <https://doi.org/10.1080/17430437.2016.1225882>
- Lopes, J. T. (2015). Adapted surfing as a tool to promote inclusion and rising disability awareness in Portugal. *Journal of Sport for Development*, 3(5), 4-10.
- *McConkey, R., Dowling, S., Hassan, D., & Menke, S. (2013). Promoting social inclusion through Unified Sports for youth with intellectual disabilities: a five-nation study. *Journal of Intellectual Disability Research*, 57(10), 923–935. <https://doi.org/10.1111/j.1365-2788.2012.01587.x>
- *McConkey, R., Peng, C., Merritt, M., & Shellard, A. (2019). The meaning of social inclusion to players with and without intellectual disability in unified sports teams. *Inclusion*, 7(4), 234–243. <https://doi.org/10.1352/2326-6988-7.4.234>
- *McConkey, R., & Menke, S. (2020). The community inclusion of athletes with intellectual disability: A transnational study of the impact of participating in Special Olympics. *Sport in Society*, 1-10. <https://doi.org/10.1080/17430437.2020.1807515>
- Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., ... & Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews*, 4(1), 1-9. <https://doi.org/10.1186/2046-4053-4-1>
- *Özer D, Baran F, Aktop A, Nalbant S, Aglamis E, & Hutzler Y. (2012). Effects of a special olympics unified sports soccer program on psycho-social attributes of youth with and without intellectual

disability. *Research in Developmental Disabilities*, 33(1), 229–239.

<https://doi.org/10.1016/j.ridd.2011.09.011>

*Pan, C. C., & Davis, R. (2019). Exploring physical self-concept perceptions in athletes with intellectual disabilities: The participation of Unified Sports experiences. *International Journal of Developmental Disabilities*, 65(4), 293-301.

<https://doi.org/10.1080/20473869.2018.1470787>

Piers, E. V. (1969) *Manual for the Piers-Harris Children's Self-concept Scale*. Nashville, TN: Counselor Recordings & Tescs.

Roswal, M., G. (2007). Special Olympics unified sports: Providing a transition to mainstream sports. *Sobama Journal*, 12(1), 13-15.

Schwab, S., Sharma, U., & Loreman, T. (2018). Are we included? Secondary students' perception of inclusion climate in their schools. *Teaching and Teacher Education*, 75, 31-39.

<https://doi.org/10.1016/j.tate.2018.05.016>

Scifo, L., Chicau Borrego, C., Monteiro, D., Matosic, D., Feka, K., Bianco, A., & Alesi, M. (2019). Sport intervention programs (SIPs) to improve health and social inclusion in people with intellectual disabilities: A systematic review. *Journal of Functional Morphology and Kinesiology*, 4(3), 57.

<https://doi.org/10.1186/s13643-019-1029-1>

Shea, L.C., Hecker, L. & Lalor, A.R. (2020). *From disability to diversity: College success for students with learning disabilities, ADHD, and autism spectrum disorder*. Columbia, SC: University of South Carolina, National Research Center for the First-Year Experience and Students in Transition.

Shogren, K. A., Gross, J. M., Forber-Pratt, A. J., Francis, G. L., Satter, A. L., Blue-Banning, M., & Hill, C. (2015). The perspectives of students with and without disabilities on inclusive schools.

Research and Practice for Persons with Severe Disabilities, 40(4), 243-260.

