1	Changes in Body Image Perceptions Upon Leaving Elite Sport:
2	The Retired Female Athlete Paradox
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4	Anthony Papathomas ^a
5	Trent A Petrie ^b
6	Carolyn R Plateau ^a
7	
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9	^a National Centre for Sport and Exercise Medicine, Loughborough University, Loughborough
10	LE11 3TU, United Kingdom. A.Papathomas@lboro.ac.uk; C.R.Plateau@lboro.ac.uk
11	^b Department of Psychology, University of North Texas, Denton, TX 76203, United States.
12	Trent.Petrie@unt.edu
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17	*Corresponding author: Anthony Papathomas, National Centre for Sport and Exercise
18	Medicine, Loughborough University, Loughborough, LE11 3TU, UK. Phone: (+44) 1509
19	228487. Email: A.Papathomas@lboro.ac.uk
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3	Abstract
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Little is known about the evolution of female athlete body image into retirement. In this study,
218 retired athletes from aesthetic sports answered a series of closed and open ended
questions regarding bodily changes since retirement. Years since retirement was unrelated to
current weight status (e.g., underweight, normal weight), what they were doing about current
weight (e.g., lose weight), and satisfaction with current weight (all p's > .69). Overall, 74.3%
thought they were normal weight, yet 55% were dissatisfied with their weight and 59.6%
were trying to lose weight. A rigorous thematic analysis of the qualitative data yielded 4 core
themes that characterized participants' experiences: 1) A move towards the feminine ideal; 2)
Feeling fat, flabby and ashamed; 3) A continued commitment to a former self; and 4)
Conflicting ideals: The retired female athlete paradox. Perceived muscle loss was considered
indicative of either increased fat (dissatisfaction) or increased femininity (satisfaction). For
some retired athletes, the satisfaction brought on by newfound femininity was complicated by
a coinciding and conflicting commitment to a muscular athletic physique. Practical
applications include strategies for sport psychologists to better support athletes in coping with
the body changes that occur on retirement from elite sport.

Changes in Body Image Perceptions Upon Leaving Elite Sport:

The Retired Female Athlete Paradox

Introduction

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Competitive sport, with its emphasis on normative comparisons, physical prowess, and body modifying training regimens, is a culture that is synonymous with the promotion of body consciousness (see McMahon & DinanThompson, 2011). Athletes' bodies are considered a performance tool on display for judgment and critique (Greenleaf & Petrie, 2013). Athletes commonly experience a range of performance-related weight pressures (Reel, SooHoo, Petrie, Greenleaf, & Carter, 2010), including coaches openly criticizing their athletes' body shape and size (e.g. Muscat and Long, 2008, Papathomas & Lavallee, 2010, Coppola, Ward, & Freysinger, 2014). This culture of "body surveillance" can put athletes at risk of body image disturbance and its associated maladaptive consequences (Cosh, Crabb, Kettler, LeCouteur, & Tully, 2015), including social physique anxiety (Haase, 2011), low self-esteem (de Bruin, Woertman, Bakker, & Oudejans, 2009) and disordered eating (Kong & Harris, 2015). The sport-body image relationship is complex and it is increasingly clear that whether or not athletes develop body image concerns is dependent on an array of inter- and intrapersonal factors (Karr, Davidson, Bryant, Balague, & Bohnert, 2013). According to a recent systematic review, two of the most salient factors are competition level and sport type; high level athletes in lean/aesthetic sports are most likely to experience a negative body image (Varnes, Stellefson, Janelle, Dorman, Dodd, & Miller, 2015). In terms of competitive level, elite performers may experience heightened weight pressures due to the higher rewards at stake and greater immersion in a weight-conscious culture and thus less competitive/recreational athletes may be more body satisfied. With regards to sport type, in lean (e.g., distance running) and aesthetic (e.g., gymnastics) sports, the influence of low

- 1 weight on achieving performance success may intensify pressures to be thin. As a result, such
- 2 weight-sensitive sports typically are populated by hyper-lean bodies which perpetuate the
- 3 overt focus on thinness (Martinsen & Sundgot-Borgen, 2013).

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4 As well as performance related weight concerns, athletes' body image may also be 5 affected by general and sport-specific cultural expectations of physical beauty. The 6 Westernized feminine ideal – whereby slenderness is considered maximally attractive 7 (Swami, 2015) – has become increasingly relevant for athletes due to the rise of athlete 8 objectification in the media (Kim & Sagas, 2014). Some sporting organisations may even 9 court such objectification by insisting on female participants wearing more revealing attire 10 than their male counterparts (Steinfeldt, Zakrajsek, Bodey, Middendorf, & Martin, 2013). A 11 commitment to the Western feminine ideal however – characterized by an absence of 12 musculature (Grogan, Evans, Wright, & Hunter, 2004) – conflicts with a commitment to the 13 physique required for success in most sports. Female athletes may therefore also perceive a 14 "functional" or "athletic" ideal (see Abbott & Barber, 2011) that concerns the body's 15 perceived capacity to achieve athletic goals. Even for weight-sensitive sports, the athletic 16 ideal is likely to involve greater muscle mass than the traditional feminine ideal. In power 17 sports, such as field athletics or rugby, the athletic ideal can be overtly muscular. In effect, 18 some athletes are situated in an untenable position of attempting to serve two masters --19 cultural prescriptions of feminine beauty (i.e., thinness) and the functional demands of 20 athletic performance (i.e., strength and musculature). Complicating matters, some argue that 21 there is a third "lean but toned" option, characterized by musculature on a slender frame. The 22 "fitspiration ideal" is an emergent cultural trend for hyper-fit bodies that are built for 23 aesthetic merit rather than for athletic prowess (Tiggermann & Zaccardo, 2015). Although 24 propagated as a body positive movement, critical examinations of the fitspiration ideal argue

that it is an equally extreme variant of the thin-ideal (Boepple, & Thompson, 2016).

