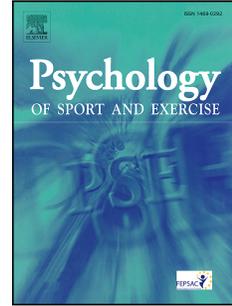# Journal Pre-proof

Self-compassion, social rank, and psychological distress in athletes of varying competitive levels

Courtney C. Walton, John Baranoff, Paul Gilbert, James Kirby

Please cite this article as: Walton, C.C., Baranoff, J., Gilbert, P., Kirby, J., Self-compassion, social rank, and psychological distress in athletes of varying competitive levels, *Psychology of Sport & Exercise* (2020), doi: https://doi.org/10.1016/j.psychsport.2020.101733.

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published in its final form, but we are providing this version to give early visibility of the article. Please note that, during the production process, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Author Statement

Courtney Walton: Conceptualization, Methodology, Formal Analysis, Investigation, Writing, Project Administration.

John Baranoff.: Supervision, Review and Editing.

Paul Gilbert: Review and Editing.

James Kirby: Conceptualization, Methodology, Supervision, Review and Editing.

Self-compassion, social rank, and psychological distress in athletes of varying competitive levels

Courtney C. Walton PhD [a*], John Baranoff PhD [a], Paul Gilbert PhD [b], James Kirby PhD [ac]

[a] School of Psychology, The University of Queensland, Brisbane, Queensland, Australia

[b] Centre for Compassion Research and Training, College of Health and Social Care Research Centre, University of Derby, Derby, United Kingdom

[c] Compassionate Mind Research Group, The University of Queensland, Brisbane, Queensland, Australia

Running Title: Self-Compassion in Athletes

* Correspondence should be addressed to Dr Courtney C. Walton.

E-mail: c.walton@uq.net.au. **Address:** School of Psychology, The University of Queensland, Brisbane, QLD, Australia

Word Count: 5,193
Conflict of Interest: None

Abstract

Background: Self-Compassion may be seen as a concept contrary to the aims of athletes engaged in competitive sport. This may be accentuated at more elite levels, where athletes may view concepts like self-criticism and self-judgement as more important for improvement.

Objectives: The current study aimed to better understand how athletes of different competitive levels (from social to international) relate to concepts of self-compassion. Further, we aimed to explore how factors relating to social rank and self-compassion contribute to psychological distress

Design: Cross-sectional online survey.

Method: An online survey was distributed, including the following validated questionnaires: Depression Anxiety and Stress Scales, the Self-Compassion Scale, Fears of Compassion Scales, Social Comparison Scale, Forms of Self-Criticising/Attacking & Self-Reassuring Scale, and the Striving to Avoid Inferiority Scale.

Results: Two hundred and fifty-three participants responded to the survey, including 115 recreational and 79 competitive athletes. There were no differences between groups on any measure of compassion or social rank. In a multiple linear regression model, lower self-compassion, higher fears of compassion (for self), and higher feelings of inadequacy predicted more pronounced psychological distress in athletes.

Conclusions: Contrary to expectation, the results suggest that even highly elite athletes may be open to using self-compassion. Given that reduced self-compassion and sense of social rank contributed to psychological distress in athletes, the results suggest that compassion-based approaches to treating psychological distress in this population may be valid.

Introduction

Taking part in competitive sport is typically associated with a wide range of positive social, health, and economic benefits [1]. However, competitive sport can also contribute to more negative consequences for both physical and mental health [2, 3]. Poor mental health may be delicately intertwined with practices of hyper-competition and perfectionism [4], distorted and narrow views of self and identity [5], self-criticism [6] and verbal/physical abuse from others [7]. Improved awareness of mental health disorders in elite sport has led to a drastic increase in research; however, much about this population remains unknown [2, 8, 9]. Exploring factors that can be addressed via systematic organisational or therapeutic intervention is crucial for promoting good mental health in athletes and the general population more broadly [10].

The body of research examining mental health problems in athletes has focussed predominantly on either sport-specific contextual phenomenon (e.g., injury, retirement, performance), or more descriptive prevalence rates. What is less well understood is how thinking patterns and approaches to considering the self in relation to others in athletic populations contributes to general psychological distress. Given that sport is inherently an arena of competition, it is likely that factors relating to social rank (how one perceives themselves compared to others) may play a key role in contributing to mental health and well-being.

Social rank is an evolutionary model that examines how competitive motivations orient attention, appraisals, and behaviour [11, 12]. Competitive motivations orient attention towards social comparison with others, to who is of higher or lower status, and submissive or aggressive behaviours as responses. Social rank theory has been applied to understand depressive symptoms and clinical populations, with promising evidence supporting the model [12]. The key vulnerability factor in social rank is how individuals

are competing out of the fear of losing, to avoid inferiority, and thereby rejection or exclusion by others. The process of social rank often includes a) social comparison (e.g., "Am I of higher or lower rank to others"), b) external shame (e.g., "others see me as inferior"), and submissive behaviour or aggressive behaviour (e.g., hide, avoid, or perfectionistic over-compensation). Importantly, according to this model it is not to be seen as superior which is important, rather it being included and avoiding rejection and exclusion which is critical [11].

It has been established that aspects of competitiveness and insecure striving for social rank are associated with poor mental health [13, 14]. Indeed, in sport, the relationship between perfectionism and negative affective responses to sporting failure is explained by young athletes' feelings of shame and embarrassment [4]. This fear of experiencing shame and embarrassment is associated with increased psychological stress in athletes [15]. In addition, athletes are often highly self-critical, considering this to be crucial for sporting success [6]. However, self-criticism interferes with goal pursuit [16] and is associated with problematic perfectionism, which has been increasing steadily over the last 20 years [17]. The function of self-criticism is important and often over-looked by researchers. One function of self-criticism is to improve and avoid making mistakes, while another form is a hating and punishing form of self-criticism [18, 19]. Therefore, exploring how self-criticism and social rank factors contributes to psychological distress in athletes may lead to practical implications for targeting maladaptive thought patterns and psychological tendencies in therapeutic settings. Self-compassion has established itself as a potentially relevant approach for this goal [20].