<https://doi.org/10.1177/1540796915583493>

- Simplican, S. C., Leader, G., Kosciulek, J., & Leahy, M. (2015). Defining social inclusion of people with intellectual and developmental disabilities: An ecological model of social networks and community participation. *Research in Developmental Disabilities, 38*, 18-29.
<https://doi.org/10.1016/j.ridd.2014.10.008>
- Siperstein, G.N., (1980). Instruments for measuring children's attitudes toward the handicapped. Unpublished manuscript, University of Massachusetts, Boston.
- Siperstein, G.N., & Hardman, M.L. (2001). National evaluation of the special olympics unified sports Program. Unpublished report. Retrieved June 19, 2021 from
https://media.specialolympics.org/soi/files/sports/unified_sports_report.pdf
- Siperstein, G. N., Summerill, L. A., Jacobs, H. E., & Stokes, J. E. (2017). Promoting social inclusion in high schools using a schoolwide approach. *Inclusion, 5*(3), 173-188. <https://doi.org/10.1352/2326-6988-5.3.173>
- Special Olympics Unified Sports (2012). Special olympics unified sports quick reference guide. Retrieved June 21, 2021 from <https://media.specialolympics.org/resources/sports-essentials/unified-sports/Unified-Sports-Quick-Reference-Guide.pdf?qa=2.208898770.114594408.1547142790-79484655.1547142790>
- Stemler, S. (2000) An overview of content analysis, practical assessment, research, and evaluation, 7, Article 17. <https://doi.org/10.7275/z6fm-2e34>
- Unified Sports*. (2021, April 26). Specialolympics.org. Retrieved June 21, 2021 from
<https://www.specialolympics.org/our-work/sports/unified-sports>
- Special Olympics (n.d.). *Unified sports*. <https://www.specialolympics.org/our-work/sports/unified-sports>
- Special Olympics (2019). Annual report. <https://annualreport.specialolympics.org/impact>

- Townsend, M., & Hassall, J. (2007). Mainstream students' attitudes to possible inclusion in unified sports with students who have an intellectual disability. *Journal of Applied Research in Intellectual Disabilities*, 20(3), 265-273. <https://doi.org/10.1111/j.1468-3148.2006.00329.x>
- Waring, A., & Mason, C. (2010). Opening doors: Promoting social inclusion through increased sports opportunities. *Sport in society*, 13(3), 517-529. <https://doi.org/10.1080/17430431003588192>
- *Wilski, M., Nadolska, A., Dowling, S., McConkey, R., & Hassan, D. (2012). Personal development of participants in special olympics unified sports teams. *Human Movement*, 13(3), 271-279. <https://doi.org/10.2478/v10038-012-0032-3>
- Zigler, E. (1994). Interim report on individual studies: Self-image, depression, and hopelessness in mildly retarded adolescents. Unpublished manuscript, Yale University, New Haven, CT.

