J Happiness Stud (2015) 16:1263–1280
DOI 10.1007/s10902-014-9558-8

RESEARCH PAPER

Self-compassion and Eudaimonic Well-Being During Emotionally Difficult Times in Sport

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Published online: 1 August 2014

Abstract Evidence is emerging for the potential usefulness of self-compassion (Neff in Self Identity 2:223–250, 2003a) in young women athletes' sport experiences (Mosewich et al. in J Sport Exerc Psychol 33:103–123, 2011, J Sport Exerc Psychol 35:514–524, 2013). However, it is unclear whether extending compassion towards the self contributes to or thwarts athletes' psychological well-being (i.e., eudaimonic well-being) in sport. The purpose of this study was to examine self-compassion during emotionally difficult sport situations in relation to eudaimonic well-being in sport. Women athletes ($N = 137$; $M_{age} = 19$ years) completed an online survey including measures of self-compassion, eudaimonic well-being, and reactions to hypothetical, emotionally difficult, sport scenarios. Pearson bivariate correlations were used to examine relationships among study variables, and Preacher and Hayes' (Behav Res Methods 40:879–891, 2008) SPSS macro was used to explore models of indirect effects. The relationship between self-compassion and eudaimonic well-being in the sport domain was generally supported, with significant correlations between self-compassion and autonomy, meaning and vitality in sport, and body appreciation ($rs = .18–.47$, $p < .05$). Significant indirect effects suggest that (1) self-compassionate athletes have greater eudaimonic well-being in sport primarily through higher positivity and perseverance, as well as lower passivity in reaction to emotionally difficult sport situations, and (2) self-critical reactions suppress the relationships between

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self-compassion and eudaimonia in sport. The pattern of findings suggests that compassionately relating to the self might be advantageous for aspects of young women athletes' psychological well-being in sport. Specifically, having a kind and understanding self-attitude might nurture constructive reactions to emotionally difficult sport situations. Findings can inform future research aimed at better understanding how self-compassion is linked with optimal psychological functioning in sport.

Keywords Self-compassion · Psychological well-being · Sport · Women

1 Introduction

Self-compassion, an emotionally positive self-attitude that represents a healthy relationship towards oneself (Neff 2003a, b), is emerging as a useful resource to help young women athletes manage evaluative sport experiences (Mosewich et al. 2011). According to Kristin Neff (2003a), three components combine and mutually interact to create a self-compassionate mind frame: extending warmth and nonjudgmental understanding towards the self through *self-kindness*; recognizing that making mistakes and encountering life's difficulties are shared through *common humanity*; and, keeping a balanced perspective to one's difficult feelings and experiences so they are held in *mindful awareness*. Having compassion for oneself is particularly useful during times of failure or when feeling inadequate (Neff 2003a, b), and might therefore be an important resource for young women athletes given the difficult experiences they can face in sport (Krane et al. 2001; Mosewich et al. 2009).

While sport has the potential to positively impact young women (Krane et al. 2004; Mosewich et al. 2009; World Health Organization 2008), it is necessary to recognize that positive experiences and positive development through sport are not guaranteed. Young women athletes in particular can encounter physical, mental, and emotional challenges in sport, including appearance- and performance-based evaluations made by the self and others (Mosewich et al. 2009, 2013). Young women athletes report difficulties with managing the evaluative characteristics of the sport environment (Greenleaf 2002; Mosewich et al. 2009), which can leave them vulnerable to maladaptive thoughts and behaviors (Stirling and Gretchen 2012). Indeed, these evaluative experiences can result in negative outcomes and unhealthy behaviors such as body image concern, disordered eating, excessive exercising, guilt, shame, and training through injuries (Beals and Manore 1994; Krane et al. 2001). Consequently, young women might benefit from extending compassion toward the self to deal with their difficult sport experiences.

Research attesting to the role of self-compassion in sport is growing. Initial research by Mosewich et al. (2011) found self-compassion was negatively related to young women athletes' unhealthy self-evaluative thoughts (e.g., shame proneness, fear of failure, and social physique anxiety). Expanding on these cross-sectional findings, Mosewich et al. (2013) developed a 7-day self-compassion in sport intervention that resulted in decreased self-criticism, rumination, and concern over mistakes among highly self-critical women athletes. These findings suggest that self-compassion serves as a way to manage difficult emotional experiences in sport in effective and healthy ways (Mosewich et al. 2011). Moreover, these findings support previous conceptions of self-compassion as having protective and reparative functions (Leary et al. 2007; Neff 2009). Neff (2003b) argued that self-compassion gives rise to proactive behaviors aimed at promoting or maintaining

well-being, and self-compassionate individuals have been found to have greater life satisfaction, happiness, optimism, and positive affect (see Neff 2009, for a review). However, little is known about the benefits of adopting a compassionate self-attitude on women athletes' well-being in sport.

