

Examining The Factors That Influence Sub-Elite and Elite Athletes' Body Image After
Transitioning Out of Sport

by

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Abstract

As majority of current research on athletes and body image focuses on actively competing athletes, this paper focuses on the factors that influence retired athletes' body image. Nine peer-reviewed qualitative, quantitative, and mixed methods studies were organized into a Google Sheet to then narrow down the studies according to a theme, research paradigm, and if they were original peer-reviewed works prior to deciding on the studies to analyze in depth. Each study explored the factors that influence body image in current and retired athletes and what are facilitators to minimizing the risk of developing body image issues. Body image is defined as how someone feels or thinks about their body. It can change over time, highlighting the importance of determining protective factors for athletes as they adopt new training and diet requirements upon leaving sport. In following the guiding research question of *what factors influence sub-elite and elite athletes' body image in retirement*, seven themes emerged throughout the research: psychosocial, media, parents, coaches, type of sport, and psychological and physical factors. These themes allowed the researcher to focus on the unique influences each theme has on retired athletes and identify barriers and facilitators that retired athletes are facing and what the best responses to these influences are. Research shows current and effective interventions for actively competing sub-elite and elite athletes by encouraging athletes to focus on their bodies' ability to perform rather than their appearance matching Western body image ideals. However, there remains a gap in the research on supporting athletes' body image once they have retired from their sport. These findings may provide more insight to therapists who work with athletes and coaches and help develop psychoeducational programs for therapists to implement with sports teams and organizations to support athletes transitioning into retirement

from their sport to minimize the impact of psychological and physical distress related to body image.

Keywords: *body image, retired athletes, retired sub-elite athletes, retired elite athletes, non-aesthetic sports, aesthetic sports, constructivism, sociocultural model of body image.*

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Chapter 1: Examining the Factors That Influence Sub-Elite and Elite Athletes' Body Image After Transitioning Out of Sport

Body image is a popular topic throughout the research, and this paper seeks to refine the topic of body image to focus on athletes. More specifically, on examining the factors that influence body image of athletes who have retired from their sport. There is a great deal of research available on athletes with body image issues, disordered eating, and eating disorders (EDs); however, there is an existing gap in the literature about body image of retired athletes. Determining the factors that influence retired athletes' body image and any associated protective factors is crucial in determining how to support athletes as they transition out of sport. Athletes are in a unique position from the moment they enter sports because they learn to be adaptable, committed, motivated, and confident to excel. Additionally, participation in sports has been linked to leadership, responsibility, critical awareness, resilience, competence and exposure to development opportunities and support, and opportunities to develop positive relationships (Silva et al., 2020). Athletes begin to embody these mindsets and skills to help them develop vital emotional intelligence, which is correlated with a successful sporting career (Mitic et al., 2021). Playing sports increases physical activity levels, which has psychological benefits, such as improved concentration, decreased depression and anxiety, and improved sleep (Active Norfolk, 2022). Many physical benefits result from playing sports and being physically active such as improving brain health, lowering the risk of cardiovascular diseases, strengthening muscles and bones, promoting a healthy weight, and improving the ability to do everyday activities (Centers for Disease Control and Prevention [CDC], 2022). Athletes must train and maintain their bodies in specific ways to perform optimally in their sport, allowing them to gain the skills of commitment and discipline. Clearly there are several benefits to participating in sports; however, it is inevitable that this time actively competing will end. Research shows the difficulties

associated with transitioning out of sport and into retirement, but there lacks sufficient evidence of implementing protective factors to ease this transition.

Chapter one began the analysis of the influences that impact retired athletes' body image, the benefits associated with participating in sports, the certainty of retiring from sports, and the lack of research surrounding protective factors to support this transitional period. The remainder of this paper will continue to explore the factors that influence sub-elite and elite athletes' body image once they have transitioned out of actively competing in their sport. It is essential to recognize that sports are socially evaluative, which means that people judge athletes by social norms, and these judgments are often tied to body image (Kovács et al., 2022). This finding leads to the assumption that there are several areas to consider as part of an athlete's social network, such as peers, coaches, parents, and social media.

Research Problem

Having the opportunity to play sub-elite or elite-level sports is something that many young athletes aspire to do. Elite-level sports, such as national, international, or Olympic, are the highest level of sport, and sub-elite-level sports are those right below elite, such as college or university teams. There is also a distinction to be made between aesthetic and non-aesthetic sports. Aesthetic sports encourage leanness in body composition, like gymnastics, swimming, dance, cheerleading, or skating (Abbott & Barber, 2011; Davison et al., 2002). Non-aesthetic sports are sports in which leanness in body composition is not encouraged, like volleyball, basketball, soccer, hockey, and softball (Davison et al., 2002). Competing in either sub-elite or elite-level sports requires much motivation and dedication to reach their goals. Athletes make many sacrifices to perform for their sport, team, school, and fans, yet lack support adapting to their new lives after retirement (Thompson et al., 2020). Body image development and the

changes to the cognitive associations of body image during retirement are essential considerations when developing support for retiring athletes. It is crucial to educate athletes on the natural changes that occur once they stop competing and how to gain acceptance of these changes to support their transition out of sport (Streno, 2021). With that, there remains a gap in the literature in summarizing the challenges and effective interventions in body image-related issues into retirement.

If competing in sub-elite and elite sports is an athlete's goal, competing in these sports should not be avoided because of the psychological and physical risk factors associated with retiring from sport. However, an increasing understanding of the influences on athletes' body image and how these influences become problematic for retired athletes emphasizes the need for protective factors.

Significance

All athletes are prone to body image concerns due to a plethora of reasons, such as type of sport, puberty, gender, those dealing with perfectionism, and those who lack a sense of control in other areas of their lives (Streno, 2020). Notably, female athletes are at a higher risk of struggling with their body image, but male athletes are not immune (Streno, 2020), showing the importance of including all genders in this study. Additionally, athletes of all ages and skill levels can be affected (Burtka, 2019; Doorey, 2016). Shockingly, a study on NCAA Division 1, 2, and 3 athletes in various sports showed that 49% in Division 1 and 40% in Division 3 have an eating disorder, and between 24% and 30% of athletes have body dissatisfaction (Lyons, 2018). Moreover, research shows that compared to the 10% of Canadians who struggle with mental illness, 41.4% of athletes on the Canadian national team for the Tokyo 2020 Olympics met the diagnostic criteria for depression, anxiety, or an eating disorder (Damjanovic, 2021). These

findings make it evident that athletes face many struggles throughout their sporting careers and highlight the need to expand the research to examine how retired athletes are impacted once they transition out of sport. A major issue among retired athletes and their body image is lacking the skills to adapt to a drastic change in their eating and training routines (Radakovska, 2015). Those in the counselling psychology field can work to understand the factors that impact retired athletes and develop protective factors or supports for them as they transition into retirement from sport. In doing so, organizations can make changes and provide ongoing support to athletes to minimize the frequency and impact of body image issues on athletes.

It is evident throughout the research that transitioning out of sport into retirement can be a distressful time for some athletes. However, there needs to be more research on how to support these athletes best to minimize their experiences' impact on their body image. Gaining a deeper understanding of the factors that play a role in athletes' body image throughout their sporting careers may help to clarify how these impacts carry over into retirement. Addressing the issue of retired athletes' struggles with body image will create hope in the well-being of athletes as they must leave their sport and begin navigating their new lives. Moreover, those in the counselling psychology field will enhance their knowledge and skill sets to support this population in their work. Without developing plans to address the factors that influence retired athletes' body image and creating support, it would be unlikely that positive changes would occur, thus leaving athletes to continue struggling.

Theoretical Framework

The sociocultural model of body image involves idealized body norms, social comparisons, and body dissatisfaction and is one of the earliest theories to examine body image (Mills et al., 2022). This theory emphasizes that those in our lives, such as peers, parents, and the

media, are where we receive messages about body ideals. These messages lead to internalizing idealized body types, resulting in body dissatisfaction. Body dissatisfaction can lead to disordered eating behaviours, such as dieting, fasting, purging, and excessive exercise, which can cause psychological distress (Mills et al., 2022).

A vital aspect of the sociocultural model of body image is how much one internalizes the importance of having their bodies match societal norms (Mills et al., 2022). This internalization means that individuals equate their beauty and self-worth to how their bodies are compared to those portrayed in society and the media (Mills et al., 2022). Three significant proponents of one's social network can impact body image: peers, family, and the media (Webb et al., 2017).

Parents are the first major influences in their children's lives and thus play a role in protecting against or enhancing body dissatisfaction (Webb et al., 2017). Experiential research has shown that individuals can recall moments of receiving negative comments from their parents about their bodies and how it continues to impact them as they age (Webb et al., 2017). Conversely, parents can be protective factors against body dissatisfaction in childhood if they act as positive role models (Webb et al., 2017). Both findings support that parents can worsen or protect against body image issues. Although parents influence most during childhood, peers take the lead into adolescence (Webb et al., 2017). During adolescence, body appearance is a factor in one's social status and causes one to tie self-worth to appearance (Webb et al., 2017). The third proponent, media, is consistently linked to heightened body dissatisfaction. Like Mills et al. (2022)'s findings, the level that one internalizes messages from social media about body ideals indicates the level of body dissatisfaction one will adopt (Ramos et al., 2019; Webb et al., 2017).

Understanding social proponents that either exacerbate or act as protective factors against developing worsened body dissatisfaction is crucial in understanding how athletes' body image

is impacted. As the sociocultural model of body image is present throughout the literature, viewing the research through this lens can help readers understand the roles of these social agents' roles in body image.

Body Image

The following section is aimed to help readers understand the definition of body image as it is a frequently used term throughout this paper. Notably, the term body image is transferable to athletes as the following definitions are generalized for all people. Body image is how one feels and thinks about their body, which can be positive or negative, vary over time, and is influenced internally and externally (National Eating Disorders Association, [NEDA], 2022), meaning that social environments can construct ideal body expectations that can be internalized. In retired athletes, the way one views their body can shift drastically once they experience the drastic changes in lifestyle and diet and exercise demands (Buckley et al., 2019). There are four types of body image: perceptual, affective, cognitive, and behavioural (NEDC, 2022). Perceptual body image is about how one sees their body, affective body image is how one feels about their body, cognitive body image is how one thinks about their body, and behavioural concerns are the behaviours one engages in because of their body image (NEDC, 2022). It is essential to distinguish the differences between positive and negative body image and how it can impact one's thoughts and behaviours. Positive body image is accepting the body as it is, which protects against developing eating disorders, increases self-esteem and self-acceptance, and ultimately leads to a healthy outlook and behaviours (NEDC, 2022). Body dissatisfaction, or negative body image, refers to constant negative thoughts about their body and is influenced by external pressures to have a specific body type (NEDC, 2022). A negative body image can put people at risk for compensatory behaviours, such as dieting or excessive exercising to achieve bodily

changes, tying self-worth to appearance, negative self-talk, body checking, self-objectification, and social comparisons (NEDC, 2022), and can lead to athletes quitting sports (Burtka, 2019). Negative body image is an extensive problem and is reported in the top three concerns by young people in Australia and has the potential to lead to an eating disorder (NEDC, 2022).

Retired Sub-Elite and Elite Athletes

Elite athletes include those who play at the highest level, be it for a professional team or compete nationally or internationally, and it is the athletes' job to train and compete in their sport, limiting their availability for other commitments such as school (de Lacey, 2022). Sub-elite athletes dedicate much of their time to training for their sport but cannot commit all their time to their sport, such as those on university or college teams (de Lacey, 2022). With these distinctions in mind, retired athletes are no longer actively training and competing in their sport; however, being a retired athlete does not necessarily mean they do not maintain a connection to their sport (Trine University, n.d.). Retirement can be due to the end of eligibility, age, injury, or voluntary removal from the sport, and it can be a complex psychological and physical transition (Trine University, n.d.). Retired athletes benefit from remaining connected to their sport by remaining active, coaching, or keeping in contact with coaches and old teammates, and overall keeping some form of connection with their sporting community (Trine University, n.d.).

Current Interventions

As the topic of body image in athletes is current throughout the literature, there is a need to incorporate treatment for the psychological and physical struggles that occur. Increasing education and awareness for athletes and their support systems to place function over appearance, create environments of body acceptance and neutrality, and seek professional help are all current and warranted interventions (Streno, 2022). A few studies examined the

effectiveness of specific interventions aimed at actively competing sub-elite and elite athletes. The Female Athlete Body Project (FAP) is an intervention that focuses on healthy body ideals while maximizing mental and physical health and enhancing quality of life rather than focusing on having an idealized body type (Gorrell et al., 2021; Stewart et al., 2019). Idealized body types are seen from a Western lens, which emphasizes thinness in women and muscularity in men (Perelman et al., 2022). FAP focuses on making small behavioural changes to support health and performance. They achieve this by focusing on the differences between societal and sports ideals for their bodies, nutrition, exercise, sleep, identifying healthy and unhealthy behaviours, setting goals, and engaging in body image exercises (Gorrell et al., 2021; Stewart et al., 2019). FAP is relatively successful at reducing ED behaviours and thin ideals after a 1-year follow-up in both female and male non-athletes (Perelman et al., 2022). According to the Diagnostic and Statistical Manual (DSM-V), eating disorders (EDs) occur due to disturbances in eating or eating-related behaviours that cause individuals to change their consumption practices and can have a negative impact on physical health and psychosocial functioning (American Psychiatric Association [APA], 2017). Based on the findings on FAP reducing ED behaviours, Perelman et al. (2022) hypothesized that developing the Male Athlete Body Project (MABP) would also effectively work with male athletes. After conducting their study on male athletes, they found at the 1-month follow-up that the MABP effectively decreased body dissatisfaction in male athletes as there was less drive toward a lean yet muscular physique (Perelman et al., 2022). Another intervention in the literature is the Bodies in Motion project, which uses cognitive dissonance and self-compassion to support healthy body image in female athletes (Voelker et al., 2021). Like FAP, Bodies in Motion emphasizes female athletes gaining an appreciation for their bodies despite societal pressures, understanding the difference between athletic and non-athletic bodies,

and learning skills to enhance their self-compassion toward their bodies (Voelker et al., 2021). These interventions show promise for supporting body image in current athletes; however, there is a gap in the literature on interventions that support retired athletes. It is evident throughout the literature that athletes have a higher rate of EDs than non-athletes (Flatt et al., 2020); however, there is also a gap in the research on supporting these athletes into retirement with new dietary and exercise needs (Buckley et al., 2019). If there are natural body composition changes that athletes struggle to accept, then psychoeducational programs on assimilating to these new demands are worth exploring (Buckley et al., 2019). Furthermore, as sports are socially evaluative, increasing support from social networks to be resilient against these engrained Western body ideals is warranted so retired athletes can understand these ideals have on their body image. Body image has been found to play a key role in mental health (Choukas-Bradley et al., 2022), warranting the exploration of current interventions on supporting athletes' mental health in addition to body image. Research shows that athletes seek support for mental health treatment less often than non-athletes, even though research shows that treatment increases overall well-being (Edwards & Froehle, 2023). Fogaca (2021) found in their study on implementing mental health and performance interventions for student-athletes that teaching athletes how to strengthen their social support systems with coaches and teammates and how to use mental skills for performance and coping with life stressors improved both performance and psychological distress. Based on these current interventions, increasing support networks and teaching athletes the skills to cope with stress and external pressures show promising results in supporting both their mental health and body image.