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The term *female athlete paradox* was coined to reflect the contrast between a feminine ideal body and demeanor and an athletic ideal body and demeanor (Krane, Choi, 3 Baird, Aimar, & Kauer, 2004). In a seminal study, these authors argued that "successful athletes must be powerful and strong, yet obvious signs of this power are construed negatively, as contradicting hegemonic femininity" (p. 317). During a series of focus groups, 21 NCAA Division I female athletes described an experience of "dual and duelling identities" 7 (p. 326), whereby the muscular athletic-self was deemed incompatible with the feminine-self. Athletes used a number of strategies to manage this identity conflict, including accentuating femininity in social situations and embracing the functional and empowering qualities of their athletic physiques. Despite these coping strategies, athletes consistently walked a tightrope between "being muscular but not too muscular." Further, the pride expressed in their athletic bodies often co-existed with a conflicting desire to "look different" and "normal." Other studies have shown that athletes experience body satisfaction within sporting environments, but body dissatisfaction within social settings (de Bruin, Oudejans, Bakker, & Woertman, 2011). The notion of body image as context specific is therefore of particular relevance to 16 athletes who inhabit both a distinct athletic subculture as well as the wider cultural milieu. Researchers have focused almost exclusively on the body image concerns of currently competing athletes at the expense of studying how body image evolves once competitive sport ceases. This oversight is problematic and limiting for a number of reasons. First, athletic retirement represents an inevitable transition out of an immersive sporting culture that can have both protective and deleterious effects on body satisfaction. As such, retired athletes are likely to experience alterations in their body image in some way, be it positively or negatively. It is well established that athletic retirement can be a psychologically disruptive experience (see Cosh, Crabb, & LeCouteur, 2013) but the impact on body image remains seldom addressed and poorly understood. In a systematic review of 126 athlete retirement

- 1 studies, just 5 of these made reference to body image related concepts (Park, Lavallee, & Tod,
- 2 2013). How athletic retirement impacts body image therefore remains very much a question
- 3 to be answered. We know little of how athletes understand their bodies on retiring from sport
- 4 and how this understanding might evolve through retirement.

Second, only an incomplete understanding of athlete body image can be achieved if changes over time and context are not studied. Increasing knowledge of how body image concerns manifest at different points in athletes' lives, particularly during and after retirement from sport, is imperative. Body image across the life-course represents a topic of concern within general psychology (Liechty & Yarnal, 2010), yet sport psychology has almost exclusively focused on young competing athletes. Outside of the discipline, studies have addressed how body image is affected by life transitions such as pregnancy (Fuller-Tyszkiewicz, Skouteris, Watson, & Hill, 2013), marriage (Bove & Sobal, 2011) and college attendance (Smith-Jackson, Reel, & Thackeray, 2011) amongst others but the transition out of sport remains effectually ignored.

Third, many athletes tolerate weight concerns and body dissatisfaction under the premise that these will dissipate when competition stops (see Papathomas, Smith & Lavallee, 2015), yet there is little evidence to support this belief. Evidence that illuminates how weight and body image concerns evolve into retirement may support efforts to properly prepare athletes for when the transition out of sport occurs. Although numerous athlete career transitions programs and models exist in the literature (e.g. McArdle, Moore, & Lyons, 2014; Stambulova, & Wylleman, 2014; Lavallee, 2005) none explicitly address management of body image concerns. As such, knowledge development in this area is necessary to inform these programs and facilitate support for athletes with regards to body image concerns.

Only a small number of studies have examined retired athletes' body image concerns (Greenleaf, 2002; Kerr, Berman & De Souza, 2006; Kerr & Dacyshyn, 2000; Stirling, Cruz &

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Kerr, 2012). Kerr and Dacyshyn (2000), in a qualitative study exploring the retirement experiences of elite gymnasts, identified a long lasting preoccupation with weight and body size as a major theme. Although not the focus of this study, of the 7 former gymnasts interviewed, 5 described persistent feelings of body dissatisfaction into their post-competitive lives. The authors made no reference as to whether gymnasts' persistent body dissatisfaction intensified with time. In a related study (Kerr et al., 2006), an open-ended survey was used to garner the views on eating and weight control practices of current artistic gymnasts and those who had been retired for up to 5 years. Again, several of the 15 gymnasts described continued body dissatisfaction as well as disordered eating behaviors, which generally were more negative accounts than from the athletes who were still competing. These two studies suggest that athlete body image concerns that develop while competing may worsen and persist into retirement. Post-retirement bodily changes may be especially impactful for gymnasts as they often retire at young age when body image issues are pertinent (see Markey, 2010). Greenleaf (2002) conducted interviews with 6 retired athletes across a range of sports. She found that participants judged their current bodies against their previous athletic bodies and that the resulting discrepancy contributed to their body dissatisfaction. Greenleaf primarily focused on participants' past experiences as athletes and therefore retirementspecific accounts of body image were limited. In an interview study with 8 retired female rhythmic gymnasts, Stirling, Cruz and Kerr (2012) found that all participants perceived postretirement weight gain, muscle loss and body dissatisfaction; some athletes also reported disordered eating and pathogenic weight control behaviors. The several athletes who had disclosed pre-retirement disordered eating may have been especially vulnerable to a worsening of body image concerns once retired. Further, the sport of rhythmic gymnastics is extreme in its focus on aesthetics and competitors are typically slender and hyper-feminized. As such, the study offered little insight into the impact of retirement from sport on the female

- 1 athlete paradox. Across these studies, the perspectives of just 36 retired athletes have been
- 2 described. To build on this nascent body of evidence, researchers should explore the
- 3 perspectives of larger cohorts of retired athletes in order to capture experiential breadth and
- 4 nuance and to examine if years since retirement may be related to their current experiences of
- 5 body image. In turn, descriptive quantitative data (e.g. BMI, years since retirement) can
- 6 complement qualitative insights by providing contextual information to guide interpretation.