Much like acceptance and mindfulness approaches, our conceptual understanding of compassion stems from Buddhist traditions and philosophies. Recently however, compassion-based approaches have begun to be integrated within western approaches to

psychology. Compassion can be conceptualized as a prosocial motivation and can be defined by "the sensitivity to suffering in self and others, with a commitment to try to alleviate and prevent it" [11, Pg 19]. The flow of compassion is multidimensional. For instance, one can experience compassion from others, give compassion to others, or provide compassion to oneself (self-compassion).

While the positive benefits of receiving compassion from self or others have been clearly demonstrated [21], a recent meta-analysis from Kirby, Day [22] has shown that the aforementioned fears of accepting compassion from self and others are strongly related to poorer mental health outcomes. Therefore, not only is the ability to provide and receive compassion beneficial, active resistance towards compassion contributes to poorer well-being and mental health outcomes. It is a considerable likelihood then, that athletes who are prone to typically high levels of self-criticism may be more fearful and less likely to engage in compassion-based practices [20]. This may be particularly the case if athletes believe that self-compassion will lead to poorer performance.

A number of studies have begun to specifically examine self-compassion within recreational and elite athlete populations. Self-compassion has been associated with a number of beneficial factors in sport, including increased well-being and reduced body image concerns, fear of failure, and fear of negative evaluation [23-27]. Second, individuals higher in self-compassion have repeatedly been shown to respond with more positive and facilitative responses, and less negative responses to hypothetical, imaged or real negative sporting scenarios [25, 27-29]. It has also recently been demonstrated that individuals in team environments are more likely to be self-compassionate when they perceive their teammates to be [30]. Finally, one study has shown that self-compassion predicted heart rate variability reactivity to a recalled sporting stressful

situation, suggesting that participants with greater self-compassion show a more regulated autonomic profile (greater parasympathetic nervous system activity) [31].

The benefits of self-compassion identified by athletes include helping them to build positivity, perseverance, responsibility, and limit rumination in sporting contexts [24]. However, of crucial practical importance, athletes in multiple qualitative studies have also highlighted a fear of being too self-compassionate in sport. For example, one participant in the study of Sutherland, Kowalski [6; Pg 511] states "*If you are too self-compassionate you are always going to be fine with good enough. You are never going to strive to be better, and for an elite athlete that shouldn't be okay*". Another participant in a different study by Ferguson, Kowalski [24; Pg 212] reported that "*It's [self-compassion] giving yourself a break when you shouldn't be . . . most people who are like that don't go as far in sports because they're too easy on themselves*". Given that data in fact suggest that it is self-compassion that is related to better perceived sport performance rather than being self-critical [32], thought patterns like this emphasise the need for communicating to athletes a clear understanding of what self-compassion is (and isn't), and may suggest the need for alternative terminology.

A particularly useful qualitative investigation was conducted by Wilson, Bennett [33] who explored how athletes deal with the interrelationship between potentially opposing concepts of self-compassion and mental toughness. The athletes within this study identified both concepts as critical for dealing with sport-related adversity. Numerous participants spoke on the idea of maintaining an equilibrium between being self-kind and self-critical. One participant phrased this nicely as "*like the zipper effect of being mentally tough and self-compassionate, it coincides*" [33; Pg 66]. The results of these qualitative studies reinforce how varied in complexity athletes' views on self-compassion can be, and reinforce the need for practitioners in particular to spend

significant time understanding what self-compassion means to an athlete, and how they see it being useful or harmful in different contexts.

Excitingly, a brief self-compassion intervention has been shown to be effective in female athletes [34]. These authors randomly assigned 29 athletes to a self-compassion intervention and 22 to an attention control group over a seven-day period. The intervention revolved around general psychoeducation and compassionate-writing exercises which targeted different compassion processes in a sport-specific context. Increased self-compassion and reduced self-criticism and rumination were found following the intervention, with these improvements remaining at a one-month follow-up. Conversely, Reis, Kowalski [28] used a single session of self-compassionate writing exercise which did not lead to improvements in self-compassion, likely stemming from the limited exposure and intensity of the intervention.

A key concern of the literature however is that 'eliteness' of athletes in the samples has not been well accounted for. Elite athletes are considered a relatively unique population due to competition and training demands [9]. There is a possibility that views towards compassion are variable amongst athlete levels, with more elite athletes showing a higher disposition to be competitive and self-critical [35], and subsequently more resistant to self-compassion. Many of the aforementioned samples include only a small number of athletes competing at more competitive levels. In our view, grouping of varyingly competitive individuals within one group may introduce a level of heterogeneity that has not been well accounted for, and the distinction between athletes engaging in sport for recreational or more elite levels, requires better consideration for effective implementation by sport psychology practitioners.

Second, although compassion-based measures have been shown to be related to measures of well-being in the sport psychology literature, they have not to our

knowledge been related to issues with depression, anxiety, and stress (termed hereafter as psychological distress). Views and practices around compassion are related to these outcomes in healthy and clinical populations [36], but this has not yet been investigated in unique competitive sporting populations who may interact with concepts of self-compassion a unique way [23, 24].

Therefore, the aim of the current study is to examine aspects of self-compassion and factors relating to social rank across groups based on their athletic competition level. First, it was hypothesised that those who compete at more elite levels (i.e., International, National, State/Regional) will show lower self-compassion and higher fears of compassion for self, than those competing in more recreational competitions (local, social) or those not competing athletically at all. Second, it was hypothesised that self-compassion and social rank factors would be related to a measure of psychological distress. Specifically, we predicted that lower self-compassion, higher fears of compassion (for self), and lower views of self across a range of social rank measures (social comparison, insecure striving, and inadequate self-criticism) would be related to increased psychological distress.