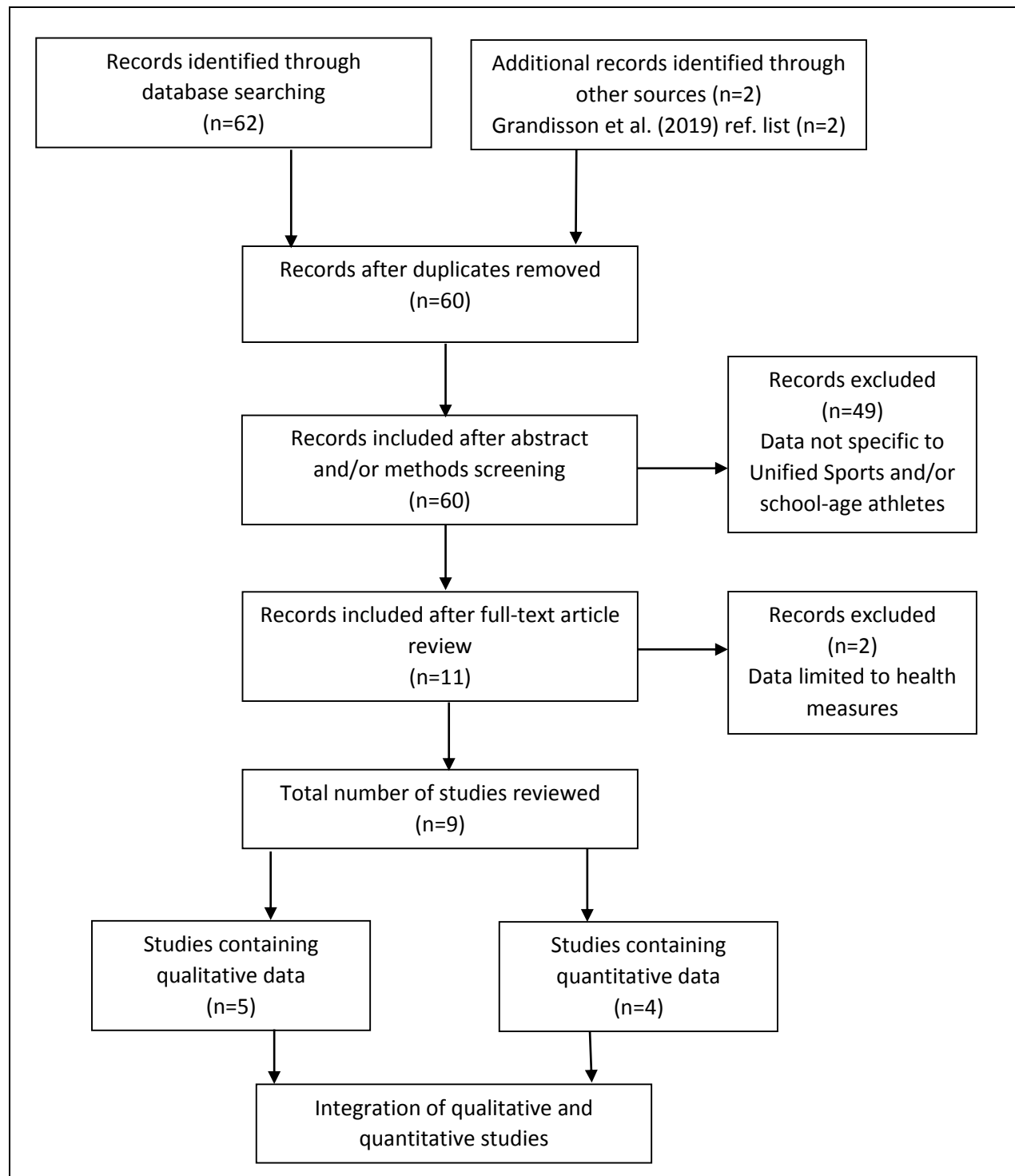


Figure 1. Study selection flow diagram

Table 1*Details of Reviewed Studies and Athlete Experiences*

Author(s) (year) & Country	Study Focus	Athlete Participants	Program Sport	Data Collection	Research Reported Athlete Experiences with Unified Sports	Research Quality
QUALITATIVE						
Briere & Siegle (2008) USA	Athlete self- concepts & impact of Unified Sports on student athletes	N=4 High school students (3 female, 1 male)	Unified Basketball	One-on-one interviews	<ul style="list-style-type: none"> ● <i>Increased social self-concept</i>, e.g., more popular “with sporty kids” (p.8) ● <i>Consistent or increased global self-concept</i>, e.g., “you learn a lot” (p.9) ● <i>Scattered physical self-concept</i>, e.g., “a little better but about the same” (p.7) 	40% Limited
Hassan et al. (2012)* Germany, Hungary, Poland, Serbia, Ukraine	Perceptions of Unified Sports to further social inclusion	N=156 12-15 years 81% male (N=25 in 1:1 interviews)	Unified Football and Basketball	One-on-one interviews of 25 athletes (5 in each country) on day of tournament	<ul style="list-style-type: none"> ● <i>Shared sport interest</i>, e.g., “I like playing sports and I wanted to be a member of group sports...” (p.9) ● <i>Unique opportunities</i>, e.g., “Our team is well known... people recognised me, that was really a great feeling” (p.10) ● <i>Financial costs</i>, e.g., “...it is money that stops me” (p.11) 	75% Good
McConkey et al. (2013)* Germany, Hungary, Poland, Serbia, Ukraine	Perceptions of Unified Sports to further social inclusion	N=156 12-15 years 81% male (N=25 in 1:1 interviews)	Unified Football and Basketball	One-on-one interviews of 25 athletes (5 in each country) on day of tournament	<ul style="list-style-type: none"> ● <i>Personal development</i>, e.g., “I am a more confident person now...I got more used to people in playing on my team...” (p. 928). ● <i>Inclusive and equal</i>, e.g., “We are all needed on the team” (p.929). 	80% Strong