Researcher's Position

While writing this paper, I can relate strongly to the sense of lost identity and the changes in body image post-sport. Growing up, I played multiple sports, and it was not until my later years of high school that I found my niche in basketball. I then continued to play college basketball, and although this was a fantastic experience, I, unfortunately, suffered from psychological and physical difficulties. Psychologically, the shift moved from having fun to performing, and if you did not perform, it was made evident by coach comments and behaviours. A protective factor I had in place was that my family always viewed sports as a place to have fun and be active and that it was not worth struggling for mentally. However, mental health is often overlooked in athletics, so although there was support around me, I still needed professional support from a sports psychologist. After this positive experience, my passion and motivation to support athletes' mental health were instilled. Physically, when I stopped competing, it was a difficult transition to learn how to navigate new diet and exercise needs. I remember struggling with weight gain, and it took several years to find a new routine and acceptance of my body. Although I have never been diagnosed with an eating disorder, there were many instances while I was conducting the research where I reflected on my behaviours and thoughts around the factors that may impact athletes' body image. Furthermore, I have a close friend who suffered from an eating disorder and continues to suffer from disordered eating behaviours and feeble body image since retiring from their sport. My experiences, friends, teammates, and other athletes, in general, instilled a passion in me to support athletes, especially retired athletes, who are often overlooked.

My internship involved working with athletes and those suffering from body-image issues. I have identified athletes that suffer from issues with their body image and some that are unaffected. Rather than losing motivation, this sparked a curiosity to uncover why some athletes are impacted more than others. This curiosity involves uncovering what protective factors some

athletes may have had in place that others did not, which may have protected them from struggling with their body image. Programs need to be in place for sub-elite and elite sports to set athletes up for a successful transition out of their sport. It has been made evident throughout the literature that specific protective factors should be explored (Carson et al., 2021; Kantanista et al., 2018; Kovács et al., 2018; Papathomas et al., 2018; Sabiston et al., 2020; Silva-Breen et al., 2022; Stoyel et al., 2021; Thompson et al., 2021), but there is a lack of research showing implementation and proof of efficacy. My goal is to use the findings from this study to create a path where I can begin examining or developing programs for athletes as I move into my counselling career.

These personal experiences and beliefs could impact how I interpret the results of this study, such as influencing which studies I choose to review. For example, due to my negative experience with a coach, I may be searching for validation in studies on coaches that there are other athletes who had negative experiences rather than searching for studies on athletes having positive experiences with coaches. Recognizing and maintaining awareness of my biases is the first step that I can take to prevent my beliefs from impacting this research. For example, my psychological and physical struggles may not resonate with everyone, so I need to be mindful of these differences. Being reflective throughout the research process to acknowledge when my personal beliefs are dominating will minimize my bias and remind me of my motivations behind this research paper. Remembering that not all retired athletes struggle with body image issues is essential to minimize my inherent biases.

This paper examines the factors that play a role in retired athletes' body image. With that, the hope is that current interventions being used to support athletes may be applied to retired athletes or can support athletes transitioning out of sport to minimize the impact of psychological

and physical distress associated with retirement. An overview of the paper includes: the methodology of the capstone research project, a review of the literature, the findings application to clinical practice, and recommendations and conclusions.

Chapter 2: Research Methodology

Finding the studies for this analysis required extensive research and consideration of several studies using search engines through the City University of Seattle and Google Scholar databases. The specific databases from the Counselling and Psychology on the CityU library include the psychology and behavioural sciences collection, PsychInfo + PsychArticles, Ebook Central, and EBSCO eBook Collection. The main keywords were *former athlete* and *body image*. They extended to different combinations and keywords on the emerging themes such as *retired athletes*, *parents and athletes*, *coaches and athletes*, *social media and body image*, *social media and athletes*, and *peers and athletes*. Excluded keywords were *brain injury*, *traumatic brain injury*, and *stroke*. Although working with individuals with these criteria and determining their experiences' effects on their body image is essential, it is not the focus of this research. Moreover, working with individuals with cognitive or motor challenges is outside this research's scope, and it would be ethically sound to remain within my area of expertise.

These searches were refined to peer-reviewed scholarly articles since 2015. The year since the publication was extended to 2015 due to the pandemic and the likelihood that less research has been conducted since 2019. The original searches aimed to examine only former athletes; however, it became clear that addressing these influences while athletes are competing is also essential. The initial research expanded to include current athletes and how to support their transition out of sport.

The inclusion criterion for the nine studies focused on athletes that competed in any sub-elite or elite sports to refine the focus to athletes who have competed at higher levels and experienced the time and life commitment to training for their sport. Female, male, non-binary, and transgender are included since I anticipate similarities and differences across genders worthy

of analyzing. Age parameters were not set because the age to compete in these sport demographics is approximately between 18 and 30 due to the nature of the time they are in university or eligible to compete on specific teams and leagues. Athletes from different cultures, religions, ethnicities, and countries are included because focusing on sub-elite and elite athletes already narrows the population. Determining similarities and differences across these demographics may provide further insight. Exclusion criteria are studies on athletes who experienced brain injuries or other traumatic body injuries or losses to narrow the search results. Brain injuries can cause both motor and cognitive challenges. Motor challenges that may occur after a brain injury can involve movement and mobility, problems with speech, swallowing, pain, fatigue, sleep, bladder and bowel control, arousal, senses, and seizures (Vista Centre Brain Injury Services, n.d.). Cognitive challenges may include problems with speech and language, processing speed, or working memory, and can impact one's ability to participate in research since they have difficulties recalling events from the past and processing those memories (Dixon, 2022). These exclusion criteria were set because it may be that those in these categories may have additional or different struggles with body image.

The research process began during a previous research course when we were tasked with choosing a topic of interest. I focused my work on athletes since it is a passion of mine to work with athletes and support their mental health. The searches began by examining the literature on athletes, body image issues, and eating disorders. This broader approach was taken to find themes and gaps within the research. It became apparent that there is plentiful research on athletes struggling with both issues, but there is a gap in the research addressing retired athletes and their struggles. This recognition of the gap led me to want to uncover what affects athletes the most as they transition into retirement. As a retired athlete, I was not surprised by the

emerging themes of psychosocial, parents, coaches, social media, and physical and psychological challenges. Instead, I became curious to determine why these themes became so apparent and how these significant factors could harm athletes' lives. Further, the research was conducted to uncover protective factors for retiring athletes in hopes of translating the knowledge into my counselling practice. Despite the research process beginning with a broader approach, refining the literature to learn more about the specific topic was required. In doing so, it allowed me to begin identifying specific themes. Once themes were established, the research focused on the specific themes. For example, while researching the influences that coaches have on athletes' body image, I refined my searches to *coaches*, *coaches and athletes*, *coaches and retired athletes*, and *coaches and athlete body image*. In refining searches, I was able to have more specific results on the themes being analyzed. Once I had determined the themes throughout the current literature and gathered research on them, I began to sift through the literature to determine which studies would add rich knowledge to this paper. There were a few ways I considered the literature being a beneficial addition. First, if the research addressed one of the identified themes, I could organize it with the other studies with the same themes. Second, if the studies matched my inclusion criteria. Third, if the research discussed any significant findings that would add to the advancement in this topic and future implications.

The next step in the research methodology was creating a Google Sheet to organize studies that matched the inclusion criteria, which was recommended by Dr. Rissanen, my capstone supervisor. In this Google Sheet, I included the citation, title of the work, a link to the study, whether it was an original piece of work, the emerging theme, if the study was qualitative or quantitative, the research and sampling approach, a description of the sample/participants, data collection, data analysis method and any strengths and limitations of qualitative and

quantitative studies. I started by making all the citations, inputting links and themes, and noting if the study was original. Once I had determined the original works, I chose the nine studies I would analyze for this paper, highlighted them in the Google Sheet, and filled out the rest of the sheet for only those nine studies. Although this approach to organizing studies was extensive, doing so made it easier to refer to studies as needed. Once the Google Sheet was completed, I was prepared to analyze each study more deeply and write the literature review.

As research on retired athletes and body image is scarce, a challenge faced throughout the research process was finding enough reliable data on retired athletes. Most of the studies examined actively competing athletes. Although there is rich and valuable information within studies concerning current athletes, the current study focuses on retired athletes. Another challenge faced during the research process was the amount of research that acknowledged the need for protective factors to be installed to support retired athletes but needed more research and results of implementing the protective factors.

Chapter 3: Review of the Literature

The purpose of this study is to explore the theories with hypotheses suggesting why some retired athletes struggle with body image after their transition out of sport. Body image is how people think, feel, and see their bodies (National Eating Disorders Association, [NEDA], 2022). In addition, athletes are presented with additional pressures placed on their bodies as part of their sport, which is discussed in depth throughout this chapter. Throughout the literature, an overarching theme is the idea of transitioning out of sports in general. Transitioning out of or retiring from sport means that an athlete is no longer training or competing for their sport, and this can be a challenging time for many athletes. Retiring from a sport can be very distressing to athletes due to the drastic changes in lifestyle (Lenton et al., 2020), and can result in depression, worry, and low life satisfaction (APA, 2020). In over 126 studies, 16% of participants had difficulties transitioning out of their sporting careers (Oulevey et al., 2021). These findings portray the idea that some athletes are not set up to have a successful transition from their career as an athlete into 'normal life', while the other 84% of athletes are. The reasons athletes transition out of their sport can be considered in how they manage their retirement through understanding their level of self-confidence and identity (Ouvlevey et al., 2021). Three interrelated factors can influence an athlete's transition out of their athletic career: the causes for career termination, coping resources for the adaptation process, and developmental experiences related to the adaptation process (Ouvlevey et al., 2021). Involuntary termination considers injuries and years of eligibility, and voluntary termination considers leaving the sport in the athletes' regard (Ouvlevey et al., 2021). Research depicts that coping resources for the adaptation process are crucial since, whether voluntary or involuntary, retiring from sport creates psychological distress and accounts for 69% of all coping needs (Ouvlevey et al., 2021). Having

the proper coping resources to manage the adaptation process entails understanding how retired athletes can manage emotions and lifestyle changes associated with leaving sport.

Developmental experiences refer to experiences these athletes had in their childhood that can influence their athletic identity. For example, in a study interview conducted on athletes, one athlete's experience was that they felt as though their involvement and effort in sport was extrinsically motivated (Ouvlevey et al., 2021), meaning that they were encouraged to play and excel in sports by parents or other influences in their lives when they were younger.

Nine empirical studies were examined to understand the factors influencing former athletes' body image (Table 1). Research that examines different influences on former athletes' body image was included. The purpose of this section is to synthesize the nine empirical studies. The synthesis will include critiques, research paradigms, sampling, participants, data collection, data analysis, and ethical considerations within each study.

The nine studies chosen (Table 1) include qualitative, quantitative, and mixed-method studies that include the lived experiences of coaches, parents, and athletes. Each study is critically examined to better understand athletes' experiences and what supports could be created to better support their transition out of sport. Each study examines research paradigms, sampling, recruitment, participants, data collection, data analysis, and ethical considerations.

Table 1

Summary of Research Articles

Author(s)	Title	Year	Research Method and Paradigm	Research Inquiry and Relevance to Current Paper
Carson, T.L., Tournat, T., Sonneville, K., Zernicke, R. F., & Karvonen- Gutierrez, C.	Cultural and environmental associations with body image, diet, and well-being in NCAA D1 female	2021	Qualitative Constructivist	Study explored the experiences and perceptions of body norms and disordered eating in NCAA D1 female distances runners and the coach-athlete power dynamic.

	distance runners: a qualitative analysis			Coaches' impact on body image and ability to be protective factors and athlete's experiences with culturally normative body types for their sport.
Daniels, E.A., Hood, A., LaVoi, N. M., & Cheryl, C.	Sexualized and Athletic: Viewers' Attitudes toward Sexualized Performance Images of Female Athletes. Sex Roles	2021	Quantitative Constructivist	Explores the impact of sexualized performance media images of female athletes on college women's and men's attitudes towards athletes. Media's power of influencing people's beliefs toward athletes.
Kantanista, A., Glapa, A., Banio, A., Firek, W., Ingarden, A., Malchrowicz-Mosko, E., Markiewicz, P., Ploszaj, K., Ingarden, M., & Mackowiak, Z.	Body image of highly trained female athletes engaged in different types of sport	2018	Quantitative Constructivist	Study explored the differences in body image in highly trained female athletes in various sports, and if variables such as aesthetic or non-aesthetic sport, level of competition, age, training background, and BMI could predict body image in athletes. Athlete's experiences that have impacted their body image.
Kovács, K., Kéring, K., Racz, J., Gyömbér, N., & Németh, K.	In the pitfall of expectations: An exploratory analysis of stressors in Elite Rhythmic Gymnastics	2022	Qualitative Antirealism/Constructivist	Study explored different stressors placed on rhythmic gymnast athletes, parents, and coaches. Coaches and parents' impact on athlete body image and how to minimize harm.
Papathomas, A., Petrie, T. A., & Plateau, C. R.	Changes in body image perceptions upon leaving elite sport: The retired female athlete paradox	2018	Multimethod Approach Interpretivist/Constructivist	Study explored the attitudes of retired athletes toward their body image. Experiences of retired athletes that impact their body image and protective factors that support their physical changes.
Sabiston, C.M., Lucibello, K. M., Kuzmochka-Wilks, D., Koulanova, A., Pila, E., Sandmeyer-Graves, A., & Maginn, D.	What's a coach to do? exploring coaches' perspectives of body image in girls' sport	2020	Qualitative Constructivist	Study explored coaches' perceptions of their roles and responsibilities and their understanding of body image in female non-aesthetic sports. Coaches' ability to be protective factors.

Silva-Breen, H., Schneider, J., Tinoco, A., Matheson, E.L., & LaVoi, N.M.	Development and preliminary validation of the coach self-efficacy body image scale	2022	Mixed Methods Constructivist	Study aimed to develop a self-efficacy assessment for coaches to determine their ability to intervene and discuss body image issues with their athletes. Coaches' ability to be protective factors.
Stoyel, H., Delderfield, R., Shanmuganathan-Felton, V., Stoyel, A., & Serpell, L.	A qualitative exploration of sport and social pressures on elite athletes in relation to disordered eating	2021	Qualitative Constructivist	Study explored athlete's experiences of sport and social pressures that may lead to the development of disordered eating. Applying protective factors against body image issues in the sports world.
Thompson, A., Petrie, T., Tackett, B., Balcom, K., & Watkins, C.E.	Eating disorder diagnosis and the female athlete: A longitudinal analysis from college sport to retirement	2021	Quantitative Constructivist	Study explored changes in athletes weight control behaviours from their last season of competing in their sport to 6 years after retirement. Athlete's experiences once retiring from sport that were protective factors or negative influences on their body image.