Methods

Procedure

Participants completed the anonymous online questionnaire using Qualtrics[TM] Survey Software. All the participants provided online informed consent before the start of their participation and Human Research Ethical Approval from the University of Queensland was given on 11th of June, 2019 (approval number: 2019001278). A convenience sample was used involving snowball sampling via online social media (e.g., twitter) as well as advertisement through SONA, the first-year undergraduate psychology pool at the University of Queensland.

Measures

Participants completed a number of measures via Qualtrics. Following basic demographics, a number of questionnaires previously employed in the literature were used to examine a range of themes including views on compassion, social rank, mental health, and athletic identity. Questionnaires within the survey were presented in a randomised order to avoid any order effects. These questionnaires are described below.

Athlete competitiveness level. To determine competitiveness level, athletes were asked "What is the highest level of sporting competition you have competed at in the last 12 months?", with the following available responses: 'International', 'National', 'State/Regional', 'Local', 'Social', or 'None'. We made the a-priori decision to group International, National, and State/Regional athletes as "competitive", and Social or Local athletes as "recreational". While there are more complex ways of defining athlete eliteness [e.g., 37], we prioritized questionnaire succinctness given participants were not reimbursed for their time. For this reason, we use the labels "competitive" and "recreational" rather than "elite" or "non-elite".

Depression, Anxiety, and Stress Scales. The Depression, Anxiety, and Stress Scales-21 [DASS-21; 38] were used to assess psychological distress. The scale consists of three subscales measuring depression, anxiety, and stress. Participants indicated how much each item applied to them over the past week on a four-point Likert scale from 0 (*Did not apply to me at all*) to 3 (*Applied to me very much or most of the time*). A total score is calculated as a measure of psychological distress by summing all items. Higher scores indicate more severe symptoms. The DASS-21 has previously demonstrated good

convergent and discriminant validity [39] and excellent internal consistency for the

depression ($\alpha = .94$), anxiety ($\alpha = .87$), and stress ($\alpha = .91$) subscales [40]. In the current

study, the total score demonstrated excellent internal consistency ($\alpha = .93$), as well as

good depression, anxiety, and stress scores ($\alpha = .89, .81, .85$ respectively).

Self-compassion Scale. The 26-item Self-Compassion Scale [SCS; 41] was used as

a measure of self-compassion in the current study. Participants responded on a five-point

Likert scale ranging from 1 (almost never) to 5 (almost always) to a number of

statements (e.g., *"When times are really difficult, I tend to be tough on myself"*. A mean

score was calculated by first reverse coding negative items, and then averaging the 26

items, with higher scores indicative of greater self-compassion. The SCS has previously

demonstrated good test-retest reliability, discriminant and concurrent validity and strong

internal consistency reliability ($\alpha = 0.92$). In the current study, the total score

demonstrated excellent internal consistency ($\alpha = .95$).

The Fears of Compassion Scale. The Fears of Compassion Scale [FCS; 42] was

used to examine fears around providing and receiving compassion to/from self/others.

Participants responded on a five-point Likert scale ranging from 0 (Don't agree at all) to

4 (Completely agree) to a number of statements. These scales comprise the following:

the 10-item Fear of Compassion for Others Scale measures the belief that compassion for

others will lead to negative consequences (e.g., "I worry that if I am compassionate,

vulnerable people can be drawn to me and drain my emotional resources"), the 13-item

Fear of Compassion from Others Scale measures the belief that compassion from others

is negative ("e.g., "Wanting others to be kind to oneself is a weakness"), the 15-item

Fear of Compassion for Self Scale measures the belief that compassion for oneself is

negative (e.g., "I feel that I don't deserve to be kind and forgiving to my-self"). In the original study [42] these scales demonstrated good reliability with Cronbach's alpha of 0.92 for self, 0.85 from others, and 0.84 for others in a student sample. In the current study, excellent consistency for the Fear of Compassion 'for Self' ($\alpha = .93$), 'from Others' ($\alpha = .90$), and 'for Others' ($\alpha = .86$) was demonstrated.

Social Comparison Scale. The Social Comparison Scale [43] measures the tendency towards making more negative or positive social comparisons (i.e., rank) in areas such as ability, inclusion, and desirability. Using a semantic differentiation approach, individuals rate how they feel relative to others on 11 bipolar constructs (e.g., "Inferior" - "Superior") on a 10-point scale. A higher score indicates a more favourable rating compared to others. The scale has been found to have high internal consistency with a Cronbach's alpha of 0.91 [43]. In the current study, there was excellent internal consistency ($\alpha = .92$).

Forms of Self-Criticising/Attacking & Self-Reassuring Scale. The 22-item Forms of Self-Criticising/Attacking & Self-Reassuring Scale [19, 44] measures participants' critical and self-reassuring self-evaluative responses to setbacks or disappointments. Participants rate on a 5-point Likert scale ranging from 0 (not at all like me) to 4 (extremely like me) how they might typically think and react when things go wrong for them. The scale measures two forms of self-criticism: Inadequate self (9 items), which focuses on a sense of personal inadequacy (e.g. "I am easily disappointed with myself") and Hated self (5 items), which measures the desire to hurt or persecute the self (e.g. "I have become so angry with myself that I want to hurt or injure myself"). In addition, a third sub-scale measures self-reassuring and supportiveness when things go badly (e.g. "I

am able to care and look after myself"; 8 items). We were primarily interested in the 'inadequate self' subscale, as we anticipated this to be most relevant in a sporting context. The scale has demonstrated Cronbach's alphas of .90 for inadequate self, .86 for hated self and .86 for reassured self [44]. In the current study, the 'inadequate self' score showed excellent internal consistency ($\alpha = .90$), and there was good consistency for both 'hated self' ($\alpha = .81$), and 'reassuring self' ($\alpha = .89$) subscales.