McConkey et al. (2019)	Meaning of social inclusion to athletes and perceptions of benefits of participation	N=49 16-25 years		Focus groups (8 group interviews structured with photos and questions)	<ul style="list-style-type: none"> ● <i>Positive perceptions</i>, e.g., “lots of different people say hello to me” (p. 931). ● <i>Togetherness</i>, e.g., “People with and without disability just being together, playing together...” (p.237) (sub-themes: equality, friendships, participation, connections, and assistance). 	85% Strong
Wilski et al. (2012)*	Impact of a Unified Sport on participants’ personal development (physical, mental, social)	N=156 12-15 years 81% male (N=25 in 1:1 interviews)	Unified Football and Basketball	One-on-one interviews of 25 athletes (5 in each country) on day of tournament	<ul style="list-style-type: none"> ● <i>Increased personal development (physical)</i>, e.g., “...my technique is much better, for example in ball control” (p.273) ● <i>Increased personal development (mental)</i> e.g., “now I believe that if I work hard I can achieve many things” (p.275) ● <i>Awareness (social)</i>, e.g., “The partners are very busy” (p.275) 	60% Adequate
QUANTITATIVE						
Baran et al. (2009)	Self-perceptions and satisfaction with Unified Sports	N=23 12-15 years 100% male		Pre/post Special Olympics Unified Sports questionnaire (questions on relationships and self-perceptions)	<ul style="list-style-type: none"> ● Significant increase in athlete recommendation of Unified Sports to a friend ($p < .05$). ● No significant change in seeing other athletes when not playing; having social contact with teammates at home or in the community. 	83% Strong
Castagno (2001)	Impact of Unified Sports on self-esteem,	N=24 M 13.8 years	Unified Basketball	Pre/post: The Katz-Zigler Self-Esteem Questionnaire	<ul style="list-style-type: none"> ● Significant increase in athlete reported self-esteem ($p < .01$); friendships ($p < .01$); 	83% Strong

	attitudes & friendship	100% male		(Zigler, 1994); The Adjective Checklist (Siperstein, 1980); The Friendship Activity Scale (Siperstein, 1980)	and, attitude toward people with intellectual disability ($p < .01$).	
Elsissy (2013) Egypt	Impact of Unified Sports on self-concept	N=10 M 13.3 years (and N=15 in segregated sports ; N=15 in control)		Piers-Harris Self-Concept Scale II (Piers, 1952)	<ul style="list-style-type: none"> ● Significant difference between Unified group and Control group (no sports) in all Piers-Harris Self-Concept Scale in favor of Unified group. ● No Significant Difference between Unified group and Non-Unified group (segregated sports) in all Piers- Harris Self-Concept Scale except factor of Happiness and Satisfaction in favor of Unified. 	75% Good
Ozer et al. (2012) Turkey	Impact of Unified Sports on psychosocial attributes (friendship, behavior, social competence)	N=23 M 14.5 years 100% male (and N=15 in control group)	Unified Soccer	Pre/post: The Adjective Checklist (Siperstein, 1980); The Friendship Activity Scale (Siperstein, 1980)	<ul style="list-style-type: none"> ● Significant increase in athlete reported friendship activity ($p = .003$). ● increase in positive and total adjective scores (attitudes) but not significant ($p > .05$). 	96% Strong

Note. * = related articles from the same larger research project.