The present study

The principal objective of the present study was to provide the first focused analysis of body image perceptions in a large sample of former competitive athletes from weight-sensitive sports. Building on previous research (e.g., Greenleaf, 2002; Kerr & Dacyshyn, 2000; Kerr et al., 2006; Stirling et al., 2012), we assessed female athletes' attitudes toward their bodies after having been retired for two to six years from their sports. This approach allowed us to move beyond mere in-career understandings towards knowledge of athletes' body image perceptions over the years following retirement. To this end, we posed the following research questions. From a quantitative standpoint we asked: Does satisfaction with perceived body weight and composition differ according to number of years since retirement? From a qualitative perspective we asked: How do former athletes describe and make sense of perceived bodily changes? How do former athletes cope with perceived bodily changes?

Our research questions point to a *multi-method approach* whereby we collected both qualitative and quantitative data within an interpretivist framework. A multi-method approach is different to a mixed-methods approach as it is merely the data collection techniques that are mixed not the underpinning paradigm (Sparkes, 2015). So although we quantitatively explored body satisfaction as a function of years since retirement, we remained wholly faithful to interpretivism by framing results as patterns to explore not Truths to abide by. In so doing, we guard against the much more contentious and problematic mixing of

- 1 philosophies; such as a contradictory commitment to both realism and relativism or
- 2 objectivism and constructionism (Papathomas & Petrie, 2014). All this said we are mindful
- 3 that although philosophically coherent, our approach is not immune to critique.
- 4 Methodologists have warned that mixing of methods can result in a prioritizing of post-
- 5 positivism and an exalting of numerical data above qualitative insights (see McGannon &
- 6 Schweinbenz, 2011). To protect against post-positivizist subordinating of the qualitative, we
- 7 place deliberate emphasis on the diversity of participant meanings and understandings.

8 Methods

Participants

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Retired collegiate female athletes from the United States (n = 218), who represented the sports of gymnastics (66%) and swimming (34%) participated. At the time of the study, athletes had been retired from their sports for 2-3 years (n = 53), 4 years (n = 52), 5 years (n = 61), and 6 years (n = 51); one athlete did not report time since retirement. Most of the women (76.6%) had retired due to having completed their athletic eligibility in college. The majority of the athletes were White/NonHispanic (88.3%); their mean age and body mass index (BMI) were 25.72 years (SD = 1.19) and 22.31 Kg/m² (SD = 2.72), respectively. Although some retired athletes committed to athletic activities (e.g. fitness running/biking), none were involved in formally organized competitive sport at the time of the research.

Procedure

Once institutional ethical approval was granted, 325 athletes from Anderson, Petrie, & Neumann (2012) were initially recruited to participate in a larger follow-up study on the physical and psychological health and well-being of retired female collegiate athletes. To make contact, we used email addresses and phone numbers obtained from the athletes' former universities as well as social media sites. We sent standardized instructions and the

- 1 link to the web-based questionnaire to the athletes who agreed to participate. Athlete
- 2 responses were anonymous and identified only by a unique code. Researchers answered
- 3 athletes' questions throughout the data collection, which took place throughout 2015. A \$25
- 4 gift-card was awarded to each participant who completed the survey.

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As part of this larger study, participants provided current demographic information (e.g., age, weight) and answered three quantitative questions regarding their weight. First, the athletes indicated whether they thought they were underweight, normal weight, or overweight. Second, they reported (YES or NO) whether they were satisfied with their current (retirement) weight. Third, they selected from three options regarding their weight-related motivations (i.e., trying to lose weight, trying to gain weight, not trying to do anything specific about weight in any way). They also responded to the question "Has your body weight and/or composition (e.g., leanness, muscularity) changed since you retired from your sport and stopped competing/training as a collegiate athlete? (YES or NO)." The 218 athletes who responded "YES" provided information for two additional, open-ended questions: (a) "Please describe the changes that have occurred with your body weight and/or composition AND how you have felt about these changes;" and (b) "Please describe how you have coped with these changes in your body weight and/or composition." Height and weight were used to determine the athletes' BMI (kg/m2) in retirement, which was then compared to their BMI when they were active collegiate athletes (see Anderson et al., 2011). A weight difference scores was calculated to determine if, on average, the athletes' BMI had changed since they were active collegiate athletes ([BMI in retirement] – [BMI when active collegiate athlete]).

Although ubiquitous within qualitative psychology research, scholars have argued that the interview represents an overused strategy that is often uncritically defaulted to within this paradigm (Potter & Hepburn, 2005). Thus, our use of open-ended questions represents a viable and appropriate alternative to interviews. Open-ended questions, as incorporated in

1 this study, have previously been used to gather important qualitative insights on eating 2 disorders (e.g., Kerr et al., 2006) and they are characterized by a number of distinct features 3 that support the collection of high quality data. First, participants are afforded indefinite time 4 to engage in the deep reflection necessary to make sense of the experiences on which they are 5 reporting. Interviews on the other hand can often be permeated with a pressure to "keep talking," which can interfere with such deep reflection (Poland & Pederson, 1998). Second, 6 7 the process of writing a response rather than speaking one is an important and unique 8 commodity of completing open-ended questions. Qualitative researchers have been quick to 9 espouse the role of writing in both developing analytical interpretations and prompting 10 participants towards their own insights (Richardson, 2000). Writing attends to the well-being 11 of research participants, as well as providing researchers with access to rich qualitative data 12 (Elizabeth, 2008). We imposed no word limit on the questions, so participants could be 13 reflective and detailed in their responses. Although not all participants offered extensive 14 responses, no responses were formally excluded from the analysis. In total, written responses 15 amounted to 8819 words. The longest responses were in excess of 100 words.

Data Analysis

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Data from the three quantitative questions, as well as the weight difference score, were examined in relation to the athletes' years since retirement. We used chi-square analyses via cross tabulation. For this analysis, athletes were grouped according to their years since retirement. Thus, data are reported in percentages. For the weight difference variable, we used an ANOVA with years since retirement as the IV; data are reported as the mean weight difference score.