The Striving to Avoid Inferiority Scale. Part one of The Striving to Avoid Inferiority Scale [45] was used to measure aspects of competitiveness via a) beliefs about striving to compete to avoid inferiority (e.g. 'If I don't strive to achieve I'll be seen as inferior to other people') and b) feelings of acceptance by others whether one succeeds or fails and not having to compete (e.g. 'Others will accept me even if I fail'). The striving element is referred to as 'insecure striving', while the second element as 'secure non-striving'. Participants rate thirty-one statements describing how they think and feel about the need to strive and compete in life. Each item is answered using a five-point Likert scale of 0 (never) to 4 (always). We were primarily interested in the insecure striving subscale. The scale has shown Cronbach's alphas of 0.84 insecure striving and 0.69 secure non-striving. In the current study, the 'insecure striving' score showed excellent internal consistency ($\alpha = .92$) while there was also good consistency for the 'secure striving' subscale ($\alpha = .88$).

The Athlete Identity Measurement Scale. We wanted to determine how strongly participants identified as athletes, as a secondary measure of athlete competitiveness. Therefore, this variable was primarily for descriptive purposes. The 7-item Athlete Identity Measurement Scale [AIMS; 46] was used to assess aspects of identification

(e.g., social identity, exclusivity, and negative affectivity) with the athlete role on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Participants' athletic identity is measured by a total composite score generated by a summation of the scores for the 7 items. Higher scores indicate stronger identification with the athlete role. The 7-item version of the AIMS has shown good reliability with Cronbach's alphas of 0.81 [46]. In the current study, the AIMS showed excellent internal consistency (α = .91).

Statistical Analysis

Statistical analysis was conducted using IBM SPSS Statistics Version 24. The first stage of analysis involved using analysis of variance to determine group level differences across the measurements obtained. For those variables for which assumptions of normality were not met, non-parametric testing using the Kruskal-Wallis test was used. Independent samples t-tests and Mann Whitney-U tests were used to determine gender differences in self compassion and fears of compassion, respectively. Pearson's correlations were used to confirm our variables of interest were correlated significantly with DASS-21 scores. Next, linear multiple regression was used to uncover the independent contribution of these correlated variables towards psychological distress.

Results

Data was examined to confirm full completion of questionnaires by participants. Overall, there was 0.08% missing data for questionnaire items. The a priori cut-off for removing a participant for missing data was either two missing points in a subscale or missing 20% of total items on a measure [32] other than the compassion scales. Two participants were removed for extensive missing data on the self-compassion scales given they were the primary survey of interest. One participant had extensive missing

data for the Forms of Self-Criticising/Attacking & Self-Reassuring Scale and this scale was removed from further analysis for this participant. Given the minimal remaining missing item data, missing values were resolved by within-item mean substitution. We calculated the item average for the participants with observed scores and imputed that average where participants had a missing score. In datasets with minimal missing data like this one, simpler methods such as this are considered appropriate [47].

Descriptive data for participants included in the study is presented in Table 1. The most frequently cited sports across the recreational and competitive athletes were: cycling ($n=26$), soccer ($n=19$), Australian football ($n=13$), touch football ($n=12$), basketball ($n=11$), ultra/trail/marathon running (each $n=11$), ultimate frisbee ($n=10$), hockey ($n=9$), netball (both $n=9$), triathlon ($n=8$), athletics/track and field ($n=8$), rugby union ($n=7$), and swimming ($n=7$). All other sports were cited five or less times. Mean scores and significance testing for the compassion and social rank-based variables are provided in Table 2. There were no statistical differences between women (M = 3.04, SD = 0.7) and men (M = 3.21, SD = 0.7) athletes in self-compassion, $t(191) = 1.66$, d = .24, $p > .05$ or fears of compassion for self, (women mean rank = 97.15, men mean rank = 96.86, $U = 4642$, $Z = -.04$, $\eta^2 = 0$, $p > .05$)[1].

Table 1

Descriptive Data for Participants Included in the Study

	Non-Athletes	Recreational Athletes	Competitive Athletes
n	59	115	79
Age	30.53 (5.5)	30.43 (5.2)	27.00 (6.2)

---

[1] The one participant who identified as non-binary gender unfortunately had to be removed for the analysis of gender differences, for statistical reasons.

Gender (women/men/non-binary)	43/16/0	57/57/1	39/40/0
Level of current competition	None	Social = 53 (46%) Local = 62 (54%)	International = 20 (25%) National = 28 (35%) State/Regional = 30 (38%)
Current Education Status	Studying Full Time = 16 (27%) Studying Part Time = 7 (12%)	Studying Full Time = 27 (23%) Studying Part Time = 6 (5%)	Studying Full Time = 24 (30%) Studying Part Time = 13 (16%)
Current Employment Status	Working Full Time = 33 (56%) Working Part Time = 20 (34%)	Working Full Time = 69 (60%) Working Part Time = 34 (30%)	Working Full Time = 41 (52%) Working Part Time = 28 (35%)
Athlete Identity Measurement Scale	18.45 (9.5)	30.40 (8.3)	38.22 (6.1)
DASS-21 – Depression	Normal = 34 (58%) Mild = 11 (19%) Moderate = 9 (15%) Severe = 3 (5%) Extremely Severe = 2 (3%)	Normal = 74 (64%) Mild = 13 (11%) Moderate = 14 (12%) Severe = 6 (5%) Extremely Severe = 8 (7%)	Normal = 51 (65%) Mild = 8 (10%) Moderate = 12 (15%) Severe = 7 (9%) Extremely Severe = 1 (1%)
DASS-21 – Anxiety	Normal = 44 (75%) Mild = 4 (7%) Moderate = 7 (12%) Severe = 0 (0%) Extremely Severe = 4 (7%)	Normal = 83 (72%) Mild = 19 (8%) Moderate = 8 (7%) Severe = 5 (4%) Extremely Severe = 10 (9%)	Normal = 57 (72%) Mild = 4 (5%) Moderate = 11 (14%) Severe = 2 (3%) Extremely Severe = 5 (6%)