Young women have reported competing in sport for a variety of reasons, including to be independent and self-sufficient, feel pride in their athletic accomplishments, and continue to grow and develop (George 2005; Krane et al. 2004; Mosewich et al. 2009). These goals and motives are reflective of optimal psychological functioning and development, consistent with Carol Ryff's (1989, 1995) model of eudaimonic well-being. Emanating from developmental, clinical, and mental health psychological perspectives, Ryff defined what it means to be eudaimonically-well as consisting of six dimensions: (1) autonomy, (2) environmental mastery, (3) personal growth, (4) positive relatedness, (5) purpose in life, and (6) self-acceptance. In a mixed methods study, Ferguson et al. (2014) found that self-compassionate athletes have greater eudaimonic well-being, which provides support for the promise of self-compassion in young women athletes' positive development. However, Ferguson et al. assessed eudaimonic well-being at the global level; thus, there exists a need to investigate whether extending compassion towards the self might be useful for psychological well-being specifically within the context of sport.

Qualitative findings from Ferguson et al. (2014) suggest that young women athletes recognize that treating oneself with compassion might be helpful in a variety of painful and difficult sport experiences. The women athletes in their research explained that self-compassion might help to provide a positive mindset, promote perseverance to overcome hardships, encourage personal responsibility, as well as decrease rumination on struggles experienced in sport. Despite recognizing the potential usefulness of self-compassion in sport, at least some young women athletes are apprehensive about extending compassion towards the self (Ferguson et al. 2014; Sutherland et al. in press). Women athletes have expressed concern about fully embracing self-compassion given (1) their perception that treating oneself compassionately carries with it the threat of becoming passive, and (2) their reliance on self-criticism as a necessity in sport (Ferguson et al. 2014). Some individuals, particularly those high in self-criticism, can find it difficult to and are fearful of extending compassion towards the self (Gilbert et al. 2011). Indeed, it has been shown that self-compassion is negatively associated with self-criticism (Neff et al. 2007). Regardless, how self-compassion and self-criticism play out in terms of psychological well-being in sport remains unclear. Given both the potential advantages of and concerns with self-compassion, more research is needed to explore whether a compassionate self-attitude promotes or thwarts eudaimonia in sport.

The purpose of this study was to explore the role of self-compassion during hypothetical, emotionally difficult, sport scenarios in relation to psychological well-being in sport. We examined the relationship between self-compassion and eudaimonic well-being in sport by exploring possible mechanisms by which this relationship may be transmitted (i.e., positive, perseverant, responsible, ruminative, passive, and self-critical reactions to emotionally difficult sport scenarios). We also explored whether resisting or fearing self-compassion is linked with eudaimonic well-being in sport, as young women athletes have expressed concern that being self-compassionate might not always be in their best interest (Ferguson et al. 2014; Sutherland et al. in press). We hypothesized that (1) self-compassion would be positively related to eudaimonic well-being in sport; (2) self-compassion and eudaimonic well-being in sport would be positively related to constructive reactions to emotionally difficult sport scenarios (i.e., positivity, perseverance, and responsibility) and negatively related to the destructive reactions (i.e., rumination, passivity, and self-

criticism); (3) the data would be consistent with models of multiple mediation in which positivity, perseverance, responsibility, rumination, and passivity are a set of mechanisms between self-compassion and eudaimonic well-being in sport; and (4) fear of self-compassion would be negatively related to eudaimonic well-being in sport, with self-critical reactions to emotionally difficult sport scenarios accounting for this relationship.

2 Method

2.1 Participants

Young women athletes ($N = 137$) who had competed in at least one sport within the previous 12 months participated in the study. Participants ranged in age from 16 to 25 years ($M_{age} = 19.04$ years, $SD = 1.84$ years), had a mean weight of 63.14 kg ($SD = 7.85$ kg), and a mean height of 167.77 cm ($SD = 7.18$ cm). The majority of participants self-identified as Caucasian (94.89 %) and single (95.62 %). Participants represented a variety of sports (e.g., basketball, hockey, fastball, soccer, athletics) ranging from local (78.83 % of participants) to international (7.30 % of participants) levels of competition. The majority of participants (55.50 %) reported being active in sport three or more times during the past week.

2.2 Measures and Materials

2.2.1 Self-compassion

The 26-item Self-Compassion Scale (SCS; Neff 2003a) is a five-point scale ranging from 1 (almost never) to 5 (almost always). Six subscales (i.e., self-judgment, self-kindness, isolation, common humanity, over-identification, and mindfulness) measure the three main components of self-compassion, which taken together represent the overall level of self-compassion. Items from negatively phrased subscales were reverse scored before computing a total mean. Past research has shown that SCS scores demonstrate internal consistency reliability, discriminant validity, and concurrent validity in university student samples (Leary et al. 2007; Neff 2003a; Neff et al. 2005). SCS scores also have evidence of reliability with adolescent (Neff and McGehee 2010) and sport samples (Mosewich et al. 2011).

2.2.2 Fear of Self-compassion

The Fear of Compassion for Self scale (Gilbert et al. 2011) is a 15-item, five-point scale ranging from 0 (don't agree at all) to 4 (completely agree). The measure assesses the extent to which individuals fear self-compassion out of worry that, for example, they will become dependent on it, lose their self-criticism, and/or have a drop in personal standards. Scores were calculated by taking the sum of the items. Scores on the Fear of Compassion for Self scale have evidence of internal consistency and are related to self-coldness, self-criticism, insecure attachment, depression, anxiety, and stress (Gilbert et al. 2011; Kelly et al. 2013).