For the qualitative data, the first author initially scrutinized the participants' written responses for patterns of meaning relevant to each question and the overall focus of the study. This process was guided by the rigorous procedures proposed by Braun, Clarke and Weate

- 1 (2016) for conducting thematic analysis in sport psychology. This established approach
- 2 provides six clear but flexible steps toward making sense of qualitative data. Braun et al.
- 3 (2016) provide a guide to analysis rather than an instructional manual and they emphasize
- 4 that researchers should adapt this guide according to 3 methodological choices. These choices
- 5 consist of 1) is data interpreted at the semantic (explicit) or latent (implicit) level or a mixture
- of the two? 2) Is coding theory-driven (deductive) or data-driven (inductive) or a mixture of
- 7 the two? 3) What epistemological and ontological perspectives do you choose to subscribe to?
- 8 In terms of the latter point, Smith and McGannon (2017) have emphasized that establishing a
- 9 clear and coherent philosophical position is integral to a rigorously executed analysis.

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Having described the broad considerations informing our analysis, we now describe how we interpreted and conducted the 6 analytical steps; a) we made loose annotations during repeated readings of the data, with the objective of summarizing content and noting initial points of interest; b) on achieving an intimate knowledge of the data, we inductively constructed concrete conceptual codes. We prioritized semantic coding – which sensitizes towards participants explicit descriptions – because it aligned with our focus on the content of experience above the *construction* of experience; c) we next grouped codes according to shared meaning to form nascent themes. For example, we grouped together quotes that in some way addressed the Western feminine ideal; d) we then reviewed these themes in terms of their faithfulness to participants' original responses. Here, we posed the following question: do themes give a fair and authentic representation of what participants wrote? Further, we examined the conceptual basis of themes to ensure each theme held intuitive appeal and each was sufficiently different from the other. During this process the second and third authors acted as "critical friends" to challenge/confirm the first authors' interpretations (see Smith & Sparkes, 2013). The critical friend process is not a form of triangulation designed to achieve interpretive consensus, but rather to ensure that the interpretations offered were properly

- 1 deliberated and sufficiently layered (see Smith & McGannon, 2017, for a review of problems
- 2 with triangulation); e) with themes organized, we attributed to each a formal title that defined
- 3 its conceptual contribution; f) we continued our analysis up to and including the writing of
- 4 the actual report. Overarching all this, we assumed a position of ontological relativism and
- 5 epistemological constructionism. That is, we considered participants' perspectives as mind-
- 6 dependent, socially constructed and indicative of a personal truth rather than "The Truth".

Results & Discussion

All chi-square tests regarding the relationships between years since retirement and current weight status (e.g., underweight, normal weight), what they were doing about current weight (e.g., lose weight), and satisfaction with current weight, were nonsignificant (all p's > .69). Further, analysis of athletes' weight difference during the years since retirement also was nonsignificant, F(3, 213) = 1.61, p = .188. These findings suggest that neither the athletes' actual weight differences nor their perceptions varied based on how long they had been retired. Thus, we present the data from these three questions for the entire sample.

Overall, most retired athletes described themselves as being normal weight (n = 162, 74.3%), followed by overweight (n = 48, 22.0%) and underweight (n = 7, 3.2%). Despite this perception of being a normal weight, over half of the athletes indicated they were dissatisfied with their current weight (n = 120, 55.0%); only 97 (44.5%) were satisfied. Further, 130 (59.6%) reported that they were trying to lose weight; 79 (36.2%) were not trying to do anything about their weight in any way and eight (3.7%) were trying to gain weight. In terms of their weight difference, the athletes' BMI in retirement was slightly lower than when they were actively competing in college (M = -.25, SD = 2.33); this difference, however, was nonsignificant, t (217) = 1.59, p = .11. In addition, there was a nonsignificant trend across the four retirement timeframes (Retired 2-3 years, M = .22 [SD = 2.16]; retired 4 years, M = -.29 [SD = 2.94]; retired 5 years, M = -.18 [SD = 2.16]; retired 6 years, M = -.78 [SD = 1.91]),

- 1 which speaks to a decrease in weight over time but does not provide specific information
- 2 about changes in body composition (e.g., becoming less toned, muscular).

From the qualitative data, four higher order themes were constructed to represent retired athletes' experiences of their bodies: a) A move towards the feminine ideal, b) Feeling fat, flabby and ashamed, c) A continued commitment to a former self, and d) Conflicting ideals: The retired female athlete paradox. We describe each of these themes, along with conceptual subthemes where relevant, before theorising their contribution to existing understandings of athlete body image. Pseudonyms have been ascribed to athletes' quotes.

Theme 1: A move towards the feminine ideal

This theme addresses the experiences of those athletes whose perceived weight changes moved them closer to a desired feminine ideal. Across the entire sample, the most commonly perceived body change was a loss in muscle size and tone as a result of decreased training volume, which was consistent with most athletes stating that they were normal weight. Some participants described losing weight and actually becoming leaner due to this muscle reduction. For example, former gymnast Isobelle stated that: "I have a slightly thinner, leaner look now and I prefer the way I look now compared to how I looked during my college career." Similarly, former swimmer Kelsey stated: "muscles have decreased, I am a lot thinner with lean muscles now. I have been happy with the changes." Providing a detailed account of her perceived bodily changes, retired gymnast Lorna emphasized her satisfaction:

I have lost muscle in my traps, thighs, and rib area. I am very happy to not have as much muscle and be more lean. I still like muscle but not as big as before. I have also lost weight due to not being as hungry. (Lorna, 24, retired gymnast)

Echoing Lorna's sentiments, former swimmer Chelsea elaborated on positively perceived post-retirement body changes:

1 Lost most of the heavier muscle I gained while training in college about six months 2 after I stopped lifting weights/swimming. Due to the loss, I dropped about 15-20 3 pounds despite maintaining a normal eating pattern. I was surprized at how baggy my 4 clothes felt and was pleasantly surprized that I could fit in smaller sizes. I didn't feel 5 as bulky or broad-shouldered. (Chelsea, 26, retired swimmer) 6 In becoming thinner as a natural consequence of ceasing involvement in sport, both Lorna 7 and Chelsea described a welcome move towards the Western feminine ideal. Our study is the 8 first to identify a perceived *improvement* in body satisfaction post-retirement from sport. This 9 unique finding contrasts with previous research that has typically associated retirement body 10 changes with predominately negative consequences (e.g., Kerr et al., 2006; Stirling et al., 11 2012; Stephan, Torregrosa, & Sanchez, 2007). Lorna expresses delight at no longer having 12 muscle in her "traps, thighs and rib area". Equally, Chelsea's post-retirement body is absent 13 of "bulky or broad-shouldered" masculinity, she fits into smaller clothes, and she interpreted 14 these changes as positive. Although female athletes often express pride in their musculature 15 (see Krane, 2001, Ross & Shinew, 2008, Steinfeldt, Carter, Benton & Steinfeldt, 2011), the 16 power of feminine beauty conventions may be difficult to resist once sporting pursuits end. 17 Lorna's and Chelsea's experiences, as well as others in the sample, suggests that despite a 18 prolonged commitment to an athletic body some retired athletes may embrace the Western 19 feminine ideal and ultimately use it to evaluate their post-retirement bodies. This perspective 20 aligns well with the view that cultural prescriptions of femininity are dominant, ubiquitous 21 and inescapable (Busanich, McGannon, & Schinke, 2012). 22 Theme 2: Feeling fat, flabby and ashamed 23 In contrast to the experiences described in Theme 1, some retired athletes perceived 24 their decrease in muscle mass as indicative of increased body fat and an undesired move

away from both the feminine and athletic ideals. Although net weight gain was uncommon,

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- 1 athletes reported negative emotional well-being when it did occur. For example, a retired
- 2 gymnast wrote: "Lost muscle and gained fat. Overall physique has definitely changed.
- 3 Gained weight. I have felt sad, upset, and ashamed about these changes." In a similar vein,
- 4 former swimmer Natalie described the difficulties caused by her own weight gain:

I have had a really hard time coping with these changes. I lost most of my muscle tone
and became kind of soft at first, then started gaining weight. It's been a really big
struggle for me...Although I weigh 200 pounds other people say I don't look like it
because it is so spread out. I am nervous to be in a bikini around others and I don't
like to wear shorts because of the cellulite that has developed on my legs.

(Natalie, 24, retired swimmer)

Such perceived changes in weight and body composition may be the reason why over half of all athletes were dissatisfied with their current weight and stated that they were trying to lose weight. The deleterious impact of weight gain on affect and psychological health is a common finding (e.g., Davis et al., 2012; Kawachi, 1999; Singh, 2014). Retired athletes may be especially vulnerable to such negative emotional consequences because any weight that is gained represents a substantial discrepancy from their former bodies. Further, after several years' of the extensive body monitoring that is synonymous with sporting cultures (Carrigan, Petrie, & Anderson, 2015), former athletes may develop a heightened sensitivity to even small body-related changes (see Kerr, Berman & De Souza, 2006; McMahon & Penney, 2013). The data provide support for this interpretation because most of the athletes' perceptions concerned changes in body composition (e.g., increased fat) not changes to their net weight. For example, Rebecca, a 25 year old gymnast, wrote: "I have lost most of my muscle but I have remained about the same weight. Therefore, I am just more flabby and feel fat and gross." Experiencing body dissatisfaction even when actual weight has not changed is indicative of a particularly refined level of body consciousness. Words such as "soft," "saggy,"

and "flabby" frequently occurred throughout many of the retired athletes' descriptions of
their current bodies. In contrast to the wider female population, where the primary concern is
being slender (Swami, 2015), thinness alone may be insufficient for retired athletes to feel
satisfied with their weight and bodies.

Not all participants allowed themselves to be emotionally impacted by unwanted changes in body composition. Many discussed accepting it as a natural part of the retirement process, with some stating they would rather possess increased fat than continue to train at the intensity they did when competing in sport. Some athletes, such as retired swimmer Lara, discussed perceived increased fat levels in terms of acceptance rather than disruption:

Some of the muscle was replaced with fat/cellulite. I have become softer in my abs and buttocks. I have also noticed my hips have widened and I now have more of a waist/curve/womanly figure with my wider hips. I have talked about it with my spouse and parents. I have also tried to focus on being healthy and not skinny. I have had to realize that I don't have the same body that I used to. I have basically had to accept it (*Lara*, *24*, *retired swimmer*).

Similarly, Katrina, another retired swimmer, also referenced "realization" and acceptance:

Lost muscle mass and gained fat. Sad that I have lost muscle definition and gained weight. Levelled off until I was comfortable enough with the weight that I had gained. Realization that I will never be as fit as I was when I was competing in college athletics. Occasionally work out and watch my weight, learned to accept the way I look (*Katrina*, *24*, *retired swimmer*).

For both Lara and Katrina, the acceptance of increased fat is a reluctant one but it is nevertheless an acceptance. Lara references the support of significant others and Katrina cites a process of having "learned to accept" suggesting this is a process that takes time. The

- 1 impact for both these former swimmers is that neither described the difficult struggles
- 2 expressed by Natalie at the start of this theme.

For Amanda, also a former swimmer, situating her body image concerns within the

broader context of life helped her minimize the impact of negatively perceived changes.