DASS-21 - Stress	Normal = 30 (51%)	Normal = 73 (64%)	Normal = 52 (66%)
	Mild = 13 (22%)	Mild = 14 (12%)	Mild = 8 (10%)
	Moderate = 7 (12%)	Moderate = 15 (13%)	Moderate = 10 (13%)
	Severe = 7 (12%)	Severe = 10 (9%)	Severe = 7 (9%)
	Extremely Severe = 2 (3%)	Extremely Severe = 3 (3%)	Extremely Severe = 2 (3%)

Notes: Scores represented by mean (standard deviation) and counts represented by number (percentage of subgroup, rounded to nearest whole number).

Table 2

Group Comparisons for Questionnaires of Interest

	Non-Athletes	Recreational Athletes	Competitive Athletes	Statistic
DASS-21	14.82 (10.5)	14.03 (11.0)	14.02 (10.5)	$H = .78$, $p = .68$; $\eta^2 = .01$
Self-Compassion Scale	2.96 (0.8)	3.10 (0.7)	3.14 (0.7)	$F = 1.07$, $p = .35$; $\eta_p^2 = .01$
Fears of Compassion (from Others)	12.69 (8.5)	13.21 (10.2)	12.74 (9.3)	$H = .04$, $p = .98$; $\eta^2 = .01$
Fears of Compassion (for Others)	14.05 (7.0)	15.54 (8.6)	15.23 (8.1)	$F = .68$, $p = 51$; $\eta_p^2 = .01$
Fears of Compassion (for Self)	12.79 (10.6)	13.36 (12.0)	13.20 (12.1)	$H = .02$, $p = .99$; $\eta^2 = .01$
Social	60.15 (16.7)	56.4 (16.3)	60.09 (16.9)	$H = 3.04$, p

Comparison				$= .22; \eta^2 = 0$
FSC/ASR - Inadequate Self	17.29 (8.1)	15.53 (8.2)	14.25 (7.1)	$F = 2.53, p = .08; \eta_p^2 = .02$
FSC/ASR - Hated Self	3.20 (3.6)	3.06 (3.5)	2.19 (2.8)	$H = 3.66, p = .16; \eta^2 = .01$
FSC/ASR - Reassured Self	19.45 (6.3)	19.38 (5.9)	20.68 (6.1)	$F = 1.22, p = .30; \eta_p^2 = .01$
STAI - Insecure Striving	33.97 (13.8)	33.07 (12.4)	33.13 (12.2)	$F = .11, p = .90; \eta_p^2 = 0$
STAI - Secure Striving	30.54 (7.7)	32.00 (7.4)	32.47 (7.3)	$F = 1.18, p = .31; \eta_p^2 = .01$

Note: DASS-21 – Depression Anxiety and Stress Scale; FSC/ASR - Forms of Self-Criticising/Attacking & Self-Reassuring Scale; STAI - The Striving to Avoid Inferiority Scale; η^2 = Eta squared ; η_p^2 = partial Eta squared

Having established that there were no differences in self-compassion or fears of compassion amongst competition level and gender, the second stage of investigation was to examine the effects of these variables on athletes' current psychological distress (determined by DASS-21). Given that in addition to the null results represented in Table 2, no difference was found between recreational and competitive athletes in current psychological distress (recreational mean rank = 97.57, competitive mean rank = 97.39, $U = 4534$, $Z = -.02$, $\eta^2 = 0$, $p > .05$), athlete data from both groups were merged. Correlations between DASS-21 scores and the variables of interest were conducted. As shown in Table 3, all social rank and compassion-based variables correlated significantly with DASS-21 scores. Athletic identity was not associated with current psychological distress and thus not included in the model. Of note, a stronger athletic identity was

significantly correlated with reduced self-compassion and increased fear of compassion for self and insecure striving to avoid inferiority. However, this effect size was only small. To examine the independent explanatory strength of all social rank and compassion-based variables; social comparison, insecure striving, inadequate self, self-compassion, and fears of compassion (for self) were entered into a multiple linear regression model.

During assumption checks, it was shown that DASS-21 and fears of compassion (for self) showed a strong positive skew which led to non-normality and heteroscedasticity of residuals in the model. Rather than transformation of these variables, bootstrapping was considered a more appropriate approach to regression analysis in order to maintain interpretation of coefficients. In addition, one multivariate outlier crossed the critical χ^2 for df = 5 (at α = .001) of 20.52; however the associated Cook's distance was low, (maximum in dataset = .13) suggesting no significant influence of any case. All remaining assumptions for analysis were met. In the bootstrapped model, the five social rank and compassion predictor variables accounted for 42.4% of the variability in DASS-21 scores, $F(5,187) = 27.50$, $p = .00$ suggesting a large effect of Cohens $f^2 = .74$ [48]. The model is shown in table 4, and suggests that self-compassion, fears of compassion (for self), and feelings of inadequacy are significant predictors of current psychological distress in athletes, contributing 2%, 2.5% and 5.2% of unique variance, respectively.

Table 3

Correlations for the Athlete (Recreational and Competitive) Sample

	1	2	3	4	5	6
1. Athlete Identity	--					

2. Psychological distress	.11	--				
3. Social comparison	-.05	-.24**	--			
4. Self-compassion	-.15*	-.59**	.32**	--		
5. Fears of compassion for self	.17*	.51**	-.18*	-.60**	--	
6. Inadequate self	.06	.60**	-.22**	-.78**	.61**	--
7. Insecure striving	.17*	.41**	.04	-.51**	.52**	.53**

Table 4

Bootstrapped Regression Coefficients with Bias Corrected Accelerated 95% Confidence Intervals, Semi-partial Correlations, and bootstrapped significance values for each predictor in the regression model.