2.2.3 Eudaimonic Well-Being

The 54-item version of the Scales of Psychological Well-Being (SPWB; Ryff and Keyes 1995), with a six-point scale ranging from 1 (strongly disagree) to 6 (strongly agree), was

used to measure eudaimonic well-being. The scale consists of six subscales assessing autonomy, environmental mastery, personal growth, positive relatedness, purpose in life, and self-acceptance. After reverse scoring negatively phrased items, subscale mean scores were calculated as well as a single composite score by taking the mean across all subscales. Past research has shown that the SPWB scores demonstrate evidence of reliability and validity (France and Finney 2009; Nave et al. 2007; Ryff 1989; Ryff and Keyes 1995). The scale has demonstrated broad applicability in terms of use with samples of various ages (Nave et al. 2007; Ryff 1989), as well as athlete samples (Edwards and Steyn 2008; Ferguson et al. 2014).

2.2.4 *Proxy Measures of Eudaimonic Well-Being*

To accurately assess well-being in different life domains, it is imperative to supplement global assessments of well-being with context-specific measures (Lundqvist 2011). Eudaimonic well-being was therefore assessed at the sport level to more accurately understand the relationship between self-compassion and eudaimonic well-being in sport. Due to the lack of a sport-specific model of eudaimonic well-being, Ryff's (1989, 1995) model of eudaimonia provided a theoretical framework of optimal psychological functioning in sport, as it has been advocated as one way to approach well-being in sport (Lundqvist 2011). However, Ryff and Keyes' (1995) measure of eudaimonic well-being is not contextualized to a specific life domain; therefore, participants completed a number of validated measures to serve as proxy indicators of Ryff's six dimensions of eudaimonic well-being. A composite score of eudaimonic well-being in sport was also calculated by creating and averaging across standardized scores of each proxy measure.

2.2.4.1 Autonomy The autonomy subscales (i.e., choice, four items; internal perceived locus of causality, three items; volition, three items) from the Basic Need Satisfaction in Sport Scale (BNSSS; Ng et al. 2011) were used as a proxy measure of *autonomy* in the sport context. The subscales have a seven-point scale ranging from 1 (not true at all) to 7 (very true). After reverse-scoring negatively phrased items, scores were calculated by taking the mean of the items. The autonomy subscale scores have demonstrated evidence of internal consistency and construct validity (Ng et al. 2011). In the current study, the proxy autonomy score was positively related to the autonomy subscale of Ryff and Keyes' (1995) SPWB ($r = .24$, $p < .01$).

2.2.4.2 Environmental Mastery Three subscales (i.e., sport competence, physical conditioning, and physical strength; six items per subscale) from the Revised Physical Self-Perception Profile (PSPP-R; Lindwall et al. 2011) were used to assess *environmental mastery* in the sport context. Participants responded to items using a four-point scale ranging from 1 (not true at all for me) to 4 (really true for me). Scores were calculated by taking the mean of the items. The PSPP-R was positively related to the environmental mastery subscale of the SPWB in the current study ($r = .28$, $p < .01$).

2.2.4.3 Personal Growth Huta and Ryan's (2010) Sense of Meaning scale (SoMS), which is a 12-item measure of the extent to which one's pursuits have been meaningful, was modified and used to measure *personal growth* in sport. Instructional changes were made to make the scale specific to the sport context (i.e., "To what degree do you typically feel that your sport activities and experiences are…"). The SoMS is rated along a seven-

point scale ranging from 1 (not at all) to 7 (very much). Scores were calculated by taking the mean of the items. In the current study, the SoMS was positively related to the personal growth subscale on the SPWB ($r = .23$, $p < .01$).

2.2.4.4 Positive Relatedness The relatedness subscale (five items) from the BNSSS (Ng et al. 2011) was used as a proxy measure of *positive relatedness* in the sport context. The subscale has a seven-point scale ranging from 1 (not true at all) to 7 (very true). Scores were calculated by taking the mean of the items. Scores on the subscale have demonstrated evidence of internal consistency and construct validity (Ng et al. 2011), and the measure was positively related to the positive relations subscale of the SPWB in the current study ($r = .39$, $p < .01$).

2.2.4.5 Purpose in Life Bostic et al.'s (2000) modified version of the Subjective Vitality Scale (SVS) was used to assess *purpose in life* in the sport context. The SVS is a six-item, seven-point scale ranging from 1 (not at all) to 7 (very much) that assesses feeling alive and having energy available to the self. Consistent with other modifications (e.g., Podlog et al. 2010), instructional changes were made to the SVS to contextualize the scale to the sport context (i.e., "Overall, during my sport experiences"). Scores were calculated by taking the mean of the items. The scale has evidence of validity and reliability (Bostic et al. 2000). The SVS was positively related to the purpose in life subscale on the SPWB in the current study ($r = .19$, $p < .05$).

2.2.4.6 Self-acceptance The Body Appreciation Scale (BAS; Avalos et al. 2005), which is a 13-item measure rated from 1 (never) to 5 (always), was used as an indicator of positive body image, which includes acceptance of, favorable opinions towards, and respect for one's body (Avalos et al. 2005; Tylka 2013). Scores were calculated by taking the mean of the items. The BAS scores have established internal consistency reliability and construct validity (Avalos et al. 2005; Tylka 2013). The BAS was positively related to the self-acceptance subscale of the SPWB in the current study ($r = .57$, $p < .01$).

2.2.5 Hypothetical Scenarios

Five hypothetical, emotionally difficult, sport-specific scenarios were used in the current study. Participants were instructed to "imagine yourself in the following situation as vividly as possible", and were presented with the following five scenarios: "You are responsible for losing an athletic competition for your team", "You fail to meet an important personal goal or personal expectation in your sport", "You make a mistake during competition", "You are injured and unable to train or compete", and "You have reached a plateau in training or competition". One scenario was previously used by Leary et al. (2007; i.e., "being responsible for a team loss"), and the remaining four were identified by female athlete participants (Ferguson et al. 2014) as emotionally difficult experiences in sport. Participants rated the emotional difficulty of each scenario on a six-point scale ranging from 1 (not at all) to 6 (extremely).

2.2.6 Reactions to Hypothetical Scenarios

Participants were asked to rate the degree to which they would react to each hypothetical scenario with positivity (two items; e.g., "I would keep a positive outlook on the

situation"), perseverance (two items; e.g., "I would keep striving for something more"), responsibility (two items; e.g., "I would take responsibility to make the situation better"), rumination (two items; e.g., "I would dwell on the situation"), passivity (two items; e.g., "I would just give up"), and self-criticism (two items; e.g., "I would be hard on myself") on a six-point scale from 1 (not at all) to 6 (extremely). The reaction items were driven by the qualitative themes in Ferguson et al. (2014), in which young women athletes explained how self-compassion might be useful in sport.[1]

2.3 Procedure

After obtaining university ethical approval and school board approval, young women athletes from university classes and high school sport teams were invited to participate in the study. Participants were emailed a secure link to access an online web-based survey and provided informed consent. After completing measures of self-compassion and eudaimonic well-being, participants were presented with the series of five hypothetical, emotionally difficult, sport scenarios, each of which was followed by the positive, perseverant, responsible, ruminative, passive, and self-critical reaction items.

2.4 Data Analysis

Prior to conducting data analyses, composite scores were created for each reaction (i.e., positive, perseverant, responsible, ruminative, passive, and self-critical) by averaging across the five hypothetical scenarios, resulting in one composite score for each reaction. Data were examined for assumptions of regression prior to any analyses. Means and standard deviations were calculated. Pearson bivariate correlations were used to examine relationships between (1) proxy measures of eudaimonic well-being and Ryff and Keyes' (1995) SPWB; and, (2) self-compassion, fear of self-compassion, proxy measures of eudaimonic well-being, and the hypothesized process variables (i.e., positive, perseverant, responsible, ruminative, passive, and self-critical reactions).

Preacher and Hayes' (2008) SPSS macro was used to explore the relationship between self-compassion and eudaimonic well-being in sport. Models were explored for each proxy measure of eudaimonic well-being, as well as a model with the composite score of eudaimonic well-being in sport. The models tested the indirect effects of self-compassion on each proxy measure of eudaimonia through multiple mediators (i.e., positive, perseverant, responsible, ruminative, and passive reactions). The analysis involved two parts: (1) exploring the total indirect effect; and (2) exploring individual mediating effects of each mechanism variable above and beyond the other mechanisms in the model. For the analysis, 5,000 bootstrap samples with replacement were requested. The macro produces unstandardized path coefficients, and significance tests for all paths are provided by 95 % bias-corrected and accelerated (BCa) bootstrapped confidence intervals (CIs). The analysis also provides regression coefficients for the normal theory approach.

Another set of path models were explored whereby self-critical reactions was entered as the intervening variable between (1) self-compassion and eudaimonic well-being in sport, and (2) fear of self-compassion and eudaimonic well-being in sport. These additional models were intended to address women athletes' reservations about fully embracing self-

[1] Reaction items underwent content review and content analysis, as per recommendations by Dunn et al. (1999) including the use of Aiken's (1985) item content-validity coefficient. Information on development is available upon request from the first author.

compassion, as it would counter self-criticism (Ferguson et al. 2014; Sutherland et al. in press), which has been identified as an important characteristic in sport (Mosewich et al. 2014).

3 Results

3.1 Missing Data and Evaluation of Assumptions

Prior to statistical analysis, participants with one (38 participants) or two (21 participants) missing data points that were not from the same subscale were retained (a total of 0.20 % of the data) and within-person mean substitution was used to estimate the missing value (Tabachnick and Fidell 2007). Seven outliers were identified in the data set and truncated at ±3.29 standard deviations above or below the mean (Tabachnick and Fidell 2007). Non-parametric distributions were normalized using appropriate data transformations (Tabachnick and Fidell 2007), and all hypothesis testing was carried out on the transformed data. Data were transformed back into original units for presentation of results.

3.2 Descriptive Statistics and Scale Reliabilities

Descriptive statistics and internal consistency scale reliabilities are reported in Table 1. Averaged across the five scenarios, the hypothetical scenarios were rated at 4.42 on emotional difficulty.

3.3 Correlations

Self-compassion was positively correlated with four of six proxy measures of eudaimonic well-being (i.e., autonomy, personal growth, purpose in life, self-acceptance), as well as the composite score of proxy measures. Self-compassion was also correlated with all reactions to emotionally difficult sport situations in the anticipated directions, including negative correlations with passive and self-critical reactions. In contrast, fear of self-compassion was positively correlated with passive and self-critical reactions, and negatively correlated with all proxy measures of eudaimonic well-being. All correlations are presented in Table 1.

3.4 Path Model Analyses

Self-compassion had a total ($B = 0.18$, $p < .001$) and direct ($B = 0.11$, $p < .01$) effect on proxy self-acceptance, as well as a total indirect effect through the five hypothesized process variables (point estimate of 0.07, 95 % BCa CI 0.017–0.144). Therefore, the data were consistent with a model of multiple mediation whereby, as a set, positive, perseverant, responsible, ruminative, and passive reactions are potential mechanisms of the self-compassion–proxy self-acceptance relationship. The tested model explained 31 % of variance in proxy self-acceptance. There were also specific indirect effects through positive (point estimate of 0.05, 95 % BCa CI 0.004–0.112) and passive reactions (point estimate of 0.03, 95 % BCa CI 0.009–0.064). Figure 1 shows the tested model of self-compassion on proxy self-acceptance, and includes unstandardized coefficients for all paths in the model. Four of the other models examined had total effects of self-compassion on proxy measures

Table 1 Descriptive statistics, scale reliabilities, and Pearson product moment correlations

Variable	Scale range	Mean (SD)	1	2	3	4	5	6	7	8	9	10	10a	10b	10c	10d	10e	10f
1. Self-compassion	1–5	3.02 (0.59)	0.83															
2. Fear of self-compassion	0–60	15.18 (12.24)	−0.54**	0.93														
3. Eudaimonic well-being	1–6	4.53 (0.59)	0.64**	−0.62**	0.83													
4. Positive reactions	1–6	3.70 (0.91)	0.63**	−0.45**	0.49**	0.90												
5. Perseverant reactions	1–6	4.67 (0.76)	0.26**	−0.33**	0.47**	0.36**	0.88											
6. Responsible reactions	1–6	4.69 (0.79)	0.28**	−0.20*	0.39**	0.30**	0.73**	0.90										
7. Ruminative reactions	1–6	3.71 (1.07)	−0.50**	0.37**	−0.38**	−0.55**	−0.05	0.02	0.90									
8. Passive reactions	1–6	1.32 (0.57)	−0.32**	0.35**	−0.42**	−0.27**	−0.50**	−0.35**	0.26**	0.94								
9. Self-critical reactions	1–6	3.60 (1.15)	−0.53**	0.42**	−0.33**	−0.56**	0.06	0.15	0.82**	0.24**	0.93							
10. Proxy eudaimonic well-being[a]	–	0.00 (0.68)	0.35**	−0.41**	0.52**	0.21*	0.48**	0.44**	−0.11	−0.45**	−0.05	0.75						
a. Autonomy	1–7	5.83 (0.85)	0.28**	−0.34**	0.29**	0.06	0.27**	0.32**	−0.06	−0.34**	−0.02	0.72**	0.86					
b. Environmental mastery	1–4	3.00 (0.62)	0.09	−0.19*	0.30**	0.08	0.34**	0.30**	0.03	−0.22*	0.07	0.62**	0.22*	0.83				
c. Personal growth	1–7	5.87 (1.01)	0.18*	−0.24**	0.31**	0.09	0.37**	0.36**	0.02	−0.30**	0.06	0.80**	0.58**	0.45**	0.94			
d. Positive relations	1–7	6.07 (0.97)	0.16	−0.21*	0.29**	0.05	0.21*	0.22*	−0.07	−0.26**	0.06	0.59**	0.32**	0.22**	0.37**	0.83		
e. Purpose in life	1–7	5.87 (1.03)	0.20*	−0.21*	0.34**	0.12	0.40**	0.29**	−0.08	−0.30**	−0.05	0.70**	0.50**	0.31**	0.54**	0.23**	0.88	
f. Self-acceptance	1–5	3.63 (0.71)	0.47**	−0.41**	0.51**	0.43**	0.29**	0.23**	−0.27**	−0.38**	−0.31**	0.52**	0.21*	0.27**	0.22**	0.19*	0.18*	0.92

Degrees of freedom = 135. Reliability α on diagonal

* $p < .05$; ** $p < .01$

[a] Proxy eudaimonic well-being created by taking the mean across all proxy measures' z-scores

of eudaimonic well-being (i.e., autonomy, personal growth, purpose in life, composite eudaimonic well-being), two of which had direct effects while controlling for the five process variables (i.e., autonomy, composite eudaimonic well-being) as well as specific indirect effects (i.e., positive and passive reactions for autonomy; perseverant reactions for the composite). However, none of the other models had total indirect effects through the five process variables as a set. Table 2 summarizes the significant findings from these tested models.

To examine women athletes' concerns regarding the diminished self-criticism associated with self-compassion in sport, additional models explored the effects of (1) *self-compassion* and (2) *fear of self-compassion* on proxy measures of eudaimonic well-being through self-critical reactions to emotionally difficult situations in sport (see Table 3). For the models in which self-compassion predicted eudaimonic well-being, there were total ($B = 0.06$, $p < .05$), direct ($B = 0.10$, $p < .01$), and indirect (point estimate of -0.04, 95 % BCa CI -0.076 to -0.003) effects when predicting proxy personal growth, as well as direct ($B = 0.45$, $p < .01$) and indirect (point estimate of -0.18, 95 % BCa CI -0.319 to -0.042) effects when predicting proxy positive relatedness. For the models in which fear of self-compassion predicted eudaimonic well-being, there were total ($B = -0.03$, $p < .01$), direct ($B = -0.04$, $p < .001$), and indirect (point estimate of 0.01, 95 % BCa CI 0.001–0.012) effects when predicting proxy personal growth, as well as total ($B = -0.15$, $p < .01$), direct ($B = -0.20$, $p < .001$), and indirect (point estimate of 0.05, BCa CI 0.001 to 0.12) effects when predicting proxy positive relatedness. Results from these models suggest self-criticism to be a potential suppressor variable, as evidenced by (a) the direct effects being larger than the total effects, and (b) the indirect effects having the opposite sign than the direct effects (MacKinnon et al. 2000; Shrout and Bolger 2002).

4 Discussion

We found significant relationships between self-compassion, psychological well-being in sport, and reactions to emotionally difficult sport situations, which provides substantial support for our first and second hypotheses. Interpretation of these relationships points to three general findings. First, self-compassionate athletes are autonomous, experience greater meaning and vitality in sport, and have appreciation for one's body. In contrast, young women athletes with greater fear of self-compassion have lower eudaimonic well-being on all proxy indicators of eudaimonia in sport. Second, self-compassionate athletes have greater "constructive reactions" (i.e., positive, perseverant, and responsible) to emotionally difficult situations in sport. Third, self-compassionate athletes have lower "destructive reactions" (i.e., ruminative, passive, and self-critical) to emotionally difficult situations in sport. These findings speak to the relevance of self-compassion for young women athletes' psychological well-being in sport, and provide insight as to how self-compassionate athletes might respond when confronted with difficult experiences in sport.

The findings are consistent with previous claims that self-compassionate people deal with challenging life events more effectively than people low in self-compassion by ruminating less on their hardships, not harshly criticizing the self, and accepting responsibility for negative life events (Leary et al. 2007; Neff 2003a, b). The current study advances these claims by suggesting that self-compassionate athletes are likely to respond to emotionally difficult sport situations with a positive mindset, wanting to overcome their hardships, and not giving up. Moreover, the pattern of relationships between self-compassion, proxy measures of eudaimonic well-being, and reactions to emotionally difficult

Table 2 Summary of significant findings from the models examining the relationships between self-compassion and proxy measures of eudaimonic well-being through positive, perseverant, responsible, ruminative, and passive reactions to emotionally difficult situations in sport

Criterion[a]	Total effect	Direct effect	Total indirect effect	Specific indirect effects[b]					*R*
				Positive reactions	Perseverant reactions	Responsible reactions	Ruminative reactions	Passive reactions	
Autonomy	$B = 0.08$	$B = 0.08$	–	0.05 (0.02)	–	–	–	0.02 (0.01)	.22
Environmental mastery	–	–	–	–	0.02 (0.01)	–	–	–	.13
Personal growth	$B = 0.06$	–	–	–	–	–	–	–	.19
Positive relations	–	–	–	–	–	–	–	–	.10
Purpose in life	$B = 0.07$	–	–	–	0.03 (0.01)	–	–	–	.19
Self-acceptance	$B = 0.18$	$B = 0.11$	0.07 (0.03)	0.05 (0.03)	–	–	–	0.03 (0.01)	.31
Composite eudaimonic well-being	$B = 0.39$	$B = 0.31$	–	–	0.07 (0.04)	–	–	–	.35

[a] Proxy measures of eudaimonic well-being

[b] Point estimate (SE) within 95 % BCa bootstrapped confidence interval

Table 3 Summary of significant findings from the models examining the relationships between self-compassion and fear of self-compassion with proxy measures of eudaimonic well-being through self-critical reactions to emotionally difficult situations in sport

Predictor	Criterion[a]	Total effect	Direct effect	Indirect effect (self-critical reactions[b])	*R*
Self-compassion	Autonomy	$B = 0.07$	$B = 0.10$	–	.10
Fear of self-compassion		$B = -0.18$	$B = -0.21$	–	.13
Self-compassion	Environmental mastery	–	–	–	–
Fear of self-compassion		$B = -0.02$	$B = -0.02$	–	.06
Self-compassion	Personal growth	$B = 0.06$	$B = 0.10$	−0.04 (0.02)	.07
Fear of self-compassion		$B = -0.03$	$B = -0.04$	0.01 (0.005)	.10
Self-compassion	Positive relations	–	$B = 0.45$	−0.18 (0.07)	.06
Fear of self-compassion		$B = -0.15$	$B = -0.20$	0.05 (0.02)	.09
Self-compassion	Purpose in life	$B = 0.07$	$B = 0.08$	–	.04
Fear of self-compassion		$B = -0.03$	$B = -0.03$	–	.03
Self-compassion	Self-acceptance	$B = 0.18$	$B = 0.17$	–	.23
Fear of self-compassion		$B = -0.05$	$B = -0.04$	–	.17
Self-compassion	Composite eudaimonic well-being	$B = 0.40$	$B = 0.51$	–	.15
Fear of self-compassion		$B = -0.12$	$B = -0.13$	–	.13

[a] Proxy measures of eudaimonic well-being

[b] Point estimate (SE) within 95 % bias corrected and accelerated bootstrapped confidence interval

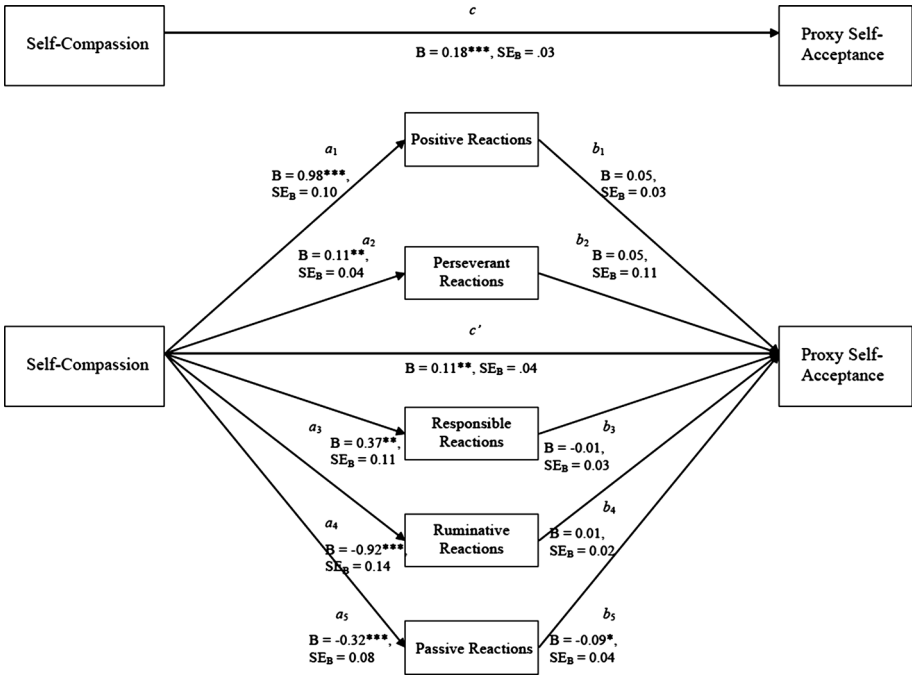

Fig. 1 The tested model of self-compassion on proxy self-acceptance. *Note* The c coefficient represents the total relationship between self-compassion and proxy self-acceptance. The c′ coefficient represents the strength of the association between self-compassion and proxy self-acceptance after controlling for the five indirect paths. The *a* and *b* paths represent the specific indirect paths involving the hypothesized mechanisms. *$p < .05$; **$p < .01$; ***$p < .001$

sport scenarios suggest that these responses might help us understand the role of self-compassion in eudaimonic well-being in sport.

We explored a number of path models, and found partial support for our third hypothesis. The data were consistent with a model of multiple mediation in that self-compassion predicted proxy self-acceptance with the set of reactions (i.e., positive, perseverant, responsible, ruminative, and passive) emerging as potential process variables. Evidence also emerged for specific indirect effects through higher positive reactions to emotionally difficult sport situations and lower passivity to those experiences. We assessed proxy self-acceptance via body appreciation, as it seemed pertinent to emphasize acceptance of the physical self due to our focus on sport. Our findings advance previous research by Wasylkiw et al. (2012), who found that self-compassionate women had greater appreciation for their bodies, by providing insight as to how or why self-compassion might be related to body appreciation. Conceptually, young women athletes who extend compassion toward the self are less likely to give up and more likely to have a positive frame of mind when confronted with emotionally difficult sport situations (e.g., an injury), allowing them to appreciate and respect their physical self. Berry et al. (2010) proposed "body self-compassion" as a sub-domain of self-compassion that might be relevant to those within highly evaluative environments. Thus, our findings further suggest that self-compassion might be particularly beneficial for young women athletes as a way to garner positive and

affiliative attitudes towards one's body during emotionally difficult or evaluative experiences.

Although previous research highlights women athletes' reliance on self-criticism in sport (Ferguson et al. 2014), we found that reacting self-critically to emotionally difficult sport situations is not associated with greater eudaimonic well-being in sport. Moreover, the relationships between self-compassion and eudaimonic well-being in sport might be suppressed by self-criticism as a competing process since the relationships are stronger when self-criticism is controlled (Shrout and Bolger 2002). Our findings therefore contradict the importance some women athletes place on being self-critical in sport (Mosewich et al. 2014), and support previous research by Powers et al. (2009) that self-critical athletes have diminished goal-related activity and emotional well-being. Our research also supports Gilbert et al.'s (2011) claim that it is not just the absence of self-compassion that is important to consider, but also the *fear* of self-compassion. Athletes actively resisting compassionate experiences or behaviors may be doing themselves a disservice as they strive to reach their potential in sport. Thus, there appear to be complexities regarding the potential advantages of self-compassion on one hand, and young women athletes' hesitations towards embracing a compassionate self-attitude in sport on the other hand. Whether these complexities are unique from *men* athletes' experiences is an important direction for future research.

This study contributes to the self-compassion literature by finding that young women athletes with a more kind and loving self-attitude might be better equipped to reach their potential when encountering emotionally difficult experiences in sport. Taken together, findings from the path models (i.e., specific indirect effects) suggest that positivity, perseverance, and passivity are potentially key mechanisms explaining why self-compassion is linked with eudaimonic well-being in sport. Self-compassion might facilitate a positive response towards and perseverance through difficult experiences in sport. Mosewich et al. (2014) found that despite the variety of setbacks that can be experienced in sport, women athletes emphasize the importance of being able to focus on the positive aspects of their hardships. Thus, self-compassionate athletes realize that there are positive features that can be found in or come from their difficult experiences. Moreover, self-compassionate individuals want to change personal weaknesses and spend more time improving on previous failures (Breines and Chen 2012). By extending compassion towards oneself, young women athletes might be more apt to improve on past transgressions and failings, and persevere through their adverse sport experiences.

Passivity also emerged as a potential process variable, suggesting that self-compassionate athletes are less likely to be complacent, give up, or quit trying when confronted with difficult experiences, which might be critical for psychological well-being in sport. This is a meaningful finding as it contributes to the ongoing discussion in the literature regarding concerns of self-compassion leading to inaction or complacency (Neff 2003a, 2009; Neff et al. 2007). If being self-compassionate leads to passivity, this would be detrimental to the achievement of many sport-related goals, not to mention the fulfillment of one's potential. Our research, however, supports Neff's (2003b) position that genuine feelings of self-compassion should not lead to passivity; rather, self-compassionate individuals care about themselves and want to engage in behaviors and actions to better themselves and promote their well-being.

A limitation within our study—and the wider body of literature on athletes' well-being—is the lack of a model of eudaimonia in sport. The current study responded to Lundqvist's (2011) recommendation that researchers consider more context-specific forms of well-being, and explicitly define the level (i.e., global or domain-specific) of well-being on which the

construct is investigated. Proxy measures of eudaimonic well-being that were specific/relevant to sport were used in an attempt to provide a more accurate estimate of athletes' well-being in sport rather than rely purely on global estimations of well-being. Although significant associations between Ryff and Keyes' (1995) SPWB and proxy measures of eudaimonic well-being provided a level of confidence for measures used in the current study, a conceptual framework and measure of eudaimonia in sport is needed (Lundqvist 2011).

In addition to measurement limitations, further methodological challenges can be improved upon in future research. Using hypothetical as opposed to recalled sport situations poses a potential concern, as recalled situations would assuredly be relevant and more detailed, thus potentially more "emotionally difficult". However, using hypothetical scenarios provided a level of systematic consistency that would not have been possible had participants recalled their own personal situations. In addition, the situations used in the current study received an average rating of 4.42 (on a scale from 1 to 6) on emotional difficulty, suggesting they were salient to the athletes. Future research might consider exploring the role of self-compassion in neutral or even positive sport situations, as Terry et al. (2013) found that self-compassion may be beneficial even when things are going well. However, Neff and Dahm (in press) explained that self-compassion is reserved for times of difficulty and struggle, but that mindfulness might be key in any experience—positive, negative, or neutral. It is therefore unknown if a compassionate self-attitude is beneficial when athletes are not experiencing adverse events, which underscores the necessity of future research to work to understand the usefulness of self-compassion in sport.

Given the cross-sectional study design, it is important that study findings be interpreted as correlational. We explored path models to begin to understand the processes that might explain why self-compassion is related to psychological well-being within sport. The data were consistent with models of mediation; however, the tested models are rooted in correlational data, which precludes conclusions of directionality, causality, or definitive mediation (MacKinnon 2008; Preacher and Hayes 2008). Rather, our results are suggestive and not indicative of mediation. We encourage future researchers to expand on our findings through the implementation of experimental and/or longitudinal research designs. Our study findings could serve as a framework for future research by generating hypotheses about causal relationships and plausible mediators (Bauman et al. 2002).

Our results suggest that extending compassion towards the self might be useful for young women athletes' eudaimonic well-being in sport. Despite the seeming necessity of self-criticism in sport (Ferguson et al. 2014; Sutherland et al. in press), our findings suggest that compassionately relating to the self might offer young women athletes an alternative and constructive self-attitude. Beginning to understand how self-compassionate athletes respond to emotionally difficult sport situations is a critical step towards developing self-compassion programs that appropriately target mechanisms to help young women athletes reach their potential in sport.

Acknowledgments This research was supported by the Social Sciences and Humanities Research Council of Canada (410-2007-2504). We would like to thank the participating school boards and the many athletes, teachers, and coaches who made this research possible.

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