Of course I am less confident in my body, however, I am really happy. I have a great job, great relationship, and a close relationship with family and friends. I no longer only find self-validation through my athletic success and athletic shape. I have figured out how to be happy with myself outside of my sport. (*Amanda*, 26, retired swimmer)

Amanda describes a process of broadening her identity beyond sport and towards other life domains, such as work, family and friends. For her, as the role of sport diminished, so too did the importance of the athletic ideal. In contrast to other former athletes featured within this theme, Amanda described reaching a point of happiness (as opposed to continued struggle or acceptance). In previous qualitative research, athletes have described the importance of broadening identity in order to reduce sporting pressures and facilitate healthy transition out of sport (Papathomas & Lavallee, 2010).

Theme 3: A continued commitment to a former self

Whereas the first two themes addressed how retired athletes' interpreted body changes with reference to a Western feminine ideal, this theme concerned those who maintained an unabated commitment to the athletic ideal they once fulfilled. The following two subthemes illustrate the ways in which a continued commitment to a former athletic self might shape how retired athletes experienced their bodies.

Constructing a new athletic body

A small number of participants actually described experiencing increased muscularity post-retirement as they embarked on a process of building a new athletic body:

1	I have become more muscular. It was difficult at first because my pants were fitting
2	tighter, but now I feel good about the changes and feel stronger. I am proud of myself
3	for being stronger and lifting the weights that I do at CrossFit. (Rebecca, 25, retired
4	swimmer)
5	First I lost all my muscle but now since I have been doing CrossFit I have built up a
6	lot more muscle than I have had. I know that my body is physically fit, it is just a
7	different kind of fit from the shape I was in during gymnastics. (Rachel, 26, retired
8	gymnast)
9	Rebecca and Rachel both described participation in CrossFit – a fitness trend characterized
10	by high-intensity functional movements – as leading to an increase in musculature. Although
11	Rebecca acknowledged some connection to the thin ideal ("it was difficult at first because my
12	pants were tighter"), both these former athletes were robust in their commitment to a more
13	muscular physique. Heywood (2015, p. 17) has argued that CrossFit represents an "emergent
14	cultural site that creates an alternative reality where body expectations and ideals tend to be
15	non-normative, and 'real,' functional bodies are idealized." As such, CrossFit may serve as
16	an empowering subculture for those individuals who have retired from sport but who
17	continue to resist dominant constructions of femininity in favor of an internalized athletic
18	ideal. In contrast, although CrossFit can expand possibilities for the female body, it may also
19	continue to reproduce hegemonic notions of female attractiveness (Washington &
20	Economides, 2016). Portrayed as overtly lean, with perfect hair and skimpy outfits, women in
21	CrossFit can be as feminized and sexualized as they are muscularized. It is uncertain then
22	whether CrossFit does offer retired athletes a sanctuary from homogeneous conceptions of
23	the ideal female body or merely adapts, reinforces and intensifies them. Its impact may be
24	better construed in terms of managing identity change during the transition into athletic
25	retirement. For example, Dawson (2012) identified CrossFit as a "reinventive institution"

1	whereby devor	tees seek to pr	oduce a new	social identity	through self-in	nprovement and
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- 2 transformation. For retired athletes, whose previous bodies and identities may be severed
- 3 (Lavallee & Robinson, 2007), such reinvention may support a successful transition out of
- 4 sport. CrossFit remains a new and marginal exercise trend and further research is needed into
- 5 its potential role in how retired athletes manage their new lives and new bodies.

Non-normalized body image ideal

Without a CrossFit-like replacement activity, ongoing subscription to an athletic ideal proved problematic as reduced training loads widened the gap between former athletes' actual and ideal bodies. Some athletes acknowledged their perceived athletic ideal as unrealistic and burdensome, yet remained committed to it. Across our sample, participants referenced a variety of strategies designed to support a return to an athletic physique such as stringent diets and bouts of extreme exercise. Few such strategies proved successful and this was often associated with emotional disturbance. Lina described some of the perceived consequences associated with her inability to fulfil the athletic ideal in retirement:

It was a rough transition. You spend years mentally thinking about the perfect body for your sport. And when the sport is over, it's hard re-adjusting that image back to "normal" standards and being ok with that. I've been out of the sport for 5 years now. The first two years were really rough. I expected to still have that body type. When I didn't, I would get sad and binge eat and then vomit to counteract it...It took time to get back in to a healthy cycle and establishing normal expectations. (*Lina*, 27, retired swimmer)

Similarly, Abbey described how a persistent allegiance to the athletic ideal impacted her current body image:

1	It took me a long time to realize that my body would never be what it was when I was
2	an athlete. I was in denial for probably a year after I was out. I still think back and use
3	that image as a gauge to how I COULD (capitals in original) look, but also know that
4	my life does not revolve around working out 20 plus hours a week or needing to be in
5	top shape to be successful. I still WANT (capitals in original) to be as lean and as
6	strong as I used to be, I've continued to work out, struggling slightly with consistency
7	due to typical adult life timeframesI guess the body image issues just make me a
8	judgmental person, causing my "ideal" to always be athletic in some way. (Abbey, 26,
9	retired gymnast)
10	Echoing the work of Greenleaf (2002), these quotes illustrate how comparing one's post-
11	retirement body with the body that was achieved as an athlete can be a source of body
12	dissatisfaction. In line with self-discrepancy theory (Higgins, 1987), each athlete's actual self
13	is discrepant with their ideal self and this is associated with negative emotions, including
14	body dissatisfaction. According to Lina and Abbey, it may take a number of years to
15	recalibrate an internalized ideal body towards something more compatible with a life outside
16	of sport. This lengthy process may also be psychologically challenging given both these
17	former athletes articulated a "rough transition." This idea is consistent with previous research
18	that has identified bodily changes post-retirement from sport as negatively related to
19	constructs such as global self-esteem, physical self-worth, and perceived bodily attractiveness
20	(Stephan, Torregrosa, & Sanchez, 2007). The degree to which expectations become
21	normalized and body image improves, as well as the time needed to reach this point, will
22	likely differ from athlete to athlete. As proclaimed by Abbey, her ideal will "always be
23	athletic in some way" suggesting she may be prone to a lingering dissatisfaction with how she
24	looks. Further, in the case of Lina, post-retirement body dissatisfaction extended to negative

- 1 affect and bulimic behaviors. Identifying the prevalence of disordered eating and eating
- 2 disorders in retired athlete populations should be a primary goal of future research.
- 3 Theme 4: Conflicting ideals: The retired female athlete paradox
 - Whereas the first two themes reflect athletes with a commitment to the feminine ideal and theme 3 concerns those with a commitment to the athletic ideal; the fourth and final theme reflects the experiences of those athletes who continued to wrestle with a dual and conflicting commitment to both the athletic and the feminine ideals:
- My weight is pretty much the same as when I was swimming, but I am

 SIGNIFICANTLY (capitals in original) less muscular. I'm glad I am not as muscular

 as I was when I was swimming and that my shoulders shrunk to a size that would fit

 into clothes, but I would like to be a little more muscular/toned than I am now.
- 12 (Simone, 26, retired swimmer)

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- I am less muscular and my butt has gotten a little saggy. I feel ok because I am still thin and feel energetic, but I would like to be more toned but not as bulky (muscular) as I was when I was competing in my sport. (*Carrie*, 25, retired gymnast)
- 16 Simone and Carrie expressed mixed feelings regarding the bodily changes they had 17 experienced. Both were pleased at their reduction in muscle mass yet at the same time 18 concerned at their lack of muscle tone. As way of explanation for this duality, we propose the 19 retired female athlete paradox, which represents an interesting twist on Krane et al.'s (2004) 20 original female athlete paradox. Whereas Krane et al.'s work addressed the inner-conflict 21 associated with maintaining an athletic physique for performance while simultaneously 22 subscribing to a thin feminine ideal; the retired female athlete paradox is defined as feeling 23 satisfied that the post-retirement body better resembles the feminine ideal, yet feeling

dissatisfied that this represents a move away from a still desired athletic ideal. This paradox

1 may be particularly difficult because the athletic body is closely connected to athletic identity

– something that is threatened during the retirement transition. Athletes may well embrace

3 their new found thinness but doing so may reinforce the loss of an athletic self and therefore

the loss of their principal identity. This finding is the first to show that tensions associated

with a commitment to competing body ideals persist into retirement.

Negotiating conflicting body ideals and associated tensions was not an easy process for the former athletes. Athletes drew upon different ideals to judge different body parts: "I like looking toned and I do not like that I have lost lot of muscle on my arms. I am ok with having lost some muscle on my legs because I like them smaller." Sculpting different body parts according to different ideal standards demands a heightened level of body consciousness and self-scrutiny. More commonly, there appeared to be a desire for a hallowed middle-ground of 'more muscular but not too muscular' that athletes felt might appease their dual allegiances to the athletic and feminine ideals. Studies must ascertain how retired athletes define this middle ground and its impact on long-term body satisfaction. A middle ground might present the best of both body ideals but it could also fail to fulfil either.

Final Reflections

This study explored 218 former athletes' perceptions of post-retirement changes to their weight and bodies and how they felt and coped with such changes. By collecting quantitative and qualitative responses through a written survey design, we were able to extend previous research (e.g., Kerr et al., 2006; Stirling et al., 2012) by examining female athletes' body image through a key developmental stage – retirement. Although 75% of the athletes viewed themselves as "normal" weight, and on average they had a lower, though nonsignificantly so, BMI in retirement than when actively competing, majorities were dissatisfied with their current weight (55%) and reported wanting to lose weight (60%).

Based on the qualitative data, much of the dissatisfaction may be ascribed to reductions in

muscle tone (and mass for some) and increases in body fat percentage (though for most actual weight did not change), which is consistent with previous research that it is changes in body composition, and not weight per se, which is particularly distressing (e.g. Kerr et al., 2006; Stirling et al., 2013). When athletes reported gaining weight in retirement, they felt neither athletic nor feminine, which was described as damaging to their identity and self-worth. The retired athletes who still predominately identified with their former athletic physiques also typically reported experiencing negative emotions because their daily lives did not allow the training time necessary to achieve these body ideals. Athletes who subscribed to both an athletic ideal and a feminine thin ideal represented particularly complex cases, as fulfilment of one ideal would result in nonfulfillment of the other. Commitment to two incompatible body ideals may render a retired athlete at risk of prolonged body dissatisfaction. In extension of Krane et al. (2003), we have coined the phrase *retired female athlete paradox* to address how these coinciding and conflicting commitments evolve on leaving sport.

Our results also provide insights into the different strategies former athletes used to cope with the bodily changes they experience during retirement. Participants who described more positive adaptations to their post-retirement body discussed coping strategies such as utilizing social support, broadening, or even constructing a new, identity, and changing their focus from being thin to pursuing health more generally. Our findings corroborate studies into coping with negative body image perceptions that suggest approaches based on "positive rational acceptance" – refocusing on personal assets (Cash, Santos, & Williams, 2005) and "positive reframing" (Pinkasavage, Arigo, & Schumacher, 2015) are the most effective.

Participants who wrote of more challenging experiences – such as prolonged body dissatisfaction and persistent negative affect – described stringent diets, extreme exercise regimes or hiding disliked parts of the body as their means of coping. For Cash et al. (2005), these strategies constitute "appearance fixing coping" – a maladaptive approach associated

less so, and how does coping evolve across the retirement process?

with high levels of body dissatisfaction and poor psychosocial functioning. Given that our
study identified several adaptive and maladaptive strategies for coping with bodily changes
during retirement from sport, future research should investigate the complexities of these
strategies. For example, it is important to explore which coping strategies are effective under
which circumstances, what factors lead some athletes to cope effectively and other athletes

Not all athletes in this study appraised their body changes as negative to warrant a coping response. In contrast to existing literature (e.g. Greenleaf, 2002; Kerr & Dacyshyn, 2000; Kerr et al., 2006; Stirling et al., 2013), the wide range of experiences reported our sample provides some much needed nuance to the overly simplistic suggestion that retirement from sport always results in body dissatisfaction. This study is the first to report that a minority of former female athletes became *even more satisfied* with their bodies post-retirement, as reductions in muscularity brought them closer to the feminine thin ideal. Equally, for some of the retired athletes who continued to internalize an athletic ideal, new fitness cultures, such as CrossFit, helped them reach it. The degree to which perceived body changes align with whichever ideal has been internalized is likely a product of individual differences and so both body satisfaction and dissatisfaction are possibilities on retirement from sport. Even where there is a misalignment between perceived body image and the internalized ideal, the broadening of identity into domains outside of sport (e.g., career, romantic relationship) helped to minimize the centrality of the body in determining worth.

Our findings present important implications for how sport psychologists within sporting organisations might promote healthier body image in retiring athletes. First, prior to retirement, athletes should be educated on the bodily changes that are likely to occur with reduced training loads and changes in nutritional habits. Such discussions may help normalize these anticipated bodily changes and assist athletes in adapting their future fitness

1 and nutrition into their retirement. Proactive planning like this may help to reduce the anxiety 2 that our athletes reported experiencing as they negotiated their lives in retirement. Second, 3 retired athletes should be supported in critically reflecting on their internalized ideal and its 4 possible impact on long-term body image and affect. Being able to adopt a more realistic 5 ideal may help athletes when their bodies naturally change as a result of reductions in training. 6 Third, athletes should be encouraged to broaden their identity and role repertoire beyond 7 those connected to sporting pursuits (Lavallee, 2005). For example, athletes could be helped 8 to acknowledge their roles and responsibilities outside of sport such as those pertaining to 9 family or work, and discuss how such identities may be fulfilling and defining as they move 10 into retirement. These psychoeducational strategies could be integrated into existing 11 programs that support athletes in their transition out of sport (e.g. Lavallee, 2005), as well as 12 into more traditional therapeutic practices. Fourth, sport psychologists might seek to address 13 the broader culture of obsessive body monitoring and dangerous weight management 14 practices that exists within elite sport (e.g. McMahon & Dinan-Thompson, 2011). Athletes 15 cannot step outside of the culture they inhabit and it impacts how they think, feel, and behave 16 (McGannon & Smith, 2015). This said; central cultural agents, whether coaches, teammates 17 or the sport institutions that govern them, can be seen as complicit in reproducing unhealthy 18 norms and a strict, often inappropriate conception of what an ideal athletic body must look 19 like. Focusing on this athletic culture may help to minimize the onset of body dissatisfaction 20 in athletes and ensure that they are already in a psychologically healthier place on entering 21 retirement. This might include working to deemphasize the weight-performance relationship; 22 banishing public weigh-ins; educating organisations, coaches and athletes on appropriate nutritional intake; establishing healthy eating norms amongst athlete groups; and ensuring 23 24 psychological support is readily available for athletes experiencing body dissatisfaction. Of 25 course, such cultural changes are ambitious, difficult and time consuming but this should not

- 1 deter sport psychology researchers or practitioners from trying. The point has been made that
- 2 a sport psychology that ignores broader culture risks alienating and distressing potential
- 3 benefactors; namely the athletes we look to support (McGannon & Smith, 2015). The powers
- 4 that be, whether they are institutions (e.g. governing bodies) or individuals (e.g. coaches),
- 5 contribute significantly to the culture of elite sport. As such, finding ways to educate these
- 6 cultural agents regarding weight and body pressures may prove more fruitful than working at

7 the level of the individual athlete.

Limitations and Conclusions

Like all research studies, this work was not without limitations for the reader to consider. We adopted a multi-method approach grounded in interpretivism, rather than mixed-method approach that draws from two separate philosophies. Although this decision ensured we maintained a coherent methodology, pragmatists might argue that the true benefits of mixing may not have been realized (see Sparkes, 2015). For example, the emphasis here was overtly on the qualitative data, with quantitative data serving as a supporting act. Mixed-methodologists therefore, those who see mixed-methods as a tradition in its own right, suggest such an approach cannot fully reap the benefits of truly exploring a topic through alternative lenses (see McGannon & Schweinbenz, 2011).

We have argued for the benefits of using open-ended questions on a written survey to collect qualitative data and we maintain it is a fruitful strategy to probe personal meanings. Nevertheless, not everyone feels comfortable expressing themselves in writing and many potentially interesting cases will choose to write short, one or two word answers. These individuals cannot be probed further and their stories remain undocumented. Where detailed responses are provided, relevant and unforeseen insights can be gleaned but the researcher has no opportunity follow-up on these points of interest. In the current study, a small number of participants made intriguing comments about the use of CrossFit as a replacement for sport

and a means to maintain an athletic body image. An interview would have permitted further
 exploration of this idea, whereas survey questions do not afford such an opportunity.

In conclusion, this primarily descriptive study is the first to explore body image perceptions in a large sample of retired athletes. Through our analysis, we have identified some key conceptual issues which contribute to understanding to the area of body image in sport. We have demonstrated that the transition out of sport does not always lead to body dissatisfaction but can sometimes result in an improved body image. Further, where increased body dissatisfaction does occur, it is often a consequence of perceived changes in body composition (i.e. increased fat) rather than perceived weight gain. Even though we were able to track changes in BMI over the course of retirement, we recognize its limitation in truly representing an individual's body composition. Thus to better understand, and track, how body composition might change from active sport participation through retirement, researchers might use more accepted measures of composition, such as percent body fat. For some retired athletes, experience was characterized by longing, or striving, for a former athletic body and the identity it encapsulated. Finally, our findings point to a potential "retired female athlete paradox" whereby former athletes are torn between their feminine ideal and the athletic ideal. Building the athletic retirement transition and the extended retirement experience into body image in sport discussions is essential if we are to enhance our understanding of the issue. Future research should now look to refine and extend the concepts identified in this study.

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