	B (BCa 95% CI's)	Semi-Partial Correlation	Sig
Constant	15.92 (4.25, 27.62)	-	.01
Self-Compassion	-2.85 (-5.51, .102)	-.14	.04
Fears of Compassion (for self)	.15 (-.03, .31)	.16	.03
Social Comparison	-.05 (-.14, .02)	-.10	.12
Inadequate Self	.42 (.16, .67)	.23	.00
Insecure Striving	.06 (-.07, .19)	.07	.36

Discussion

The current study aimed to examine if athlete 'eliteness', as assessed by competition level contributed towards views on self-compassion and social rank-based factors, which may subsequently predict susceptibility to psychological distress. Our hypothesis that those competing at a higher sporting level (more competitive) would

endorse lower self-compassion and stronger fears of compassion for self was not well supported, with only minimal correlational evidence. There was no difference on any measure of compassion-based investigation amongst those not playing sport, recreational athletes, or competitive athletes. The correlations between athlete identity and compassion were statistically significant but small in effect size. Within athletes specifically, individuals' self-criticism expressed via feelings of inadequacy was the strongest predictor of current psychological distress, along with self-compassion and fears of compassion for self, to a smaller extent. The findings have important implications for practitioners working with athletes experiencing psychological distress, as well as helping to inform future research in the field of clinical sport psychology.

It is certainly surprising to us that eliteness did not differentiate between any of the measures explored. Although replication and further studies to address the limitations outlined below are warranted, for now a tentative conclusion can be drawn that athletes competing across various competition levels do not differ in how they view self-compassion and compare themselves to others. Alternatively, given that the questionnaires used were not sport-specific, one hypothesis is that athletes view these concepts as context-specific. For example, a recent study showed that student athletes self-reported considerably higher scores on measures of grit in sporting contexts compared to academic and general life [49]. Thus, in the current study, while a highly competitive athlete may be resistant to concepts of self-compassion in sporting settings [6], this fear may not overlap with their views as relevant to navigating general life. This view supplements the qualitative work of Wilson, Bennett [33] who show that athletes alternate between using self-compassion and criticism at different times. This is the rationale used by some authors who recently adapted the wording of the self-compassion scale in their work to be athlete specific [30, 32].

The results of the regression analysis suggest that lower self-compassion, higher fears of self-compassion, and feelings of inadequacy predict current psychological distress in athletes. This is aligned with research in non-athlete populations [14]. The findings support the suggestions of Mosewich, Ferguson [20] who suggest that self-compassion interventions may be needed to address self-criticism in athletes. Practitioners who work with athletes that may be experiencing mental health problems may be well-advised to direct therapeutic approaches to understand how an athlete views themselves through the lens of self-compassion and social rank [50, 51]. In terms of feasibility of such intervention, it is notable that fears of compassion were considerably low in this sample compared to broader samples [22], suggesting many athletes may not be as fearful of the construct as anticipated.

Finally, we highlight that our results suggested no difference between men and women athletes. The bulk of research in this area has focused on women athletes, primarily due to their facing challenges related to self-criticism around body image at a higher rate than men [52]. Nevertheless, this general focus makes conclusions applicable to the broader population difficult. Our results, along with a small number of other studies [e.g., 27, 53] suggest that men athletes do not appear to be more, or less, self-compassionate, suggesting intervention via this route may be just as warranted.

Limitations and Future Directions

A key concern was that there may have been a bias in the recruitment, in that compassion was clearly a part of the study's focus (the word compassion was in the study title). Poucher, Tamminen [9] have recently discussed how the naming of study content (e.g., to explore 'wellbeing' rather than 'mental health') could drastically affect recruitment biases in athlete samples, and work in other fields has highlighted how study

terminology can drastically affect results [54]. Fears of compassion were low in this study (scores around ~13) while a recent meta-analysis from Kirby, Day [22] had a mean score of 19.64 for non-clinical samples. It is feasible that athletes who are less resistant and more self-compassionate, were more likely to respond to the questionnaire, while those more fearful and critical athletes did not. This represents a limitation of psychological self-report data collection generally. Lastly, the measurement of psychological distress was constrained to a specific time period, while other measures of compassion and social rank assessed more trait-like characteristics. This introduces the possibility that certain temporal stressors in the participants' environment may have contributed to either higher or lower than typical psychological distress scores. This is a common issue in much psychometric assessment in mental health research.

We contend that a number of future directions can be taken from this work. Firstly, it is unclear whether individuals from different sporting cultures (e.g., high contact team sports vs individual endurance sports vs aesthetic sports) view concepts of self-compassion differently, and this is an interesting future research question. Unfortunately, we did not have the statistical power nor a priori hypotheses to begin investigating differences amongst sports. Second, we propose the more complex mediation models exploring the role of self-compassion may be beneficial to further explore how self-compassionate practices influence a range of variables applicable to sport and mental health. We did not have appropriately defined theoretical rational for this in the current study, and thus propose our results as more preliminary in understanding the associations between social rank, compassion, and psychological distress. Lastly, mental health problems are of increasing concern in elite sport [2, 8]. Appropriately conducted controlled trials of compassion-focussed therapies [51] on identified psychological

distress and mental health problems in athletes is warranted given the role of self-compassion on psychological distress in the current study.

Conclusions

The strengths of this study are that for the first time, self-compassion has been explored in significant detail across a diverse population of athletes and non-athletes. The sample ranges from those who have never participated formally in sport, to those participating at a local/recreational level, and those competing at an international stage across a range of individual and team sports. The sample is well balanced across gender, employment/education status, and mental health status. In addition to providing detailed data on self-compassion and fears of compassion, views on constructs which have not been adequately described in athlete samples previously such as social comparison, striving to avoid inferiority, and feelings of inadequacy have been provided. It is anticipated that this data will inform future research hypotheses and work in the field, to further understand how athletes view and engage with these approaches.