Research Paradigm

Five of the nine studies were qualitative, with one claiming to be a multimethod approach, which differs from a mixed method as it gathers both qualitative and quantitative data but is rooted in an interpretivist framework (Papathomas et al., 2018), three quantitative, and one mixed method. Qualitative studies use descriptive data like observations and anecdotes to understand the lived experiences of participants, quantitative studies aim to measure variables by using a numerical system to understand and explain the nature of a phenomenon through the development of theories, and a mixed methods study combines both qualitative and quantitative approaches (City University of Seattle, 2023). Each study is grounded in constructivism, which asserts that individuals seek to gather subjective understandings of the world that they live in, and these meanings are often constructed socially (Creswell & Creswell, 2017). The following

section examines how each study is grounded in constructivism and what this can tell us about former athletes and their body image.

Constructivism

Constructivism suggests that interpersonal interactions elicit cognitive changes (Barak, 2017), which allows readers to understand that social interactions can influence one's experiences. Each of the studies grounded in constructivism speaks to the researchers' goal of understanding how these social interactions impacted their body image. An essential feature of constructivism is that interpretations are varied and cannot be narrowed down to only a few meanings (Creswell & Creswell, 2017), highlighting the need to gather participants' lived experiences and views about the topics. Six of the nine studies gave athletes a voice in their experiences with body image throughout their sporting careers (Carson et al., 2021; Kantanista et al., 2018; Kovács et al., 2022; Papatomas et al., 2018; Stoyel et al., 2021; Thompson et al., 2021), four gave a voice to coaches (Carson et al., 2021; Kovács et al., 2022; Sabiston et al., 2020; Silva-Breen et al., 2022), one gave a voice to the parents of athletes (Kovács et al., 2022), and one gave a voice to college students and their perceptions of athletes (Daniels et al., 2021). Each qualitative study conducted interviews, allowing researchers to gather lived experiences from their participants reference. One of the quantitative studies used descriptive statistics and t-tests to examine variables in athletes competing in non-aesthetic versus aesthetic sports (Kantanista et al., 2018). Another quantitative study had participants write a paragraph explaining their views toward images of athletes after looking at photographs and then used independent sample t-tests to examine differences in views toward athletes (Daniels et al., 2021). The third quantitative study utilized questionnaires to assess weight control behaviours in athletes (Thompson et al., 2021). The mixed methods study implemented interviews and scales

to assess current behaviours affecting body image in athletes (Silva-Breen et al., 2022). The multimethod approach had participants answer three quantitative questions and several follow-up open-ended qualitative questions, all answered by having participants write out their responses (Papathomas et al., 2018). Each study allowed participants to understand how their experiences influence their realities (Creswell & Poth, 2018), which aligns with the research paradigm of constructivism.

Summary

The use of constructivist worldviews within the studies examining the factors that influence former athletes' body image is accurate as researchers are searching for an understanding of how participants' lived experiences have shaped their perceptions. Additionally, each study indicates the need for change within these systems. Having qualitative, quantitative, and mixed methods provides statistical and anecdotal proof of the need for changes within these systems. A limitation to be aware of with constructivism is that it prevents drawing conclusions that can be applied to other populations (Thompson, 2019). That said, it is notable that conclusions drawn from these studies apply to sub-elite and elite athletes in these demographics. The following section analyzes the nine chosen studies' sampling, recruitment, and participant characteristics.

Sampling, Recruitment, and Participants

Sampling sizes are modest across the studies as the targeted population is narrowed to sub-elite and elite athletes worldwide. All nine studies' samples were accessible from being involved in a sports community and were recruited through social media posts, emails, snowball sampling, and convenience sampling. Sample sizes ranged from 9 to 682 participants. Sampling type, recruitment, sample size, and participant characteristics will be discussed (Table 2).

Table 2*Summary of Sampling Procedures*

Study Reference (Methodology)	Sampling Strategy	Recruitment Strategy	Participants
Carson et al., 2021 (Qualitative)	Purposive	Recruited through social media and email listservs. Participants used to or are still competing for their team.	N = 29 current and former female D1 distance runners (>800m) Age: 18-36 (M = 24.6) Inclusion criteria: participated in at least one full season of cross country or track and field at a D1 institution and screened at risk for an ED based on the Female Athlete Triad Exclusion criteria: runners currently in inpatient eating disorder treatment and those whose first language is not English.
Daniels et al., 2021 (Quantitative)	Convenience	Recruited through their undergrad psychology class and were given course credit for participating.	N = 563 college students – undergrad psychology classes 396 women 194 men Age: 18-25 (M = 19.62, SD = 1.81) 276, 49.0% first year; 135, 24.0% second year; 80, 14.2% third year; 48, 8.5% fourth year; 21, 3.7% in fifth or higher year; 3, .5% not reported on average, 172, 30.6%; 157, 27.9% had mothers/female guardians who attended some college from a four-year college; 105, 18.7% had postgraduate study or degree; 89, 15.8% graduated from high school; 31, 5.5% had some high school or less; 9, 1.6% not reported 165, 29.3%; had fathers/male guardians who graduated from a four-year college; 127, 22.6% attended some college; 108, 19.2% had postgraduate study or degree; 103, 18.3% graduated high school; 37, 6.6% had some high school or less; 6, 1.1% reported not having a male guardian; 17, 3.0% not reported). White/European American 60.9% Multiple ethnicities 16.2% Latino/a 12.6% Asian American 5.9% African American 3.4%

			<p>Other ethnicity >1%</p> <p>Native American/American Indian >1%</p> <p>Not reported > 1%</p> <p>Exclusion criteria: not reporting gender (n = 12); taking longer than an hour to complete the survey (n = 32); being over 25 (n = 4); indicating gender as transgender (n = 2), and straight lining responses (n = 23).</p>
Kantanista et al., 2018 (Quantitative)	Purposive	Recruited through sports clubs in Poland.	<p>n = 242 participants aged 13-30 (M = 20.0, SD = 4.5) highly trained female athletes from different teams around Poland</p> <p>n = 19 synchronized swimming</p> <p>n = 15 gymnastics</p> <p>n = 22 dance sport</p> <p>n = 23 soccer</p> <p>n = 33 floor ball</p> <p>n = 19 basketball</p> <p>n = 21 volleyball</p> <p>n = 21 karate</p> <p>n = 17 swimming</p> <p>n = 20 rugby</p> <p>n = 21 field hockey sprint, n = 11 athletics</p> <p>Body height (M = 168.4 cm, SD = 10.4)</p> <p>Body weight (M = 59.7 kg, SD = 12.6)</p> <p>BMI (M = 20.9 kg/m², SD = 3.9)</p> <p>Time competing ranged from 0.5-21 years (M = 9.0, SD = 4.7)</p> <p>National 29.3%</p> <p>International 70.7%</p> <p>Inclusion criteria: athletes competing on national and international teams</p>
Kovács et al., 2022 (Qualitative)	Convenience	Potential participants were known through their involvement on the national rhythmic gymnastics team and were personally invited. No compensation offered.	<p>n = 4 Hungarian female rhythmic gymnasts who competed at European and World Championship levels and achieved middle ranking and have stopped competing within the previous 2 years due to a severe sports injury</p> <p>Age (M = 20.25 years, SD = 2.06)</p> <p>Number of years in sport (M = 14.25, SD = 6)</p> <p>n = 5 coaches for the national Hungarian team in the last 5 years (not all had worked with one or more of the athlete participants)</p> <p>female 100%</p> <p>Age: (M = 38.40, SD = 13.39)</p> <p>Number of years coaching: (M = 19.60, SD = 4)</p> <p>n = 3 parents (mothers) of athletes</p> <p>Age: (M = 46.14 years, SD = 3.06)</p>

<p>Papathomas et al., 2018 (Mixed methods)</p>	<p>Purposive</p>	<p>Participants were recruited by email and phone, which were provided by participants' former universities and social media sites. A \$25 gift card was offered to those who completed the survey.</p>	<p>n = 218 retired collegiate athletes from the United States 66% gymnastics 34% swimming n = 53 retired for 2-3 years n = 52 retired for 4 years n = 61 retired for 5 years n = 51 retired for 6 years 76.6% retired due to completed eligibility 88.3% White/Non-Hispanic Age (M = 25.72, SD = 1.19) BMI (M = 22.31 Kg/m², SD = 2.72) None were involved in organized competitive sport for duration of study.</p>
<p>Sabiston et al., 2020 (Qualitative)</p>	<p>Purposive, followed by snowball</p>	<p>Coach participants were recruited by phone or email through publicly available contact details of sport organizations in the Greater Toronto region and support from partner organizations. Were offered \$25.</p>	<p>n = 13 coaches 8 male, 5 female 54% Caucasian n = 3 soccer n = 2 rugby n = 2 basketball n = 2 hockey n = 2 fast pitch/softball n = 1 volleyball n = 1 water polo Years of coaching ranged from 4-25 years (M = 10.5, SD = 6.4) n = 8 formal coaching training Inclusion criteria: experience coaching girl adolescent athletes (ages 13-17) in non-aesthetic team-based sports at local recreational or competitive levels and can speak English.</p>
<p>Silva-Breen et al., 2022 (Mixed methods)</p>	<p>Purposive</p>	<p>Participant recruitment was through social media posts, emails to athletic directors, conference commissioners, and coaches, and advertisements in university and partner newsletters. Coaches were offered chances to win a \$75, \$100, or \$150 vouchers upon completion of the second survey.</p>	<p>n = 682 coaches Women 60.6% Men 38.9% Gender fluid 0.3% Non-binary 0.3% Caucasian/White 86.7% Asian/Pacific Islander 2% American Indian/Alaska Native 0.5% African American/Black 1.3% Hispanic/Latino 2% Mixed/Multiracial 2.8% Head coaches 64.1% Coaches of adolescents 45.9% Coaches of female athletes 50.7% Coaching at the college level 37.8% Have received education or training on body image and/or eating disorders 53.4% Ages ranged from 18-82 years (M = 39.7, SD = 11.7) Coaching experience ranged from 0-53 years (M = 15.4 years, SD = 10.6)</p>

			Inclusion criteria: over 18 years old, identifying as a coach, having coached any sport or physical activity in the last 2 years.
Stoyel et al., 2021 (Qualitative)	Convenience	Participants were emailed asking for their participation in the study.	n = 9 elite athletes, competing at national and international levels n = 4 male n = 5 female Ages ranged from 19-44 years n = 1 orienteering n = 2 swimming n = 1 triathlon n = 1 ultra-running n = 1 lacrosse/rowing n = 1 mid-distance running n = 1 running n = 1 lacrosse/track/triathlon No participants scored above 4.0 on the Eating Disorder Examination Questionnaire (EDE-Q). Several participants disclosed issues with food, 2 alluded to histories of disordered eating, 2 disclosed a history of a formally diagnosed eating disorder, and 1 has a current self-diagnosed eating disorder.
Thompson et al., 2021 (Quantitative)	Purposive	Recruited via email. Participants received a \$25 e-gift card.	n = 193 NCAA DI athletes n = 122 female artistic gymnasts n = 71 female swimmers all from 26 different U.S universities White 88.6% African American 3.6% Hawaiian/Pacific Islander 0.5% Asian American 4.1% Biracial 2.1% Other 1% Athletes had been retired for: n = 2 years 1% n = 3 years 22.3% n = 4 years 25.9% n = 5 years 29.5% n = 6 years 21.2% reasons for retirement being end of eligibility n = 75.9% Age (M = 25.75 years, SD = 1.19) BMI (M = 22.32kg/m ² , SD = 2.81)

Sampling Type and Recruitment

As noted in six of the studies, a purposive sampling technique was used to recruit their participants (Carson et al., 2021; Kantanista et al., 2018; Papatomas et al., 2018; Sabiston et al.,

2020; Silva-Breen et al., 2022; Thompson et al., 2021). Purposive sampling is done by researchers who believe their selected participants will be the best representatives for their study (Dudovskiy, n.d.). Purposive sampling is applied when studying a phenomenon of interest, as it can provide valuable information on the topic by choosing participants who have knowledge or personal experience with the phenomenon (Palinkas et al., 2015). However, in purposive sampling, researchers must explain the purpose behind choosing their selected participants, as the variation in the sample is unknown (Palinkas et al., 2015). Three studies used convenience sampling (Daniels et al., 2021; Kovács et al., 2022; Stoyel et al., 2021), since participants could be conveniently drawn from a population accessible to the researcher (Andrade, 2021). These convenience samples occurred through universities with which the researchers were affiliated and through connections within the sports community. Convenience samples are beneficial since they can reach numerous potential participants by sharing information via social media, email, and in person, but they lack the production of random sampling (Hillman, 2023).

Seven of the nine studies recruited their participants through the sports team/club that the athlete, coaches, or parents were affiliated with (Carson et al., 2021; Kantanista et al., 2018; Kovács et al., 2022; Sabiston et al., 2020; Silva-Breen et al., 2022; Stoyel et al., 2021; Thompson et al., 2021). One study recruited participants through an undergrad psychology class (Daniels et al., 2021), and the remaining study recruited through universities in the US that athletes used to attend (Papathomas et al., 2018). Six of the nine studies recruited participants by phone or email, where they explained the purpose of the study and asked for consent (Carson et al., 2021; Papathomas et al., 2018; Sabiston et al., 2020; Silva-Breen et al., 2022; Stoyel et al., 2021; Thompson et al., 2021). Three of the nine studies recruited participants with personal invitations (Daniels et al., 2021; Kantanista et al., 2018; Kovács et al., 2022). There are limitations to these

sampling techniques. First, athletes experiencing issues with their body image may overrepresent the samples since their experiences lead them to want to share their experiences. If athletes had positive experiences in their sporting careers and into retirement, they might be less likely to participate. Second, relying on self-reports may underrepresent certain factors, such as intimate details, that participants may feel ashamed about sharing. Third, the social desirability bias, where participants report less socially desirable attitudes or behaviours and report more desirable ones, may occur (Latkin et al., 2017). Fourth, longitudinal studies must assess participants more frequently since changes could occur throughout the study (Thompson et al., 2021). Lastly, those without connections with athletic communities may not be selected to participate due to accessibility.

Five of the studies used purposefully sampled athletes who are or had competed in sub-elite or elite sports to gather an understanding of their experiences that have impacted their body image (Carson et al., 2021; Kantanista et al., 2018; Papathomas et al., 2018; Stoyel et al., 2021; Thompson et al., 2021). Two studies purposefully sampled coaches with experience working with athletes, which could be protective factors (Sabiston et al., 2020; Silva-Breen et al., 2022). The remaining three studies conducted convenience sampling: undergrad psychology students' views and beliefs on athletes depicted in the media (Daniels et al., 2021); the experiences of athletes who have disclosed experiences with body image, disordered eating, and diagnosed eating disorders (Stoyel et al., 2021); and athletes, parents, and coaches' experiences (Kovács et al., 2022). The triangulation of the parent, athlete, and coach dynamic warranted examination because all three parties had associated leanness to success in gymnastics (Kovács et al., 2022). Moreover, parents must adhere to the sporting community to avoid harming their child's sporting career (Kovács et al., 2022). This finding legitimizes the need to examine parents as a factor that

influences former athletes' body image by seeing the potential for changes, which may become protective factors.

The athletes sampled have or are currently competing on elite teams nationally or internationally (Carson et al., 2021; Kantanista et al., 2018; Kovács et al., 2022; Papathomas et al., 2018; Stoyel et al., 2021; Thompson et al., 2021). Once researchers recruited these athletes, they continued to refine inclusion criteria. Within the six studies on athletes, the inclusion criteria throughout were that they participated in at least one entire season of cross country or track and field at a Division 1 institution and screened at risk for an eating disorder (ED) based on the Female Athlete Triad (Carson et al., 2021), have or are competing in national, international, or collegiate teams (Kantanista et al., 2018; Papathomas et al., 2018; Stoyel et al., 2021), or competed at European and World Championship levels and achieved middle ranking and have stopped competing within the previous two years due to a severe sports injury (Kovács et al., 2022). The coaches sampled have experience coaching female adolescent athletes (ages 13-17) in non-aesthetic team-based sports at local recreational or competitive levels and can speak English (Sabiston et al., 2020), are over 18 years old, identify as a coach, have coached any sport or physical activity in the last two years (Silva-Breen et al., 2022), or have coached for the Hungarian national team in the last five years (Kovács et al., 2022). The parents sampled were mothers of athletes who competed for the Hungarian national team (Kovács et al., 2022). The undergrad psychology students sampled included those in the course but excluded those who did not report their gender ($n = 12$), took longer than an hour to complete the survey ($n = 32$), were older than 25 ($n = 4$), indicated their gender as transgender ($n = 2$), and straight-lined their responses ($n = 23$) (Daniels et al., 2021). Straight-lining responses is when participants rush through surveys and answer each question identically, which can hinder research data analysis

since it does not gather participants' authentic responses (Vannette, 2018). Although the samples are credible sources for the studies, the athletes' experiences need to be heard to determine the protective factors that need to be put in place to aid in their issues of body image upon retiring from sport.

Sample Size

Qualitative researchers often do not have set sample sizes for their studies, but they do ensure they have suitable sample sizes, which is around ten participants, so they can reach the point of saturation and justify the smaller sample sizes (Doll, n.d.). Using smaller sampling sizes allows researchers the time to interview their participants and use in-depth, open-ended, and exploratory questions to allow their participants to reflect on their experiences (Sabiston et al., 2020). The four qualitative studies aligned with this recommendation and included a range of 9 to 29 participants. Kovács et al. (2022)'s study was unique in that there were nine total participants, which included four athletes, five coaches, and one parent. Although these participants combined totals is close to the recommended ten participants, it is crucial to be aware of limitations in small sample sizes. Including too small of sample sizes may prevent data from being theorized or generalized across each group of participants (Faber & Fonseca, 2014). Markedly, each group of participants was dependent on each other, which helped researchers decide on their sample sizes (Faber & Fonseca, 2014). The three quantitative studies ranged from 193 to 563 participants. The studies utilized the Body Image Measure (Kantanista et al., 2018), a between-subjects design (Daniels et al., 2021), and the Questionnaire for Eating Disorder Diagnoses (Thompson et al., 2021). The mixed methods studies gathered qualitative data by having expert feedback and cognitive interviews (Silva-Breen et al., 2022), written responses to open-ended questions (Papathomas et al., 2018), quantitative data from online surveys (Silva-

Breen et al., 2022), and written responses to three qualitative questions (Papathomas et al., 2018). Silva-Breen et al. (2022) stopped data collection once they had reached saturation, whereas others spoke to gathering rich information from participants to understand the phenomenon, develop common themes (Kovács et al., 2022; Stoyel et al., 2021), and allow the participants themselves to bring an awareness of their understanding of athletes' body image (Sabiston et al., 2020).

Participant Characteristics

Current and former sub-elite and elite athletes, their coaches, their parents, and college students were sampled in the nine studies.

Athletes. The following section on athletes discusses the various demographics and inclusion criteria that athletes met to participate in each study. The demographics include the level athletes competed at, type of sport played, institution played for, geographical location, number of years in sport, years since retirement, reason for leaving sport, ethnicity, age, gender, body measurements, risk level of having an ED, and specific inclusion and exclusion criteria set by researchers.

The athletes sampled have all competed and trained for high level sports including collegiate, university, national, international, or Olympic, which supports this inclusion in each study as they have lived experience with the research topic and can provide various insights. There are a variety of sport types, including mid-distance, distance, and ultra-runners, orienteering, triathlon, lacrosse, rowing, and track (Carson et al., 2021; Stoyel et al., 2021), swimming, synchronized swimming, gymnastics, artistic gymnastics, rhythmic gymnastics, dance sport, soccer, floorball, basketball, volleyball, karate, rugby, field hockey, and sprint athletics (Kantanista et al., 2018; Kovács et al., 2022; Papathomas et al., 2018; Thompson et al.,

2021). Some studies included more diversity regarding location as they examined athletes who competed at various sports clubs or universities (Carson et al., 2021; Kantanista et al., 2018; Papathomas et al., 2018; Thompson et al., 2021). These variations in sports clubs and universities are essential to recognize if there are any institutional factors perpetuating issues with body image in their athletes. Additionally, one study on athletes was conducted in Poland, increasing geographical diversity to help apply findings across different countries (Kovács et al., 2022). Two studies noted that competing in their sport ranged from 0.5 to 21 years (Kantanista et al., 2018; Kovács et al., 2022). Years since retiring from sport were mentioned in three studies and ranged from two to six (Kovács et al., 2022; Papathomas et al., 2018; Thompson et al., 2021), but it is essential to consider a broader range as not every study noted the time their participants had been in retirement. Only one of the studies on athletes noted various ethnicities and cultural demographics including White, African American, Hawaiian/Pacific Islander, Asian American, and Biracial (Thompson et al., 2021), and although there was a mix of ethnicities included, it mainly included White athletes (88.6%). Ages across studies of athletes ranged from 13 to 44 (Carson et al., 2021; Kantanista et al., 2018; Kovács et al., 2022; Papathomas et al., 2018; Stoyel et al., 2022). All studies on athletes, excluding one that included a relatively even mix of genders (n = 4 male, n = 5 female) (Stoyel et al., 2022), examined female athletes (Carson et al., 2021; Kantanista et al., 2018; Kovács et al., 2022; Papathomas et al., 2018). Including all genders in studies is essential to discover gender differences. One quantitative study gathered mean body height and weight (Kantanista et al., 2018), and they, in addition to two more quantitative studies, also gathered mean body mass index (BMI) from their participants (Kantanista et al., 2018; Papathomas et al., 2018; Thompson et al., 2021).

Specific inclusion criteria were that athletes must have competed for their Division I team for a minimum of one full year and have screened at risk for an ED based on the Female Athlete Triad (Carson et al., 2021), competed on national, international, or collegiate teams, had received specific rankings, and left sport due to an injury (Kantanista et al., 2018; Kovács et al., 2022; Papatthomas et al., 2018; Stoyel et al., 2021). Including athletes who screened at risk for an ED can limit the information gathered throughout the research since it does not include those who already have evident issues with body image, yet may be ignoring the experiences of those who, although not deemed at risk, may have valuable experiences and rich information to add to the findings. Excluded participants were those currently in inpatient treatment for EDs (Carson et al., 2021). A more in-depth explanation of why those in inpatient treatment for EDs were excluded would give readers a better understanding of why researchers did not want to include their experiences. These excluded participants could provide valuable insight into their experiences in and post-sport, especially if their eating disorders developed due to factors experienced during their sporting careers and into retirement, which could enhance research findings and help determine protective factors for these athletes and perhaps lower the risk of developing an ED.

Overall, the diversity around the type of sport played and age can support exploring experiences across athletes, but researchers should consider including more diverse ethnicities in their studies. It may be that some cultures serve to protect or hinder the athletes' body image based on their body ideals. Cultures may also restrict the types of uniforms athletes wear, which may hinder or protect athletes' body image. Examining cultural differences in studies can help identify if there are any protective factors within cultures themselves.

Coaches. The coaches throughout the studies had all coached sub-elite or elite athletes, allowing them to share their experiences and perceptions of how they have seen athletes manage

body image and how their beliefs and perceptions may help or hinder the topic. The coaches' ages ranged from 18 to 82 (Kovács et al., 2022; Sabiston et al., 2020; Silva-Breen et al., 2022). This age range is a strength as generational differences will influence perceptions about athletes' ability to manage pressures associated with their bodies and can provide insight to researchers about how these generational differences from coaches can impact athletes. One of the studies included only female coaches (Kovács et al., 2022), while the other two studies included a more diverse sampling of genders, with eight males and five females (Sabiston et al., 2020), 60.9% women, 38.9% men, and 0.3% gender fluid and non-binary, respectively (Silva-Breen et al., 2022). Including a range of genders may also give researchers more insight since female coaches may have preconceived ideas about body image and struggle with their body image (Silva-Breen et al., 2022), which can be projected onto the athletes themselves. Conversely, male coaches have less of an understanding of the female body and want to avoid making comments that may be deemed as sexualized, so they avoid having conversations about body image altogether (Sabiston et al., 2021). Two of the three studies disclosed ethnicities within their study, which weighed heavily in favour of Caucasian/White participants at 54% and 86.7% (Sabiston et al., 2020; Silva-Breen et al., 2022). The years of coaching experience ranged from 0 to 53 years (Kovács et al., 2022; Sabiston et al., 2020; Silva-Breen et al., 2022); the sport they coached varied from rhythmic gymnastics (Kovács et al., 2022), soccer, rugby, basketball, hockey, fast pitch/softball, volleyball, and water polo (Sabiston et al., 2020). One of the studies considered whether the coaches had received previous training or education on body image or disordered eating (Silva-Breen et al., 2022). This previous experience may support the notion of implementing educational programs into athletics to support athletes. The inclusion criteria for coaches were that they coached a sports team or physical activity in the last two to five years

(Kovács et al., 2022; Silva-Breen et al., 2022), have experience coaching female adolescents (ages 13-17) in non-aesthetic team-based sports at both recreational and competitive levels, can speak English (Sabiston et al., 2020), are over 18 years old, and identify as a coach (Silva-Breen et al., 2022).

Parents. The parents included those of sub-elite and elite athletes who competed on national and international teams, which naturally exposes them to the pressures their children face as athletes and can witness how these factors influence body image (Kovács et al., 2022). The parents included in this study were all mothers with a mean age of 46.14 (SD = 3.06 years) (Kovács et al., 2022). This limited representation of parents lacks diversity, hindering researchers' ability to reach conclusive findings that can be applied across different demographics. Although each of these participants can give rich details about their experiences with their child's body image and their child in sport, the ability to apply the findings would be strengthened by increasing sample sizes, as well as diversity across numerous demographics like age, gender, geographical location, and the sport that their child plays.

Undergrad students. The undergrad psychology students studied in Daniels et al. (2021)'s research represent public opinion toward athletes through the media. This study's results reflect the media's influence on athletes' body image and perception. This study's sample size was 563 students (n = 396 women, n = 194 men) aged 18-25 (mean = 19.62, SD = 1.81), and included a variety of ethnicities, but weighed heavily of White participants (60.9%) (Daniels et al., 2021). Researchers found that women tend to be more judgmental about female athletes' athletic abilities upon seeing images of them in the media than men were (Daniels et al., 2021), which shows that researchers need to ensure they are examining results from both genders separately to avoid results being skewed based on having a higher number of female participants.

The exclusion criteria for this sample were that the participants did not report their gender (n = 12), took longer than an hour to complete the survey (n = 32), were over 25 (n = 4), indicated gender as transgender (n = 2), and straight-lined their responses (n = 23) (Daniels et al., 2021).

Summary

Six studies used purposive sampling to recruit participants, while the remaining three used convenience sampling. Most of the studies recruited their participants through means that were accessible to them, such as sports teams, clubs/athletic departments, and schools, which allowed researchers to have easy access to contact their potential participants. Four distinct sampling groups were used: athletes, coaches, parents, and general population undergrad students. The benefits of having these four sampling groups are that they can each give insight into the perceptions of athletes' body image and can strengthen the understanding of what influences put added pressure onto athletes. However, there were still gaps within the studies in that they lacked much ethnic and cultural diversity. Cultures may play more significant roles than are known about athletes and their bodies when considering uniforms and views toward body image and ideals. Including research on cultural differences may further this research and provide insight into protective factors and supports that can be applied to this population.

Data Collection

This section focuses on the data collection procedures that were conducted throughout the nine studies. Four studies conducted qualitative research, three quantitative, and two mixed methods, each grounded in constructivism. This section discusses the timing and collection methods of the researcher's data collection. Deciding on data collection is an essential step in the research process for researchers as it allows them to determine the boundaries for their research and how they will collect, record, and store data (Creswell & Creswell, 2017). The researchers of

the qualitative and mixed methods studies sought to gather a deep understanding of their participants' experiences; therefore, conducting interviews and open-ended questions was an appropriate choice. For the qualitative studies, implementing questionnaires was appropriate as they could gather information about the participant's opinions and perceptions.

Timing

Eight of the studies used cross-sectional designs by gathering participant data once (Carson et al., 2021; Daniels et al., 2021; Kantanista et al., 2018; Kovács et al., 2022; Papathomas et al., 2018; Sabiston et al., 2020; Silva-Breen et al., 2022; Stoyel et al., 2021), while the remaining one longitudinal study gathered data twice, once at the end of their last season of competing and once more six years later after all participants had retired (Thompson et al., 2021). The limitation of only gathering data at the start and end of a longitudinal study is that there is no way to notice fluctuations in findings during the years of the study (Thompson et al., 2021). Regarding the participants, three of the studies examined current athletes (Kantanista et al., 2018; Stoyel et al., 2021), while three examined formally retired athletes (Kovács et al., 2022; Papathomas et al., 2018; Thompson et al., 2021), and one examined both current and former athletes (Carson et al., 2021). Studying current and former athletes is beneficial because it can give researchers insight into when protective factors must be implemented to support athletes transitioning out of sport and into retirement. The parents studied were those of former athletes (Kovács et al., 2022), and the coaches were all still currently coaching (Kovács et al., 2022; Sabiston et al., 2020; Silva-Breen et al., 2022).

Collection Methods

Gathering information on athletes' body image is a sensitive subject. Employing in-depth interviews allows researchers to support participants throughout the process and gather a rich

understanding of athletes' experiences, which is a qualitative method. Four of the qualitative studies used semi-structured interviews as their primary method of collecting data (Carson et al., 2021; Kovács et al., 2022; Sabiston et al., 2020; Stoyel et al., 2021). The remaining multimethod study was rooted in interpretivism, meaning it was qualitative, but researchers also gathered quantitative data to compare athletes' experiences (Papathomas et al., 2018). While some mentioned using interview guides, all would do well in explaining how the interviews were conducted and if any steps were taken to add comfort for the participants. The mixed methods study used surveys and cognitive interviewing (Silva-Breen et al., 2022), and the quantitative studies used scales (Kantanista et al., 2018), writing tasks and surveys (Daniels et al., 2021), and questionnaires (Thompson et al., 2021). These data collection forms do not allow for an in-depth and personal connection between researchers and participants. However, they allow for a large data intake over a short period.

Semi-Structured, Cognitive Interviews and Open-Ended Questions. Four qualitative studies utilized semi-structured interviews as their data collection method to gather an understanding of their participants' experiences with body image and disordered eating in athletes and the influences that may have exacerbated these issues (Carson et al., 2021; Kovács et al., 2022; Sabiston et al., 2020; Stoyel et al., 2021). Using semi-structured interviews allows researchers to plan some of their questions and delve deeper into the lived experiences of their participants. By having pre-determined questions, researchers ensure that the same questions are being asked to each participant. The open-ended nature of questions allows participants to provide detail about their views, which deepens the researcher's understanding. The multimethod study used open-ended questions where participants could write their responses, allowing them time to consider their experiences and responses and provide more detail (Papathomas et al.,

2018). The mixed methods study had participants recall their responses on the survey section of the research to explain and respond to questions in the cognitive interviews (Silva-Breen et al., 2022).

Developing interview guides helps researchers identify the critical topics on which they wish to gather information throughout the interview process. Two studies made a note of using an interview guide (Kovács et al., 2022; Sabiston et al., 2020), and one study used the Cognitive Model of the Survey Response Process to prompt their participants to think back about what they answered in the survey to answer the interview questions (Silva-Breen et al., 2022). Three studies provided examples of questions asked throughout their interviews (Carson et al., 2021; Stoyel et al., 2021; Sabiston et al., 2020). The questions asked had the strength of being open-ended that led with phrases like “What was your relationship like,” “Have you ever,” “From your experience, “How do you feel about” and “What role do you think”, and probed the participants to provide information about several topics like body image in athletes, outside influences on how they view their bodies, how coaches and peers impact them, potential medical issues related to disordered eating, injuries, if they have ever received support for body image in sport, and if they would find these supports beneficial. Gathering information from various questions like these allows researchers to get a broader understanding of the impacts on athletes. Building rapport with participants and having some interviewers who have experience in the field of competitive sport are strengths as participants feel more open speaking with someone who has knowledge or experience in this stigmatized area. Researchers could have strengthened their interviews by ensuring participants understood the level of confidentiality and informing them about the support offered if needed once the interview was completed since sensitive topics were being addressed.

Having researchers with their own experience in this area conduct interviews can help with participant comfort and reduce bias. Some of the researchers were working as sports psychologists (Stoyel et al., 2021), had experience as an athlete in competitive non-aesthetic sports (Sabiston et al., 2020), and were specialized sports coaches (Kovács et al., 2022). Having those with experience in this area conduct interviews allows for accurate probing. Only two studies explicitly explained building rapport with their participants by using their personal experience and professional expertise to relate to participants and to develop interview questions and probes (Kovács et al., 2022; Stoyel et al., 2021). In interviews, especially on sensitive topics, building rapport is crucial because participants can feel safe being vulnerable about their experiences, thus yielding more in-depth explanations and richer research results. However, this approach can also cause biases if the researcher is immersed in this field since they may have experiences that can affect how they interpret the findings. Although removing all bias is impossible, researchers can take steps to minimize it (Galdas, 2017). Including a discussion on researcher bias allows readers to see that researchers were aware of their biases and the steps they took to minimize them (Creswell & Creswell, 2017). Additionally, acknowledging reflexivity about one's positionality and bias is a strategy researchers should include to address how their views may impact the study (Holmes, 2020). Lastly, having participants write responses can be a limitation because some participants feel uncomfortable writing out their experiences (Papathomas et al., 2018).

Surveys and Questionnaires. The three quantitative and multimethod studies implemented questionnaires and surveys to gather data from their participants (Daniels et al., 2021; Kantanista et al., 2018; Papathomas et al., 2022; Silva-Breen et al., 2022; Thompson et al., 2021). Daniels et al. (2021) had participants examine four photographs of randomly assigned

conditions. The conditions of the athletes in the photos were either sexualized ($n = 130$), performance ($n = 144$), sexualized performance ($n = 142$), or non-sexualized ($n = 147$). The participants were instructed to look at the photographs and then write a paragraph about how it made them feel. To reduce participant fatigue, participants were instructed to write a paragraph for the first and fourth photographs and give a title to the second and third photographs (Daniels et al., 2021). Participants then completed a survey providing their demographics and assessing their attitudes toward athletes. Kantanista et al. (2018) conducted the Feelings and Attitudes towards Body Scale to assess participants' views about their bodies. Researchers chose this scale as it was adapted to their Polish population. The scale had six statements that were scored on a 5-point scale, and they used Cronbach's alpha test to gather internal consistency of 0.90 (Kantanista et al., 2018). Papatomas et al. (2018) had participants complete three yes or no questions regarding weight, then they were prompted to answer an additional yes or no question if their body composition had changed since leaving sport, and if they answered yes, they were provided with two additional open-ended questions. Silva-Breen et al. (2022) developed their Coach Self-Efficacy Body Image Scale (CSEBIS) and had participants rate 43 questions on a scale of zero to ten. Researchers also conducted the Coaching Efficacy Scale (CES) to examine their participants' self-reported confidence in their coaching abilities. This scale used four subscales of motivation, game strategy, technique, and character building and has shown good reliability and validity in previous studies (Cronbach's alpha = 0.922) (Silva-Breen et al., 2022). Thompson et al. (2021) implemented the 50-item self-report Questionnaire for Eating Disorder Diagnoses (QEDD) to classify their participants based on the DSM-IV-TR diagnostically and then had participants complete five questions from the Bulimia Test-Revised (BULIT-R) on a 5-point scale to gather information about their weight control and binge eating. Researchers chose

these scales from their previous research on female collegiate athletes (Thompson et al., 2021). The strength of each of these questionnaires is that researchers can gather information quickly. However, a limitation is that researchers cannot gather in-depth details from their participants about their experiences.

Summary

Gathering information on the sensitive topic of the influences and factors that impact former athletes' body image requires researchers to implement their data collection methods accurately. Examining qualitative and quantitative studies provides various information that can help recognize emerging themes. A limitation of quantitative studies is that they lack an in-depth explanation of participants' lived experiences, and this can lead to gaps in their findings. However, these types of data collection allow information to be learned quickly and at higher volumes. The limitations of qualitative studies are that if researchers do not take the time to build rapport and explain the study to their participants thoroughly, they may question the depth in which their participants shared their experiences. The strengths of the interviews used in the qualitative studies are that researchers can hear firsthand the experiences of athletes and the many unique details that contributed to them and can use probing questions to seek clarity on emerging themes. Each of the studies would have benefitted from implementing resourcing for their participants, such as being free to refuse to answer questions or to have the contact information of a counsellor (Labott et al., 2013) after the study to support them after sharing vulnerable and potentially triggering information.

Data Analysis

Data analysis is crucial in the research process as it helps researchers construct meaning about the phenomenon they are studying. The qualitative studies, mixed methods, and

multimethod study all utilized thematic analysis (Carson et al., 2021; Kovács et al., 2022; Papathomas et al., 2018; Sabiston et al., 2020; Stoyel et al., 2021), which is used to identify and analyze repeated patterns, thus allowing researchers to identify themes (Kiger & Varpio, 2020). The quantitative studies and remaining mixed methods study used descriptive statistics, t-tests, exploratory factor analysis (Daniels et al., 2021; Kantanista et al., 2018; Silva-Breen et al., 2022), and cross-tabulations and chi-squared analysis (Papathomas et al., 2018; Thompson et al., 2021). This section examines how each study conducted its data analysis.

Qualitative Analysis

Analyzing qualitative data allows researchers to make meaning of their findings to answer the research question. As each qualitative study used thematic analysis, researchers must work through their findings to recognize and interpret those themes' meanings. When the researchers draw conclusions from the data, it is crucial to have multiple people involved to legitimize the findings and enhance the trustworthiness of the results. Triangulation was used in each study as multiple researchers were involved in the coding and analysis processes (Carter et al., 2014). One of the studies enhanced validity by sharing the interview transcripts with the participants to check for accuracy (Stoyel et al., 2021). The remaining qualitative studies did not include specific ways they checked the validity, which would strengthen their studies.

Describing how researchers analyzed their data is an important step to ensure that they took all the necessary steps to ensure meaningful findings. Three qualitative studies explained their data analysis process (Kovács et al., 2022; Sabiston et al., 2020; Stoyel et al., 2021). These studies explained their processes of gathering data through the use of Braun and Clarke's (2006) six-step process for thematic analysis (Kovács et al., 2022; Sabiston et al., 2020), multiple readings of transcripts, coding and repeating apparent themes, sorting and mapping themes and

subthemes to determine an underlying theory, employing the mutually exclusive and collectively exhaustive (MECE) principle, having additional researchers with no influence from other researchers look at the themes to notice if the original researchers had missed anything, and using intuitive processes to enhance trustworthiness (Stoyel et al., 2021). Three studies also included researchers engaging in reflection through journaling and supervision to address pre-existing assumptions and increase credibility and authenticity (Kovács et al., 2022; Sabiston et al., 2020; Stoyel et al., 2021). Sabiston et al. (2020) also had researchers utilize a critical friend to have the original researcher reflect on their reasoning and process for interpretations rather than solely the interpretation itself to maintain credibility. They also demonstrated confirmability by providing direct participant quotes and dependability through clear and thorough study reporting (Sabiston et al., 2020).

Qualitative research has several strengths related to the research question since the focus is on exploring the phenomenon's personal experiences (Creswell & Creswell, 2017); however, qualitative research has limitations. The most significant limitation is the researcher's bias and presence (Anderson, 2010), which are inevitable. The researcher's mere presence during interviews can impact how participants respond due to confidentiality. Although it was made clear that each study took steps to minimize these effects, it is likely that results were still impacted and must be considered while analyzing each study. Ultimately, research bias is an inherent and unavoidable characteristic of this data collection and analysis form. Researchers can take appropriate measures to minimize the effects this will have on their results.

Quantitative Analysis

Analyzing quantitative data allows researchers to gather an understanding from a large amount of data to answer their research question. The quantitative studies used descriptive

statistics, t-tests, exploratory factor analysis (Daniels et al., 2021; Kantanista et al., 2018), cross-tabulations, and chi-squared analysis (Papathomas et al., 2018; Thompson et al., 2021). Daniels et al. (2021) implemented independent t-tests to determine if there were ethnic differences in views towards athletes, two-factor ANOVAs, Tukey's post hoc tests to analyze the effects of photograph condition and the gender of the viewer, and the Bonferroni correction to account for multiple comparisons. They followed up with a one-way ANOVA and Tukey's post hoc test to determine significant interactions (Daniels et al., 2021). Researchers used photographs of less familiar athletes to minimize influencing participants' responses and used the same photographs for each participant (Daniels et al., 2021). Analysis of variance tests was used to see if participants' perceptions of the photographs changed across conditions, and a factor analysis was used to determine three dependent variables based on composite scores: competence, self-esteem, and sexual appeal (Daniels et al., 2021). Daniels et al. (2021) used p -values set at $p < 0.01$ and Cohen's d to measure effect size (Daniels et al., 2021). Researchers found a significant effect on sexualized and sexualized-performance athletes being rated less competent than non-sexualized athletes (Daniels et al., 2021). In photos of non-sexualized athletes, women rated the athletes more competently than men did, but in photos of sexualized athletes, women rated athletes less competently than men did (Daniels et al., 2021). Researchers also found significant effects between self-esteem ratings and photo conditions, where both men and women rated sexualized athletes as having less self-esteem (Daniels et al., 2021). Daniels et al. (2021) found effects in sex appeal and sexualized athletes, showing that both women and men rated the photos of sexualized athletes as more sexually appealing than performance athletes. Kantanista et al. (2018) used a one-way ANOVA to compare how athletes from different types of sports view their bodies, Tukey's Honestly Significant Difference (HSD) post hoc test for complete detailed

comparisons, eta squared to determine percentages of variation to explain certain effects, stepwise forward selection regression analyses to analyze if there was a statistically significant difference in athletes competing in aesthetic versus non-aesthetic sports, level of competition, age, and BMI (Kantanista et al., 2018). Each statistic variance was 0.05 using STATISTICA10 (Kantanista et al., 2018). P-values were set at $p < 0.05$ and were used to determine a significant positive effect between age and level of competition, showing that body image improved as athletes aged and in internationally competing athletes compared to nationally competing athletes (Kantanista et al., 2018). P-values found a significantly negative effect between the type of sport and BMI, showing that those competing in non-aesthetic sports had a more negative body image than those competing in aesthetic sports and that a higher BMI led to a more negative body image (Kantanista et al., 2018). Researchers did not mention the use of Cohen's d values in effect size in their results (Kantanista et al., 2018). Papathomas et al. (2018) used chi-square analysis via cross-tabulations and an ANOVA with the years since participants had retired from sport as the independent variable and grouped their participants by years since retirement to determine the weight difference score. Researchers noted that the relationship between years since retiring from sport, current weight, what participants were doing about their weight, and satisfaction with their current weight were all nonsignificant with a p-value of $p > .69$, and their weight differences during their years since retirement was not significant ($p = .188$), which suggests that weight differences and views toward weight were independent of years since retirement (Papathomas et al., 2018). Although researchers mentioned significant findings with p-values, they did not say their set p-values or if they used Cohen's d to measure effect sizes. Silva-Breen et al. (2022) checked for normality; all their questionnaires showed normal distributions. They employed exploratory factor analysis and subsequent confirmatory factor

analysis to indicate variance in each section to determine acceptable levels of explanation. Researchers then used model fit to determine if their scale was unidimensional, measurement invariance tests to check for homogeneity across genders, and relative and absolute fit indices to determine how many factors to retain and assess the model fit to the data (Silva-Breen et al., 2022). Silva-Breen et al. (2022) used Cohen's d guidelines of small, moderate, and large while interpreting their t-test results and correlations, which had p-values set to $p > .01$. To check for test re-test reliability, researchers used Pearson's correlation coefficient to check the stability of the subscales and total scale scores from T1 and T2 (Silva-Breen et al., 2022). Researchers evaluated internal consistency using Cronbach's alpha and convergent and discriminant validity by correlating the total scores between their measures (Silva-Breen et al., 2022). Their discriminant validity check used p-values of $p > .05$ to find that feeling confident in avoiding negative body image behaviours is associated with feeling positive about physical appearance (Silva-Breen et al., 2022). Unlike the in-depth explanations of the previous quantitative studies' data analyses, Thompson et al. (2021) lacked depth in their explanation of their data analysis process. What is made clear to readers is that researchers used the QEDD as it is reliable with both athletes and non-athletes in previous research, and they compared their results from T1 to T2 through cross-tabulations and chi-squared analyses in addition to the athletes' ED diagnosis from T1 to T2 to track changes that occurred into retirement (Thompson et al., 2021).

Throughout this section, it became clear that quantitative research is effective in allowing researchers to gather voluminous data quickly. In examining the quantitative results, researchers can draw conclusions and future implications in working with athletes.

Summary

Most of the studies showed readers the steps they took to enhance the reliability and validity of their research. Researchers need to be transparent in their methods and check for reliability and validity to strengthen their research and clarify to readers that their findings hold strong. Ultimately, using data analysis measures can allow readers to trust the findings of their participants' experiences.

Ethical Considerations

Athletes who struggle with body image and disordered eating are vulnerable. Thus, according to both the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (CIHR, 2022) and the *Code of Ethics for Canadian Psychologists* (Canadian Psychological Association [CPA], 2017), including them in research requires researchers to follow ethical guidelines to protect themselves and their participants. These ethical guidelines include if the appropriate institutional approval was received, if researchers gained informed consent, and a discussion on steps taken to enhance the vulnerability and confidentiality of participants. Furthermore, as previously noted, some participants are below the legal age and working with minors adds additional ethical considerations. Table 3 highlights the ethical considerations within each study and highlights those impacting vulnerability and confidentiality.

Ethical Guidelines

Ethical standards in research in Canada are set in the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (CIHR, 2022). The policy shares that humans undoubtedly add richness to our studies on humans, but researchers must adhere to the three guiding principles: respect for persons, concern for welfare, and justice (CIHR, 2022). Additionally, following the four ethical principles of respect for the dignity of people and

persons, responsible caring, integrity in relationships, and responsibility to society from the *Code of Ethics for Canadian Psychologists* (CPA, 2017) are adhered to while researching humans.

Although the studies were not conducted in Canada, these guiding principles can be used to highlight ethical considerations in the nine studies.

Table 3

Summary of Ethical Considerations

Study Reference (Population sampled)	Appropriate Institutional Approval(s)	Informed Consent	Vulnerability	Confidentiality
Carson, et al 2021 (Athletes and coaches)	Approvals granted	Unknown	No discussion	No discussion
Daniels et al., 2021 (Undergrad students)	Approvals granted	Yes	Brief mention of participant fatigue.	Informed consent was completed after participants knew about their rights as participants and their right to skip questions or withdraw at any point without penalty.
Kantanista et al., 2018 (Athletes)	Approvals granted	Yes	No discussion	Brief mention of participants being informed about the research, but no discussion on gaining consent.
Kovács et al., 2022 (Athletes, coaches, and parents)	Approvals granted	Yes	No discussion	Informed consent, including information about the study and being able to withdraw, pause, or stop at any time, was done before beginning. Participant names were changed and all identifying information was changed before data analysis.
Papathomas et al., 2018 (Athletes)	Approvals granted	Yes	Discussion on retired athlete's continued body dissatisfaction and their risk of developing disordered eating symptoms calls for future research to	Participants agreed to participate before receiving instructions and the questionnaire. Participant responses were anonymous and identified using unique codes and pseudonyms were used for the

			determine the prevalence of EDs and disordered eating in retired athletes.	sharing of interview quotes.
Sabiston et al., 2020 (Coaches)	Approvals granted	Yes	No discussion	Informed consent was completed two weeks prior to conducting interviews.
Silva-Breen et al., 2022 (Coaches)	Approvals granted	Yes	No discussion	Brief mention of participants being excluded for not giving consent.
Stoyel et al., 2021 (Athletes)	Approvals granted	Yes	Rapport created throughout the study allowed a participant to share their suspicion of having an ED.	All participants gave informed consent and researchers used pseudonyms rather than real names.
Thompson et al., 2021 (Athletes)	Approvals granted	Yes	No discussion	Brief mention of participants consenting before starting.

Qualitative Ethical Guidelines

Qualitative research holds its own space in the Tri-Council Policy Statement (CIHR, 2022), due to its nature of observing and interpreting the information gathered from the researcher themselves and what the participants give. There is an emphasis placed on the processes of informed consent, confidentiality and privacy, the relationships between the participants and researchers, and the reviewing and conducting of the research (CIHR, 2022).

Vulnerability

Vulnerability in research involves ensuring that risk and harm are minimized, including providing extra support to participants who may need it (Gordon, 2020). Throughout the studies, some participants were found to be at clinical levels of EDs and some at risk of EDs and disordered eating, which makes them a vulnerable population; however, the studies lacked acknowledging how they implemented support for their participants within the study itself (Carson et al., 2021; Stoyel et al., 2021; Thompson et al., 2021). In alignment with the ethical

principle of responsible caring (CPA, 2017), providing support and resources for these participants would have shown that researchers were tightly upholding their ethical duties. One of the studies briefly mentioned how they reduced participant fatigue (Daniels et al., 2021). Another study discussed how their ability to build rapport with participants allowed them to open up about their suspicion of having an ED (Stoyel et al., 2021).

Daniels et al. (2021) excluded participants who identified their gender as transgender but did not mention their reasoning for excluding them. In their study, they included questions in their surveys related to the photos of athletes being sexually appealing to men but not to women, and they found an interaction between the photo conditions and the gender of the participant on esteem and competency ratings (Daniels et al., 2021). Including an explanation of why researchers excluded transgender participants would have given readers a better understanding of their sampling techniques and if they believe including transgender participants would have affected their results.

Vulnerability includes considering participants under the age of consent, which is 18 in Canada, and if they have a disability preventing them from entirely giving consent (CPA, 2017). Only one of the studies had participants under 18 (Kantanista, 2018), but they needed to acknowledge how they obtained informed consent and assent. Notably, this study was conducted in Poland, where the age of consent in research is 16 (Orzechowski et al., 2021). However, this still needs to account for participants between 13 and 16. The remaining studies lacked acknowledging if their samples were a vulnerable population and the steps that they took to minimize harm (CPA, 2017). Seven of the studies mentioned gaining consent from their participants. However, a helpful addition to their studies would have been to provide readers with an explanation of how they obtained consent and assent from their minors.

Although the aim of the nine studies was not around those with clinically diagnosed EDs, some participants disclosed meeting the threshold and those who were at risk (Carson et al., 2021; Stoyel et al., 2021; Thompson et al., 2021), leading readers to search for an understanding of steps that researchers took to support these vulnerable populations. Building rapport can protect their participants, but further discussion as required would have been beneficial. Any research with humans creates vulnerability, and each study's ethics could be strengthened by mentioning their consideration of any vulnerabilities and how they plan to address them.

Confidentiality

The confidentiality and privacy of participants are recognized internationally, making it an ethical standard in the research realm across the globe (CIHR, 2022). In working with participants of a sensitive nature, it is critical to gather consent by ensuring that participants understand that any identifiable information will be shared. As part of the consent process, participants must be informed about the ongoing risks to their confidentiality throughout the research process, such as during information and data collection, data analysis, dissemination of those findings, storage of the findings, and destruction of the findings (CIHR, 2022). Six of the studies briefly mentioned completing informed consent with their participants (Daniels et al., 2021; Kovács et al., 2022; Sabiston et al., 2020; Silva-Breen et al., 2022; Stoyel et al., 2021; Thompson et al., 2021), while one mentioned informing their participants about the study but failed to include a discussion on gaining consent from their participants (Kantanista et al., 2018), and one mentioned participants agreeing to participate but lacked an explanation of the informed consent process (Papathomas et al., 2018). Only three of the studies discussed the steps they took to enhance participants' confidentiality by recording responses anonymously (Papathomas et al., 2018), changing names to pseudonyms (Kovács et al., 2022; Papathomas et al., 2018; Stoyel et

al., 2021), and changing all personally identifying information prior to data analysis (Kovács et al., 2022). Based on the suggestions for participants to have an ongoing understanding of the research and the data from the Tri-Council Policy Statement (CIHR, 2022), each study would have benefited from including a more thorough explanation of the steps they took to reinforce participant confidentiality to show readers that they took these crucial steps. If the researchers did engage in these ongoing conversations with their participants, participants likely felt more comfortable sharing vulnerable information to extend the data knowing that their identities were protected.

Summary

As shown in Table 3, researchers lacked in-depth descriptions of how they reinforced participant vulnerability and confidentiality. Each research study's benefits were that they all followed the ethical standards of including the mention of institutional review board approvals, and seven out of nine studies mentioned their gaining of informed consent. In following Kovács et al. (2022)'s lead, readers would be more confident knowing that researchers included a discussion on how they gathered informed consent and protected the confidentiality of their participants. The most considerable weakness is that each study did not explain how they would support vulnerable participants at risk for disordered eating and EDs. This can impact the studies' validity by neglecting to implement support for these vulnerable populations.

Findings

The studies were analyzed through a sociocultural model of body image lens to identify themes in former athletes struggling with body image issues within the overall stress of retiring and transitioning out of sport. The themes were found from identifying a problem in the literature, finding literature on the topic, and then noticing commonalities across studies. In this

approach, apparent themes that emerged that influence the body image of retired athletes include psychosocial, media, parents, coaches, type of sport played, and psychological and physical factors. Additionally, the writers' previous personal understanding and experiences of what may influence athletes helped narrow searches to those topics, which ultimately yielded the results of the themes discussed below. Figure 1 was developed as a visual to see the themes, barriers, and facilitators to change.

Figure 1

Summary of Findings

Themes of Athletes Experiences	Barriers	Facilitators to Change
Psychosocial	<ul style="list-style-type: none"> - Balancing social and athletic lives - Judgements from peers about how athletes should look and behave 	<ul style="list-style-type: none"> - Psychoeducation on detrimental effects of body comments
Social Media	<ul style="list-style-type: none"> - Assumptions and comparisons toward athletes based on how they are depicted in the media - Negative comments on body composition - Sexualizing female athletes in the media 	<ul style="list-style-type: none"> - Psychoeducation on detrimental effects of body comments - Psychoeducation on relationship between body size/type and performance - Psychoeducation on sexualized athletes in the media and how it influences opinions of athletes' competence
Parents	<ul style="list-style-type: none"> - Unintentionally supporting maladaptive behaviours such as restrictive diets - Pressure to perform 	<ul style="list-style-type: none"> - Psychoeducational programs to support relationships between parents, coaches, and athletes
Coaches	<ul style="list-style-type: none"> - Not feeling equipped or educated to support athletes - Comments about bodies and performance 	<ul style="list-style-type: none"> - Systemic changes around coaches' power over athletes - Coaches serving as role models to normalize body image concerns and increase self-acceptance - Being mindful of language about bodies

Type of Sport	<ul style="list-style-type: none"> - Aesthetic sports vs. non-aesthetic sports - Uniforms - Bodies for performance either aligning with Western body ideals or not 	<ul style="list-style-type: none"> - Viewing bodies for function rather than appearance - Combating Western body ideals
Psychological and Physical	<ul style="list-style-type: none"> - Changes in diet and exercise demands 	<ul style="list-style-type: none"> - Acceptance of bodily changes after retirement - Focusing on other areas of life that make them happy like family, career, and what their bodies can still do

Psychosocial

This theme entails retired athletes' different psychosocial pressures and how they impact their body image. These aspects are worth examination since the psychosocial factors apparent in athletes' lives are highlighted by the research and focus on the bi-directional pulling of athletic versus social demands. In sports, athletes' performance is necessary to continue their athletic career, but at the same time, their social lives are essential to their development (Ojala, 2018). The many pressures on athletes are consistent across cultures, and their stressors from psychosocial and cultural demands are at odds with elite sport demands (Rahayuni, 2022). The dichotomy between athletes' athletic and social lives creates undue stress and pressures and leaves athletes needing to navigate how to manage the two simultaneously.

Athletes must manage the stress of their sport in addition to societal demands on how their bodies appear based on societal expectations of athletes' body compositions (Stoyel et al., 2021). A participant in Carson et al. (2021)'s study shared the feeling that they must uphold the typical runner's physique of being "muscular but skinny" because that is what society expects them to look like. Society is considered as those who are non-athletes but understand the athletic world and know someone who is an athlete, and body image is viewed from a Western lens

where there is an emphasis on thinness in women and muscularity in men (Stoyel et al., 2021). Athletes train specifically for their sport, and when this does not produce a body that aligns with Western body ideals, problems with body dissatisfaction and disordered eating arise (Stoyel et al., 2021). These bodily comparisons translate into performance comparisons in athletes, where they will base their performance on how their bodies look compared to other athletes (Stoyel et al., 2021). For example, if an athlete watches another athlete with longer legs, they may deem themselves less competent in their sport based on this difference in body composition. These comparisons can make athletes feel inadequate athletically and socially as they do not align with Western ideals and are inadequate in their athletic performance. Not only do athletes compare themselves within sport, but they also struggle with balancing the demands that their sport places on them to have a body conducive to performance while society has blind assumptions itself about how they should look (Stoyel et al., 2021). Many of the participants in the study shared their experiences of having the expectations to meet demands from both their sport and their peers (Stoyel et al., 2021). These expectations include peer comments about what athletes eat and drink and whether their behaviours and appearance align with their perceptions of athletes (Stoyel et al., 2021). These bi-directional pulls of sport and social pressures occur while the athletes are still competing, and there is a gap in the research on whether these pressures apply once they have retired from sport.

Given that the research shows these pressures occurring while they are actively competing, protective factors that should be examined in supporting these athletes are finding ways to minimize the harm that societal pressures can have on athletes' diet and training regimes (Stoyel et al., 2021). Athletes are already pressured to perform optimally in their sport, which includes eating, recovering, and training in disciplined ways. When these do not match societal

expectations, it adds undue stress on these athletes. Future research should examine if these expectations and discipline carry over into athletic retirement, which may be maintaining body dissatisfaction and disordered eating. Stoyel et al. (2021) included athletes who are runners, which limits sporting diversity, so future research would benefit from including more diversity in the type of sport that participants partake in. This is important because Stoyel et al. (2021) focused on runners, where leanness is tied to performance, so there is a need to discover if the results from the studies would differ if participants were training for sports that did not encourage leanness for performance. This study discussed the Western ideal of body image and athletes, which allows readers to understand the conflict. Athletes must balance social and athletic pressures (Stoyel et al., 2021). Further studies should examine if this Western ideal is consistent across countries or if different countries and cultures can act as protective factors against these societal expectations.

Media

This theme examines how the media influences how athletes are viewed based on their bodies. For this discussion, media includes social media platforms and media through magazines and advertisements. It is common for social media to facilitate judgment and comparisons between people. However, social media was a surprising finding in Stoyel et al. (2021)'s study in that it is linked to body dissatisfaction and disordered eating in athletes. For athletes, these judgements create hesitancy in posting pictures online because of negative comments about their bodies not looking like that of an athlete (Stoyel et al., 2021). These negative comments toward their bodies decrease their self-esteem and confidence in their ability to perform in their sport (Stoyel et al., 2021). Related to the previous discussions on psychosocial factors influencing

athletes' body image, social media pressures athletes to look a certain way, encouraging appearance over functionality for their sport.

Daniels et al. (2021) focused on determining how non-athletes perceive athletes when shown in the media. Female athletes are depicted in the media as sexualized even when showcased as their athletic selves (Daniels et al., 2021). These depictions in the media were shown to have non-athletes perceive sexualized athletes as less competent (Daniels et al., 2021), creating a negative stigma toward athletes solely based on how they are shown in the media. By highlighting appearance over performance in female athletes, the media creates internal and external pressures for these athletes, further enhancing the dichotomy of having a body that aligns with Westernized ideals and what is needed for performing in their sport. Consistently, while comparing female and male athletes in Brazil, female athletes are shown in the media only when the feminine athletic quality was depicted, meaning that they much less often showed images of women actively playing sports, sweating, and having their hair out of place, whereas men were more likely to be photographed to show off their athletic abilities rather than strictly appearance (Romero et al., 2016). These differences emphasize the importance of athletes looking a certain way for both genders but emphasize that female athletes always look “attractive.”

The limitation of Daniels et al. (2021)'s study was that it was conducted primarily on White university students in the US, which limits the generalizability across countries. They also examined athletes who were young and White themselves. Researchers highlight the need to conduct similar studies with more diverse sampling populations and subjects to determine if there are different perceptions of athletes when race and age vary.

Parents

One of the studies examined for this paper analyzed parents' role in how former athletes view their bodies and if there is research on parents acting as protective factors against body dissatisfaction (Kovács et al., 2022). One of the studies found that parents play a significant role in influencing athletes' stress levels and can have a more extensive influence on athletes' stress levels than athletes place on themselves (Kovács et al., 2022). Some parents place such immense stress on their children that it becomes more overwhelming to manage the criticisms from parents than it does the pressure of playing the sport itself (Kovács et al., 2022). These explicit examples of parents directly giving criticism to their children in sports are evident, and it is worthwhile to consider if parents are also unconsciously supporting behaviours and views that may be harming the body image of athletes. Research states that some parents play unconscious roles in supporting their children's eating behaviours and body image issues and even change their own to show that they fully support their child in their sport (Kovács et al., 2022). This finding shows that parents may be exacerbating problems by supporting their success; however, encouraging these strict eating behaviours can create internal beliefs about how they should view their bodies.

A conflict in the research is that one study states that direct weight-related comments from parents increase the likelihood that the daughter will have poor body image or disordered eating behaviours (Francisco et al., 2012), while others claim that only mothers have an impact on athlete's body image (Kovács et al., 2022). Francisco et al. (2012) also found that if the mother has disordered eating behaviours, the daughter is likely to have similar behaviours, further supporting the impact that mothers can have on body image. These contrasts show that mothers significantly influence female athletes' body image. Further exploration of the fathers' and parents' roles in male and female athletes' body image is needed. Part of the research inquiry

is to determine if encouraging positive parental involvement protects against cognitive distortions about body image. However, parents fear expressing concerns about their children's well-being and if they will be viewed as not supporting their child's sports performance and involvement (Kovács et al., 2022). With that said, developing psychoeducational programs that can support the relationships between parents, athletes, and coaches, as well as eliminating the use of public weighing and body measuring of athletes, could likely decrease body dissatisfaction in athletes by placing less emphasis on body leanness (Kovács et al., 2022).

Coaches

Three of the included studies examined the theme of coaches' influence on athletes' body image and what protective factors could be implemented to support retired athletes in transitioning out of the sport. Playing sub-elite and elite sports consumes both the coaches and the players' time and energy, leading to coaches being seen as a prominent interpersonal social influence within the sport environment (Sabiston et al., 2020). Coaches are in unique positions of power and play prominent roles in athlete well-being, skill development, and body ideals (Carson et al., 2021; Sabiston et al., 2020). Importantly, all three studies mention that coaches' validations are valued by athletes (Carson et al., 2021; Kovács et al., 2022; Sabiston et al., 2020), showing that coaches can be both negatively and positively influential in how athletes view themselves. Two sub-themes emerged: coaches commenting about athlete body size and comparing body size to performance.

Research states that 60% of athletes struggle with negative body comments coming from coaches regardless of competing in aesthetic or non-aesthetic sports (Kantanista, 2018; Sabiston et al., 2020), which leads to athletes feeling anxious around coaches and having heightened negative body image and maladaptive eating and dieting behaviours (Carson et al., 2021;

Sabiston et al., 2020). Athletes shared experiences where coaches abused their power by shaming their food choices, being told they would be faster if they were smaller, telling them they needed to lower their body weight, and that none of their body parts should move when they jump in the mirror, and even commenting on the opponent's bodies (Carson et al., 2021). In addition to comments, athletes were forced to do public weigh-ins. They saw these incidents as a form of discipline and would engage in disordered eating behaviours like avoiding eating and making themselves sick to have a lower number on the scale (Kovács et al., 2022). This abuse of power over athletes and comparing their bodies to their performance exacerbated body image issues by forcing athletes into shameful experiences and feeling like coaches prioritized athletes' performance over their health (Carson et al., 2021).

One study examined coaches' perspectives on athletes' body image and how equipped coaches felt to support athletes (Silva-Breen et al., 2022). There is mixed research on coaches' ability to identify athletes struggling with their body image. Some coaches can identify these struggles through facial expressions, body language, and covering their bodies (Sabiston et al., 2020). Others lack confidence in identifying body image issues in their athletes (Silva-Breen et al., 2022). Regardless of the ability to recognize struggles in their athletes, coaches report having difficulty approaching conversations out of fear of saying the wrong thing or getting into trouble, which is more commonly reported by male coaches (Sabiston et al., 2020). Female coaches feel better equipped to have these conversations with their athletes since they have experienced pressure to have their body fit the mould of societal expectations, but they remain hesitant to approach athletes in case the athlete does not feel comfortable discussing their body with their coach (Sabiston et al., 2020).

One of the studies highlights systemic changes in how coaches treat athletes due to the immense psychological stress they endure from negative body comments from their coaches (Carson et al., 2021). Comparatively, some coaches believe they can support their athletes themselves by creating an environment conducive to conversations about and normalizing body image concerns, building self-acceptance, being role models, and being mindful of the language they use around athletes in discussing bodies to focus on performance rather than how their body looks while performing a skill (Sabiston et al., 2020). Implementing the scale developed by Silva-Breen et al. (2022) would be an effective way to determine coaches' level of self-efficacy and confidence in being protective factors for their athletes' body image. These three findings suggest coaches' ability to support an athlete's body image. These studies were conducted in different countries, showing similarities globally and pointing to a need to address these issues for athletes worldwide. The studies lacked a focus on how athletes are impacted into their retirement; however, creating environments that protect against the development of body image issues may provide athletes with the skill to do so post-sport.

Type of Sport

This theme discusses whether different types of sports play a role in body image issues in athletes. Sports can be divided into aesthetic or non-aesthetic. Aesthetic sports, such as dance, gymnastics, cheerleading, and swimming, encourage leanness, whereas non-aesthetic sports, such as basketball, tennis, soccer, and volleyball, do not explicitly encourage leanness (Davison et al., 2002). There have been mixed findings throughout the research regarding the type of sport and level of body dissatisfaction. Some research argues that athletes engaged in aesthetic sports at a high level had more positive body image than their counterparts in non-aesthetic sports who

described wanting to have a “smaller body” regarding physique and leanness for sport (Reina et al., 2019).

Conversely, other research has shown that athletes who compete in aesthetic sports tie performance to their physique, leading to a drive for leanness (Chapa et al., 2022). The finding on aesthetic athletes having higher body satisfaction was surprising, but upon analyzing it, sports that encourage leanness mean that the athletes will likely have bodies that are more aligned with Western society’s body image ideals, which are beginning to influence other cultural body ideals (Thornborrow et al., 2020). This is supported by Kantanista et al. (2018)’s study, which was conducted in Poland and shows that Western body ideals are consistent in other countries. Moreover, research shows that even in Asian countries that were formerly seen as not suffering from Westernized body ideals are adopting these ideals, showing that the desire for thinness and body dissatisfaction is being experienced globally more than ever (Shagar et al., 2021).

Different sports entail different requirements for how bodies look based on their training regime and how they use their bodies to perform (Stoyel et al., 2021). Participants believe that non-athletes do not understand this fact, which causes judgement from society to athletes if their bodies do not fit societal standards regardless of how they perform in their sport, which increases the risk of body dissatisfaction, as discussed in the previous theme of psychosocial pressures (Stoyel et al., 2021). Moreover, athletes adopt a perfectionist attitude and internalize the need to perform and look perfect for their sport, albeit an unrealistic expectation (Carson et al., 2021). There are mixed results in body dissatisfaction and level of sport. It has been found that athletes who compete at international levels have higher body satisfaction than those who compete at national levels (Kantanista et al., 2018). Previous research shows that the higher the competition, the more at-risk athletes were for body dissatisfaction; however, researchers believe that

international-level athletes may have more determination to win and awareness of their body function for sport rather than appearance (Kantanista et al., 2018). This means that the level of competition and understanding of the body's function, rather than appearance, can act as protective factors against body dissatisfaction. Although there remains a gap in focusing on these issues following athletes into retirement, it is apparent through the research that when athletes view their bodies from a functional rather than appearance lens, they have higher body satisfaction (Kantanista et al., 2018). This is an important finding since Westernized body ideals are prominent globally and increase body satisfaction among aesthetic sport athletes. Continuing research on safeguarding athletes from Westernized body ideals as they transition into retirement is required.

Psychological and Physical

This theme discusses athletes' psychological and physical difficulties while transitioning out of sport (Stokowski et al., 2019). Transitioning out of sport can place athletes in a vulnerable place, causing them psychological distress of experiencing anxiety and depression, a decrease in their sense and self-worth, changes in mood, and a decrease in social support, which leads to isolation and loneliness (Stokowski et al., 2019). Leaving sport also creates physical difficulties like disordered eating, body image issues, and weight fluctuations (Stokowski et al., 2019). Many skills developed throughout one's athletic career can be transferable to their 'real life,' such as leadership, work ethic, time management, and discipline around nutrition and training. The acquired discipline can create a complex relationship with food and body for the individual (Buckley et al., 2021), because they must learn how to properly fuel their bodies to perform optimally. This complex relationship between food and exercise exists while the athlete competes. Once athletes retire and no longer need to train and monitor food intake in the same

ways, navigating this can become a confusing adjustment. If one completely changes their activity level, the amount and type of food they eat may also change. However, suppose someone is never taught how to accommodate these changes. In that case, it will understandably increase the complexity of their relationship with food and exercise, which can ultimately lead to body changes and, thus, body dissatisfaction.

There are mixed reports of being pleased with physical changes in retirement (Papathomas et al., 2018). In their study, most former athletes reported feeling that they are a healthy weight but are unhappy with their weight (Papathomas et al., 2018). This is likely due to the complex relationship that emerged when they were training for their sport (Buckley et al., 2021). The demands on female body ideals encourage a feminine appearance, whereas these former athletes are accustomed to having a solid body to be competent in their sport. Some former athletes are happy with their bodies in retirement because they become smaller due to a loss of muscle mass that is no longer required (Papathomas et al., 2018). This unsurprisingly matches the Western body ideals and could be why former athletes feel more pleased with their bodies post-sport (Papathomas et al., 2018). Other athletes report feeling unhappy with their loss of muscle mass because they feel they are loose or “flabby” (Papathomas et al., 2018).

An important finding in Papathomas et al. (2018)’s study is how former athletes manage their body changes and the associated psychological disruptions. While actively competing, their participants discuss accepting that their bodies will never be as they were. They also mentioned the importance of finding social support and focusing on the positive areas of their lives, such as careers, families, what their bodies can do for them, and their happiness levels (Papathomas et al., 2018). Supporting athletes in understanding how to fuel and train for their changing bodies

upon leaving sport and helping them to accept those changes would serve as protective factors against body image issues as they retire.

Summary

Six themes emerged from the research: psychosocial, media, parents, coaches, type of sport played, and psychological and physical factors. It was apparent how external comments and judgements affected athletes' body image. Psychoeducational programs can help those external factors in athletes' lives understand the negative impact these comments can have on their well-being. Furthermore, increasing awareness of the separation between body composition and performance can minimize the volume of comparisons and judgements made toward athletes. Although many sports require certain body types to perform, this does not mean that every athlete will necessarily fit this expectation. Athletes internalize the messages they receive from those in their lives and from the media. If they are fed enough negative feedback about their bodies, it is understandable that they would internalize the negative beliefs about their bodies. Considering retired athletes' perceptions of their bodies is an area that warrants further exploration since body image is something that can change depending on one's physical expectations and changes in the environment (Greco, 2022). Furthermore, there remains a gap in the research about athletes in their retirement. Athletes actively competing adopt these negative beliefs about themselves, so this may be the time to implement protective factors.

Chapter 4: Clinical Applications

The studies analyzed throughout this paper each contained implications of how their findings could be implemented into practice to support retired athletes' body image. This discussion is done through a sociocultural model of the body image lens. Ensuring retired athletes' body image is supported as they transition out of sport requires considering how to address the barriers apparent throughout the research. By addressing the factors that influence retired athletes' body image, we can ensure that therapists, athletes, parents, and coaches can work together to support athletes rather than exacerbate body image issues (Carson et al., 2021; Kantanista et al., 2018; Kovács et al., 2022; Papathomas et al., 2018; Sabiston et al., 2020; Silva-Breen et al., 2022; Stoyel et al., 2021; Thompson et al., 2021). Clinical applications discussed include how therapists can work with athletes and coaches, developing and implementing psychoeducational programs, coaches learning how to be protective factors, and systemic changes.

Clinicians may use the information discussed in this section to further their knowledge about how to support retired athletes effectively and work to develop programs and provide education to those involved in retired athletes' lives. Furthermore, understanding the factors that add to body image issues in retired athletes may allow clinicians to help athletes who did not receive this support before retirement and are currently struggling with the impacts. In analyzing the clinical applications, it is important to note how they apply across cultures. For example, including more diverse ethnicities, genders, types of sports, socioeconomic groups, and samples from various geographical locations would support applicability and generalizability across diverse groups (Carson et al., 2021; Daniels et al., 2021; Sabiston et al., 2020; Silva-Breen et al., 2022; Stoyel et al., 2021; Thompson et al., 2021). It is also pertinent that those planning on

working with athletes understand the stressors they face throughout their sporting career and into retirement.

Clinicians

As stated in clause II.6 of *competence and self-knowledge* under Principle II: Responsible Caring of the *Canadian Code of Ethics for Psychologists*, clinicians must be competent in the areas in which they are working to support their clients in the most beneficial way (CPA, 2017).

With that, sports psychologists, who have experience working with athletes, may be practical additions to work within team environments to support athletes' transition into retirement to support their body image (Papathomas et al., 2018). Part of sports psychologists' work can be on educating athletes on the body changes that will occur naturally upon retiring from sport, like a decrease in training, which then requires a decrease in food intake (Papathomas et al., 2018).

Talking openly about these body changes may help alleviate anxiety levels because the changes are anticipated and are not a surprise once the athlete retires (Papathomas et al., 2018).

Furthermore, sports psychologists can discuss and educate athletes on the body image culture within sports and how it impacts athletes (Papathomas et al., 2018). However, athletes cannot leave this culture when they want to continue playing sports, so bringing awareness to the culture that has been created and shifting the focus to a culture of performance rather than appearance can serve as a protective factor (Kovács et al., 2022; Papathomas et al., 2018). In addition to drawing attention away from the perception of weight impacting performance, sports psychologists can continue to be impactful in more ways. First, encouraging the elimination of public weigh-ins should happen as they create problems in athletes' long-term mental, physical, and emotional well-being (Kovács et al., 2022). Second, working with nutritionists to educate athletes about nutrition before retiring will prepare them for how their bodies may change upon

retirement and how to manage the psychological distress that may accompany these changes (Papathomas et al., 2018). Third, helping athletes reflect on their internalized ideals can support them in determining reasonable expectations of how their bodies should look and gaining acceptance of the natural changes that may occur (Papathomas et al., 2018). Fourth, helping athletes determine their identities outside of sport can help them gain acceptance upon retirement (Papathomas et al., 2018).

Collaborating with clinicians, especially sports psychologists with expertise in working with athletes and nutritionists who can support nutritional changes, are critical clinical applications to supporting retired athletes' body image. Focusing on providing education on the natural changes that will occur upon retiring from the sport and having the expertise to support mental health in athletes are both aspects that should be applied to all sub-elite and elite sports contexts.

Psychoeducational Programs

Several studies discuss the need to create psychoeducational programs within their sporting context (Kantanista et al., 2018; Kovács et al., 2022; Sabiston et al., 2020; Thompson et al., 2021). Coaches, parents, and athletes have all expressed the need for educational programs within their sporting environment to minimize the impact of body image dissatisfaction in athletes.

Two studies identified the need for psychoeducational programs on weight-related topics and communication (Kantanista et al., 2018; Kovács et al., 2022). In Kovács et al. (2022)'s study, their participants called for educational programs targeting communication between athletes and coaches and coaches and parents. Participants hoped that early and effective communication between these parties would help them identify body image dissatisfaction or

disordered eating patterns in athletes and help them feel better equipped to attend to these issues rather than ignore them (Kovács et al., 2022). Designing weight-related educational programs to address female athlete behaviours was also identified as a way coaches and athletes would feel more confident in their ability to recognize the signs of weight-related issues arising in athletes and have the tools to address them (Kantanista et al., 2018). Implementing these educational programs early on, especially for adolescent athletes, is crucial due to the emerging issues around bodies in these age groups (Kantanista et al., 2018).

Additionally, research shows that high school and college athletes who are low socioeconomically and have food insecurity are at a higher risk for eating disorders (Poll et al., 2020). Educating athletes on the effects of food insecurity on their body-related behaviours and providing them with resources for support, such as food vouchers or directing them to organizations that work to support those who are low socioeconomically, may reduce the risk of developing eating disorders. Ultimately, screening athletes for their risk level of disordered eating and body dissatisfaction and providing psychoeducational programs to coaches, athletes, and parents will increase their level of confidence in recognizing early signs of body dissatisfaction and disordered eating and be able to provide support for athletes as they move into retirement (Kantanista et al., 2018; Kovács et al., 2022; Poll et al., 2020).

Coaches shared that lacking knowledge about body image and its impacts has been a barrier to addressing these issues with their athletes out of fear of appearing inappropriate or feeling as though they do not know how to support their athletes properly (Sabiston et al., 2020). This has led to coaches voicing their desire for educational programs to help them feel better equipped to address disordered eating and body image dissatisfaction among their athletes (Sabiston et al., 2020). Sabiston et al. (2020) discussed how previous studies have shown that

single-session educational programs have helped decrease body dissatisfaction in cheerleading athletes the following season. However, they argued that having longer-term programs around coach comments and eating and weight concerns would be more effective in helping them feel equipped to address body image concerns and disordered eating patterns that arise in their athletes. Additionally, coaches believe that being positive role models will be a protective factor but feel like they need this long-term training and education to be those models (Sabiston et al., 2020). Through these coaches' anecdotes, there is a clear need for educational programs to be implemented for coaches themselves to be able to identify issues and support their athletes.

The need for interventions and educational programs is evident throughout the literature, and, notably, the research found that implementing them in the early stages of an athlete's sporting career is the most effective (Thompson et al., 2021). Therapists or nutritionists with experience working with athletes, communication, and weight-related issues would be practical tools in this process. Having someone not part of the sporting context may help athletes and coaches feel more at ease in asking questions and allows for an unbiased perspective. As discussed earlier, sub-elite and elite sports teams would benefit from having the same therapist and nutritionist working with the team for the duration of at least one season to build rapport and be able to provide ongoing, long-term education to support athletes throughout the season and even into retirement.

Coaches

Coaches influence athletes' lives, creating a coach-athlete power dynamic (Carson et al., 2021). This is anxiety-provoking for athletes since they strive for coach validation. The research shows a need to implement safeguards to focus on the opposing influence coaches can have on athletes and work to minimize this power dynamic (Carson et al., 2021). Alarming, this power

dynamic has been shown to facilitate harassment and abuse from coaches to athletes (Carson et al., 2021). Athletes equate their self-worth to validation from their coaches, which can ultimately lead to emotional distress if they do not receive the validation they strive for (Carson et al., 2021). While considering this power dynamic, coach comments and perceptions must be addressed to improve athletes' experiences in sports (Sabiston et al., 2020).

Sabiston et al. (2020) believe that implementing weight bias education to coaches would be helpful because it may lower the prevalence of the perception that someone of a higher weight will have more body dissatisfaction. Addressing this bias will create equal treatment toward athletes despite their body type and size (Sabiston et al., 2020). Sabiston et al. (2020) also put forth the need for education on body image and its complexities, focusing on performance over appearance and creating positive body image features. With this education, coaches can play a significant role in shifting the focus to performance rather than appearance, which leads to a more positive body image (Sabiston et al., 2020). Furthermore, coaches need to use less objectifying language and comments since body talk, whether negative or positive, leads to body objectification and ultimately gets in the way of focusing on performance (Sabiston et al., 2020).

Silva-Breen et al. (2022) created the Coach Self-Efficacy Body Image Scale (CSEBIS) to determine coaches' levels of self-efficacy and confidence in addressing body image concerns among athletes. The scale highlights behaviours that should be avoided, such as avoiding making comments about athletes' bodies, and behaviours that should occur, such as having conversations with athletes about concerning changes to their weight (Silva-Breen et al., 2022). In using this tool, coaches can identify the areas in which they need the most support to be the most positive influences they can be for their athletes. The scale also provides psychoeducation to coaches around functionality over appearance (Silva-Breen et al., 2022). In determining the areas where

coaches need the most support, interventions can be created to enhance sport retention and enjoyment and reduce the negative impacts of psychological and physical distress on athletes' body image (Silva-Breen et al., 2022).

Comments made by coaches about athletes' bodies were found to be a huge stressor for athletes and were influential on their eating and exercise behaviours, which can become dangerous (Carson et al., 2021). These findings emphasize the need to create a safe and respectful sporting environment free from harassment or abuse to athletes, as their well-being should be one of the main focuses (Carson et al., 2021). It is evident how much coaches play a role in athletes' sporting experience. They can be significant factors in preventing athletes from developing severe body dissatisfaction with the proper education and tools.

Systems

Systemic changes may seem daunting to address; however, throughout the literature, there is a demand to make systemic changes both from a societal and organizational lens. It is seen throughout the literature how much of an influence social media and societal norms have on athletes' body image. Bringing attention to how society influences athletes' body image can increase an understanding of the detrimental impact it can have when these messages are internalized (Papathomas et al., 2018). It can be powerful to address these societal messages and teach athletes how to combat them (Papathomas et al., 2018). An important note is that societal pressures are not always unique to sports, and athletes are also impacted by societal messages in general, which is why Stoyel et al. (2021) argue that current interventions to address disordered eating and body image issues may be beneficial when applied to athletes if those applying interventions understand how these messages may align or go against sport pressures.

As highlighted throughout Principle IV: Responsibility to Society in the *Canadian Code of Ethics for Psychologists*, psychologists must support systemic change if it is going to benefit the public (CPA, 2017). Therapists can be educators in sporting contexts to change language and body talk toward athletes. Engaging in ongoing work with teams and clubs allows therapists to build rapport and get to know players and coaches, which will help them recognize issues that arise and identify changes that need to be made. On a more extensive system scale, social media and society influence our perceptions of body image from a Western lens, which impacts how athletes view their bodies and frequently has them prioritizing appearance over performance (Kovács et al., 2022; Papatthomas et al., 2018; Sabiston et al., 2020). As stated under Principle IV: Responsibility to Society in the *Canadian Code of Ethics for Psychologists*, psychologists must advocate for the well-being of society (CPA, 2017), and can begin working toward addressing issues and implementing changes. Starting this change by working with one team may allow therapists to build networks and a platform to help multiple teams. Approaching societal change in this way allows therapists to start making minor differences, which can potentially reach multiple athletes. The required changes that athletes and coaches have requested would benefit from having educated and experienced professionals in those areas to provide education, tools, and support.

Summary

The clinical applications developed from this study's findings are how therapists can work with athletes and coaches, psychoeducational programs, coaches as protective factors, and systemic changes. Specific recommendations within these applications are creating psychoeducational programs to support both coaches and athletes around language and comments made about bodies, minimizing body talk and shifting the focus to being on athlete

performance and minimizing bias toward larger bodies, and involving sports psychologists on sub-elite and elite sports teams to provide education and support. Therapists can take action to make both organizational and societal changes. Each of these applications is viewed through the sociocultural model of body image. Understanding how this theory influences our views toward body ideals will aid in minimizing the power it has on people's perceptions of themselves and others.

Chapter 5: Conclusion and Recommendations for Future Research

This paper sought to discover the factors that influence sub-elite and elite athletes' body image once they have transitioned out of actively competing in their sport. This study found common themes of psychosocial, media, parents, coaches, type of sport played, and psychological and physical factors. A literature review showed how these themes could contribute to body dissatisfaction in athletes and the importance of finding ways to support athletes in their transition out of sport. The barriers had commonalities of managing societal expectations of Western body ideals and managing the power dynamic with coaches. In response, the facilitators to change called for utilizing therapists, implementing psychoeducational programs, educating coaches, and working to make systemic changes. Overall, it became apparent throughout this paper that long-term psychoeducational programs for both athletes and coaches would be effective.

All nine studies used a constructivist paradigm, which allowed researchers to examine how their participants' experiences were socially constructed (Creswell & Creswell, 2017). Additionally, working through a constructivist lens gives the participants their voice in sharing their experiences and allows them to be reflective on their experiences as they share them with researchers to create deeper understandings (Creswell & Poth, 2018).

Given the findings on coaches' impact on athletes, there is a need to increase education for coaches on how their behaviours and language affect athletes' mental and physical well-being (Carson et al., 2021; Kovács et al., 2022; Sabiston et al., 2020; Silva-Breen et al., 2022). Therapists can be impactful in providing this education to coaches, which may create systemic changes if coaches apply their learnings and share knowledge with colleagues. Suppose coaches receive proper and ongoing training and education on fostering a positive sporting environment.

In that case, systemic shifts may begin to occur, and athletes may feel better supported throughout their sporting careers and better equipped as they transition into retirement. A possible future research question to address this would be whether *coach education on body-related topics minimizes the risk of their athletes developing eating disorders and body dissatisfaction.*

Furthermore, educating athletes on the natural body changes that may occur upon leaving sport can help decrease anxiety levels since they are aware of the possibility of these changes and anticipate them rather than being surprised (Papathomas et al., 2018). Creating body acceptance and focusing on connecting to other aspects of athletes' identity as they transition out of sport, such as starting a family or a career, would protect athletes from more significant amounts of and focus on body dissatisfaction (Papathomas et al., 2018). Two potential research questions related to body acceptance should be explored. First, *what strategies could be implemented to increase body acceptance among current and retired athletes?* Second, *does focusing on body acceptance in a sporting environment lower the risk of athletes developing eating disorders and concerns about body image?*

An important finding from this study that can be applied to both athletes and the public is devaluing the messages of Western body ideals that the media engrains in us (Papathomas et al., 2018). To address this, education on the media's impact must continue to be analyzed and translated into educational practices. Included strategies should focus on minimizing harm, such as tailoring social media feeds to avoid seeing images of certain body types or behaviours and focusing on a person's performance and other positive qualities rather than appearance. With that, I would argue the importance of the following future research question: *How does the media impact retired athletes' body image and what protective factors can be applied to support them?*

In conducting a study on this research question, it is possible to lower the systemic problem of the media on body image. In the meantime, continuing to educate and bring awareness to both athletes and the public about the media's impacts on body image may help lower the risk of people being negatively influenced.

There are limitations to the findings and the clinical applications. Many studies addressed the need to expand diversity within their sampling population (Carson et al., 2021; Daniels et al., 2021; Silva-Breen et al., 2022; Stoyel et al., 2021; Thompson et al., 2021). Expanding studies to address athletes from different sports, geographical locations, socioeconomic statuses, and genders would strengthen the findings and create the ability to generalize findings and facilitators for change across diverse groups. Research shows that athletes who have low socioeconomic status and food insecurity are at a higher risk of developing an eating disorder (Poll et al., 2020); thus, future research would do well in addressing the underlying issues of how to support these athletes' basic needs to lower the risk of body-related problems. There also remains a lack of research addressing retired athletes' body image issues. Considering these gaps, I would recommend conducting further research on retired athletes to determine if they would have found these clinical applications beneficial before retirement. Although there is no way to implement these supports for them, it can spark the demand for immediate action in supporting athletes about to move into retirement. With that, another recommendation I would make is to determine how to support athletes who are already retired and what would support them in their current stages of life. I would argue that providing similar education on the natural body changes that occur post-sport, moving toward body acceptance, and focusing on other aspects of their identity would serve them well. Finally, increasing psychoeducational programs for coaches on their influence on their athletes must be made apparent in the sporting culture

(Kovács et al., 2022; Sabiston et al., 2020; Silva-Breen et al., 2022). This influence creates a power dynamic, and although it may be unavoidable, coaches must learn how to be effective yet safe mentors for their athletes.

Throughout writing this paper, my knowledge has increased in both clinical and research perspectives on how these meanings can apply in professional practice. First, researching a topic that is my passion allowed me to reflect on what I would have found beneficial as I retired from sport. My most considerable struggle was navigating how to view exercise to maintain a healthy lifestyle rather than training to compete. Additionally, as the purpose and level of my training changed, preparing for the associated nutritional changes could have minimized my struggles in finding a weight that best suited my new lifestyle. Second, finding body acceptance is a complex task for many people but crucial. With further research, how to educate athletes on body acceptance with the natural body changes that occur post-sport will become more apparent. Moreover, implementing this research into clinical settings as a therapist will support retired athletes who did not receive support and now need the tools to learn to accept their bodies. Thirdly, engaging in this research process allowed me to identify literature gaps and bring awareness to areas that need further attention, such as retired athletes rather than only currently competing athletes.

This capstone explored the factors that impact retired athletes' body image and the barriers and facilitators to change. Through this analysis, I recognize the need for changes to be made both at the organizational and systemic levels. I believe adding therapists to all sub-elite and elite sporting contexts will provide education and support to athletes and coaches so they can implement changes to prepare and support athletes as they transition into retirement.

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