Overall, the results of the current study suggest that athletes are no more, nor no less likely, to endorse self-compassion or be fearful of it than non-athletes. The second major finding was that feelings of inadequacy, and to a lesser extent, reduced self-compassion, were associated with more severe psychological distress in athletes, irrespective of competitive level. Practically, these results suggest that contrary to expectation, athletes may not be resistant to self-compassion work, and would benefit from therapeutic approaches that target self-critical thoughts and damaging of self and comparison with others.

Funding Source

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Competing Interests Statement

The manuscript has not been previously published, nor is it under review for publication elsewhere. The authors report no conflicts of interest regarding this study.

References

1. Wankel, L.M. and B.G. Berger, *The Psychological and Social Benefits of Sport and Physical Activity.* Journal of Leisure Research, 1990. **22**(2): p. 167-182.
2. Rice, S.M., et al., *The Mental Health of Elite Athletes: A Narrative Systematic Review.* Sports Med, 2016. **46**(9): p. 1333-53.
3. Engebretsen, L., et al., *Sports injuries and illnesses during the London Summer Olympic Games 2012.* British Journal of Sports Medicine, 2013. **47**(7): p. 407-414.
4. Sagar, S.S. and J. Stoeber, *Perfectionism, Fear of Failure, and Affective Responses to Success and Failure: The Central Role of Fear of Experiencing Shame and Embarrassment.* Journal of Sport and Exercise Psychology, 2009. **31**(5): p. 602-627.
5. Brewer, B.W. and A.J. Petitpas, *Athletic identity foreclosure.* Current Opinion in Psychology, 2017. **16**: p. 118-122.
6. Sutherland, L.M., et al., *Narratives of young women athletes' experiences of emotional pain and self-compassion.* Qualitative Research in Sport, Exercise and Health, 2014. **6**(4): p. 499-516.
7. Stirling, A.E., et al., *Canadian Academy of Sport and Exercise Medicine position paper: Abuse, harassment, and bullying in sport.* Clinical journal of sport medicine, 2011. **21**(5): p. 385-391.
8. Reardon, C.L., et al., *Mental health in elite athletes: International Olympic Committee consensus statement (2019).* British Journal of Sports Medicine, 2019. **53**(11): p. 667-699.
9. Poucher, Z.A., et al., *A Commentary on Mental Health Research in Elite Sport.* Journal of Applied Sport Psychology, 2019: p. 1-23.
10. Walton, C.C., R. Purcell, and S. Rice, *Addressing mental health in elite athletes as a vehicle for early detection and intervention in the general community.* Early Interv Psychiatry, 2019. **13**(6): p. 1530-1532.
11. Gilbert, P., *The origins and nature of compassion focused therapy.* British Journal of Clinical Psychology, 2014. **53**(1): p. 6-41.
12. Wetherall, K., K.A. Robb, and R.C. O'Connor, *Social rank theory of depression: A systematic review of self-perceptions of social rank and their relationship with depressive symptoms and suicide risk.* J Affect Disord, 2019. **246**: p. 300-319.

13.	McEwan, K., P. Gilbert, and J. Duarte, *An exploration of competitiveness and caring in relation to psychopathology.* British Journal of Clinical Psychology, 2012. **51**(1): p. 19-36.

14.	Gilbert, P., et al., *The dark side of competition: How competitive behaviour and striving to avoid inferiority are linked to depression, anxiety, stress and self-harm.* Psychology and Psychotherapy: Theory, Research and Practice, 2009. **82**(2): p. 123-136.

15.	Gustafsson, H., S.S. Sagar, and A. Stenling, *Fear of failure, psychological stress, and burnout among adolescent athletes competing in high level sport.* Scandinavian Journal of Medicine & Science in Sports, 2017. **27**(12): p. 2091-2102.

16.	Powers, T.A., et al., *The effects of self-criticism and self-oriented perfectionism on goal pursuit.* Pers Soc Psychol Bull, 2011. **37**(7): p. 964-75.

17.	Curran, T. and A.P. Hill, *Perfectionism is increasing over time: A meta-analysis of birth cohort differences from 1989 to 2016.* Psychol Bull, 2019. **145**(4): p. 410-429.

18.	Castilho, P., J. Pinto-Gouveia, and J. Duarte, *Two forms of self-criticism mediate differently the shame-psychopathological symptoms link.* Psychol Psychother, 2017. **90**(1): p. 44-54.

19.	Gilbert, P., et al., *Criticizing and reassuring oneself: An exploration of forms, styles and reasons in female students.* British Journal of Clinical Psychology, 2004. **43**(1): p. 31-50.

20.	Mosewich, A.D., et al., *Enhancing capacity: Integrating self-compassion in sport.* Journal of Sport Psychology in Action, 2019: p. 1-9.

21.	Zessin, U., O. Dickhauser, and S. Garbade, *The Relationship Between Self-Compassion and Well-Being: A Meta-Analysis.* Appl Psychol Health Well Being, 2015. **7**(3): p. 340-64.

22.	Kirby, J.N., J. Day, and V. Sagar, *The 'Flow' of compassion: A meta-analysis of the fears of compassion scales and psychological functioning.* Clinical Psychology Review, 2019. **70**: p. 26-39.

23.	Mosewich, A.D., et al., *Self-compassion: A potential resource for young women athletes.* Journal of sport and exercise psychology, 2011. **33**(1): p. 103-123.

24.	Ferguson, L.J., et al., *Exploring self-compassion and eudaimonic well-being in young women athletes.* J Sport Exerc Psychol, 2014. **36**(2): p. 203-16.

25.	Ferguson, L.J., et al., *Self-compassion and eudaimonic well-being during emotionally difficult times in sport.* Journal of Happiness Studies, 2015. **16**(5): p. 1263-1280.

26.	Eke, A., et al., *Narratives of adolescent women athletes' body self-compassion, performance and emotional well-being.* Qualitative Research in Sport, Exercise and Health, 2019: p. 1-17.

27.	Reis, N.A., et al., *Exploring Self-Compassion and Versions of Masculinity in Men Athletes.* J Sport Exerc Psychol, 2019: p. 1-12.

28.	Reis, N.A., et al., *Self-compassion and women athletes' responses to emotionally difficult sport situations: An evaluation of a brief induction.* Psychology of Sport and Exercise, 2015. **16**: p. 18-25.

29.	Barczak, N. and R.C. Eklund, *The moderating effect of self-compassion on relationships between performance and subsequent coping and motivation.* International Journal of Sport and Exercise Psychology, 2018: p. 1-13.

30. Crozier, A.J., A.D. Mosewich, and L.J. Ferguson, *The company we keep: Exploring the relationship between perceived teammate self-compassion and athlete self-compassion.* Psychology of Sport and Exercise, 2019. **40**: p. 152-155.

31. Ceccarelli, L.A., et al., *Self-Compassion and Psycho-Physiological Recovery From Recalled Sport Failure.* Frontiers in Psychology, 2019. **10**(1564).

32. Killham, M.E., et al., *Women athletes' self-compassion, self-criticism, and perceived sport performance.* Sport, Exercise, and Performance Psychology, 2018. **7**(3): p. 297.

33. Wilson, D., et al., *"The zipper effect": Exploring the interrelationship of mental toughness and self-compassion among Canadian elite women athletes.* Psychology of Sport and Exercise, 2019. **40**: p. 61-70.

34. Mosewich, A.D., et al., *Applying self-compassion in sport: An intervention with women athletes.* Journal of sport and exercise psychology, 2013. **35**(5): p. 514-524.

35. Hardy, L., et al., *Great British medalists: psychosocial biographies of super-elite and elite athletes from Olympic sports*, in *Progress in Brain Research*. 2017, Elsevier. p. 1-119.

36. MacBeth, A. and A. Gumley, *Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology.* Clinical Psychology Review, 2012. **32**(6): p. 545-552.

37. Swann, C., A. Moran, and D. Piggott, *Defining elite athletes: Issues in the study of expert performance in sport psychology.* Psychology of Sport and Exercise, 2015. **16**: p. 3-14.

38. Lovibond, S.H. and P.F. Lovibond, *Manual for the depression anxiety stress scales*. 1996: Psychology Foundation of Australia.

39. Henry, J.D. and J.R. Crawford, *The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample.* British journal of clinical psychology, 2005. **44**(2): p. 227-239.

40. Antony, M.M., et al., *Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample.* Psychological assessment, 1998. **10**(2): p. 176.

41. Neff, K.D., *The development and validation of a scale to measure self-compassion.* Self and Identity, 2003. **2**(3): p. 223-250.

42. Gilbert, P., et al., *Fears of compassion: development of three self-report measures.* Psychol Psychother, 2011. **84**(3): p. 239-55.

43. Allan, S. and P. Gilbert, *A social comparison scale: Psychometric properties and relationship to psychopathology.* Personality and Individual Differences, 1995. **19**(3): p. 293-299.

44. Baião, R., et al., *Forms of self-criticising/attacking & self-reassuring scale: Psychometric properties and normative study.* Psychology and Psychotherapy: Theory, Research and Practice, 2015. **88**(4): p. 438-452.

45. Gilbert, P., et al., *Development of a striving to avoid inferiority scale.* British Journal of Social Psychology, 2007. **46**(3): p. 633-648.

46. Brewer, B.W. and A. Cornelius, *Norms and factorial invariance of the Athletic Identity Measurement Scale.* Academic athletic journal, 2001. **15**(2): p. 103-113.

47. Parent, M.C., *Handling item-level missing data: Simpler is just as good.* The Counseling Psychologist, 2013. **41**(4): p. 568-600.

48. Cohen, J., *Statistical power analysis for the behavioral sciences*. 2013: Routledge.

49. Cormier, D.L., J.G.H. Dunn, and J. Causgrove Dunn, *Examining the domain specificity of grit.* Personality and Individual Differences, 2019. **139**: p. 349-354.
50. Stillman, M.A., et al., *Psychotherapy for mental health symptoms and disorders in elite athletes: a narrative review.* British Journal of Sports Medicine, 2019: p. bjsports-2019-100654.
51. Kirby, J.N., *Compassion interventions: The programmes, the evidence, and implications for research and practice.* Psychology and Psychotherapy: Theory, Research and Practice, 2017. **90**(3): p. 432-455.
52. Slater, A. and M. Tiggemann, *Gender differences in adolescent sport participation, teasing, self-objectification and body image concerns.* Journal of Adolescence, 2011. **34**(3): p. 455-463.
53. Huysmans, Z. and D. Clement, *A Preliminary Exploration of the Application of Self-Compassion Within the Context of Sport Injury.* J Sport Exerc Psychol, 2017. **39**(1): p. 56-66.
54. Foroughi, C.K., et al., *Placebo effects in cognitive training.* Proceedings of the National Academy of Sciences, 2016. **113**(27): p. 7470-7474.

Highlights

- We explored social rank and self-compassion measures in a competitively diverse sample of athletes and non-athletes.

- We anticipated that athletes competing at a higher level would report less self-compassion and higher fears of compassion.

- There was no difference in any measure of compassion amongst groups.

- Self-compassion, fears of compassion (for self), and feelings of inadequacy predicted psychological distress in athletes.

- Findings suggest compassion-based approaches to treating psychological distress may be appropriate in athletes.

Declaration of interests

☒ The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

☐The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: