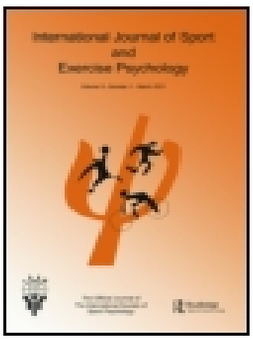

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The moderating effect of self-compassion on relationships between performance and subsequent coping and motivation

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In this investigation, self-compassion was examined as a potential moderator of relationships between athletes' subjective appraisals of performance and coping or motivational outcomes after a performance episode. Data were obtained online from competitive swimmers ($N = 121$, $M_{age} = 15.53$, $SD_{age} = 2.23$). Significant moderation effects were observed in the prediction of post episode task-oriented coping and self-determined motivation. Self-compassion was the only significant predictor of post episode disengagement-oriented coping and trended toward being the only significant predictor of post episode externally-regulated motivation. These findings suggest that there is potential value in developing self-compassion among athletes in performance-based sport.

Keywords: *self-determined motivation*; *positive psychology*; *performance episode*; *sport*

Athletes must effectively manage the pressures of excelling in sport in order to perform well. A variety of psychological factors go into the management of these pressures including coping and motivation (Crocker, Tamminen, & Gaudreau, 2015; Ryan & Deci, 2000). In particular, certain motivational orientations and coping strategies following a performance are of considerable importance due to the influence of athlete self-regulation on engagement with and autonomy towards sport. Performance appraisal, how an athlete believes he or she performed, has been positively associated with self-determined motivation and productive coping (Gaudreau, Nicholls, & Levy, 2010). Further investigation is needed into the processes underlying the relationships between performance appraisals and subsequent coping and motivation.

Athlete self-regulatory monitoring and evaluation of personal reactions is a psychological skill that optimises cognitions and behaviours to usefully facilitate performance (Kirschenbaum, 1984). Coping is a self-regulatory process involving effortful management of cognitions and behaviours to adapt to situations including those following competitive performances. Two broad categories of coping studied in sport include *task-oriented* (TOC) and *disengagement-oriented* (DOC; Crocker et al., 2015; Gaudreau et al., 2010). TOC involves efforts directed towards managing a stressor to facilitating task accomplishment (e.g. problem solving, cognitive reframing) whereas DOC involves withdrawal from task accomplishment strivings in dealing with the stressor (e.g. behavioural disengagement, denial, and venting of unpleasant emotions). TOC and DOC have been argued to be, respectively, adaptive and maladaptive in sport coping due to the inherent necessity for the athlete to be engaged with the task of performing (Amiot,

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Blanchard, & Gaudreau, 2008; Gaudreau, Gunnell, Hoar, Thompson, & Lelièvre, 2015; Poliseo & McDonough, 2012).

Motivation is also imperative to understanding adjustment to stressors (Lazarus & Folkman, 1987). Researchers such as Hardy, Jones, and Gould (1996), Kirschenbaum (1984), and Ryan and Deci (2000) have suggested that successful continued performance and well-being are possible outcomes of persistent self-determined motivation. According to Ryan and Deci (2000), *self-determined* motivation is a combination of intrinsic imperatives (i.e. grounded in fundamental psychological needs) and autonomously directed extrinsic motivation governed by integrated and identified regulations (i.e. grounded in external principles valued by the individual). *Controlled motivation* involves other extrinsic motivational imperatives (i.e. external regulation, introjected regulation) aimed to "satisfy external demand or reward contingenc[ies]" (Ryan & Deci, 2000, p. 72). Self-determination theory (Ryan & Deci, 2000) is an organismic motivational metatheory that emphasises how personal resources can influence development and self-regulation. These positive processes facilitate optimal functioning, through autonomous motivations, to augment performance (Ryan & Deci, 2000).

When looking into performance-related variables such as coping and motivation, it is also pertinent to investigate additional influencing factors to predict adaptive or maladaptive outcomes. Self-compassion has become of increasing interest in sport and exercise psychology in recent years (e.g. Magnus, Kowalski, & McHugh, 2010; Mosewich, Crocker, Kowalski, & DeLongis, 2013; Mosewich, Kowalski, Sabiston, Sedgwick, & Tracy, 2011; Reis et al., 2015; Rodriguez & Ebbeck, 2015). Self-compassion consists of three main factors: self-kindness, common humanity, and mindfulness (Neff, 2003a). *Self-kindness* requires being empathetic and considerate to oneself especially after pain or failure whereas *common humanity* concerns the appreciation that one's successes and failures or thoughts and emotions may be experienced universally. Finally, *mindfulness* involves acknowledgment and awareness of cognitions and emotions without over-identification. Self-compassion has been positively related to, as examples, life-satisfaction, positive affect, personal initiative, emotional intelligence, and conscientiousness (Leary, Tate, Adams, Batts Allen, & Hancock, 2007; Neff, 2003b; Neff, Rude, & Kirkpatrick, 2007).

It is important to note that the self-kindness, common humanity, and mindfulness of self-compassion should not be confused with unproductive tendencies (e.g. self-pity, complacency) as sometimes occurs. The experience of self-pity, for example, is egotistical and narcissistic in nature, which differs quite noticeably from the extension of self-compassion to oneself (Neff, 2003a). The self-compassionate individual's tendency to adopt a perspective of the common humanity within the experience of failure should buffer against, rather than facilitate, engagement in self-pity (Neff, 2003b). Furthermore, self-compassion is most beneficial when "complete and genuine", in that self-compassionate individuals seek a clear view of failures and negative cognitions rather than the ability to ignore them (Neff, 2003b, p. 225). Self-compassion does not encourage complacency as a consequence (Neff & Germer, 2013), which may be particularly important in considering the construct relative to performance sport. Therefore, self-compassion is a personal quality that may aid athletes in their management of the pressures of excelling in sport in a productive, effective, and healthy way.

Self-compassion has been posited as a personal quality with effective potential in coping with the pressures and stress (Mosewich et al., 2011; Neff, 2003a; Neff, Kirkpatrick, & Rude, 2007; Neff, Rude, et al., 2007). It may influence management of pressure in a variety of ways, ranging from appraisal of stressors through subsequent cognitions and stress-management behaviours (Allen & Leary, 2010). Self-compassion has been positively associated with productive coping via persistence in situations of failure or challenge using, as examples, mindfulness, anxiety buffering, and positive affect (Leary et al., 2007; Mosewich et al., 2011; Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Reis et al., 2015; Shapiro & Schwartz, 2000). Specifically,

the mindfulness facet of self-compassion has been identified as a key component of attentional self-regulation in facilitating the processing of anxiety and negative emotions (Shapiro & Schwartz, 2000). Additionally, Neff, Kirkpatrick, et al. (2007) found that individuals higher, as opposed to lower, in self-compassion maintained greater anxiety-buffering during ego-threatening situations. This may be aided by behavioural equanimity, or non-reactivity in responding, which has also been associated with self-compassion (Reis et al., 2015). With regards to athletes, emotional regulation, a type of self-regulation of noteworthy importance in sport (Wagstaff, 2014), has been characterised as a "core component" of self-compassion (Neff, Hsieh, & Dejitterat, 2005, p. 266). Self-compassionate individuals generally report greater positive affect, which has been associated with viewing threatening situations more broadly (i.e. the cognitive ability to acknowledge and process a wider array of situational information; Leary et al., 2007; Mosewich et al., 2011; Neff, 2003a; Neff, Rude, et al., 2007; Reis et al., 2015), as well as a tendency for attenuated reactivity (Leary et al., 2007; Reis et al., 2015). Overall, athletes higher in self-compassion may be more effective in regulating their thoughts, feelings, and behaviours than less self-compassionate athletes, and cope more successfully with stress in performance sport settings. It may be that self-compassion also has an influence on post-event performance-related coping and motivational outcomes.

Consistent with foundational contentions in coping research (Lazarus & Folkman, 1987), Gaudreau et al. (2010) have argued that a process-oriented model of coping should be relied upon for research on coping in sport because the use of coping strategies varies across time and environments to account for changing circumstances. These researchers proposed that future researchers should focus on desired outcomes throughout specific stressful situations to facilitate quantification of the degree of success in coping. The study of specific performance episodes (i.e. time-bound units within a larger cohesive unit of sport involvement; Beal, Weiss, Barros, & MacDermid, 2005), such as a particular competitive event, could serve effectively in this capacity. Understanding of key features of self-compassion in sport may also be advanced by the study of specific performance episodes as higher self-compassionate individuals tend to engage in acceptance of specific circumstances and understand their implicated personal limitations (Leary et al., 2007). For this reason, performance episodes were utilised in following study to examine athletes' subsequent coping and motivational outcomes.

Self-compassion has both positive and negative associations with self-determined and controlled motivations, respectively. Self-compassion may support self-determined motivation in persisting towards mastery of a goal or task (Neff et al., 2005). Self-compassionate athletes have generally reported higher autonomy by appraisals of greater control (Mosewich et al., 2011) and the experience of greater situational and emotional control (Poliseo & McDonough, 2012). Neff (2003a) argued that those who have higher self-compassion generally adapt a more conscientiousness perspective, which should therefore lead to acting more in line with one's values (i.e. integrated regulation). Researchers have found, for example, that female exercisers higher in self-compassion tended to report lower external motivation (Magnus et al., 2010).

The purpose of this investigation was to examine self-compassion as a potential moderator of the relationship between preceding performance appraisals and subsequent performance-related coping and motivational outcomes (see Figure 1). Based on the extant literature, it seemed reasonable to expect that productive coping and motivation outcomes should be facilitated following a given performance episode in individuals higher in self-compassion through mutual links to self-regulation and autonomy. It was hypothesised, therefore, that performance appraisal and self-compassion would predict, respectively, post-performance episode coping (i.e. TOC, DOC) and motivation (i.e. self-determined, externally-regulated) in the moderated multiple regression models (i.e. Hypotheses 1a, 2a, 3a, 4a). It was further hypothesised that the interaction effect of performance appraisal and self-compassion would also significantly predict, respectively,

TOC, DOC, self-determined motivation, and externally-regulated motivation in the moderated multiple regression models (Hypotheses 1b, 2b, 3b, 4b).

Methods

Participants

Participants were 121 ($n_{male} = 72$) adolescent swimmers ($M_{age} = 15.53$ years, SD = 2.23 years) from Midwestern high school and swim club teams in the United States. Participants were predominately White ($n = 99$), with others responding as Asian ($n = 10$), Other ($n = 8$), African American or Black ($n = 3$), or not reported ($n = 1$). The number of competitive years participants reported ranged from 2 to 16 years ($M = 7.92$, SD = 2.91). Participants varied in highest level of competition involvement including local ($n = 27$), regional ($n = 59$), national ($n = 28$), international ($n = 2$), or unreported ($n = 5$). Using G*Power 3.1 analysis software for a linear multiple regression model with three predictors (performance appraisal, self-compassion, and the interaction of these two variables) to detect a small effect size of $f^2 = 0.15$, the suggested sample size was 119 participants.

Measures

Swimmers responded to an online survey in providing data for this investigation. They were first asked to complete a writing reflection task about a specific performance episode (i.e. a single race) from their most recent championship experience. The swimmers then responded to items regarding that specific performance episode, measures of coping and motivation subsequent to that competitive episode, their level of self-compassion as an athlete, and, finally, questions soliciting demographic information. Previous self-compassion studies have used writing techniques to prime participants toward responding relative to a competitive episode (Mosewich et al., 2013; Reis et al., 2015). Data for performance, coping, motivation, and self-compassion were collected via empirically tested psychometric scales.

Demographics

Participants were asked to report their age, gender, race, years of competition, and highest level of competition in swimming.

Performance

As in earlier studies (e.g. Coffee & Rees, 2008; Vast, Young, & Thomas, 2010), participants were asked to provide subjective appraisals of the quality of the performance under consideration in responding to the survey questions. Athletes provided these data by responding to "Was it a good or bad performance for you?" on a 5-point Likert scale (0 very bad; 4 very good).

Self-compassion

The 26-item Self-Compassion Scale (SCS; Neff, 2003b) was used to assess trait self-compassion. For this study, the participants were instructed to respond to the items relative to their involvement in swimming. Participants reported on 5-point Likert scales (1 *almost never*; 5 *almost always*) how much the items pertained to their thoughts about themselves as swimmers. General self-compassion scores were computed by averaging scores on the six subscales of the instrument (i.e. self-kindness, self-judgement, common humanity, isolation, mindfulness, over-identification) as has

occurred in previous research e.g. Leary et al., 2007; Neff, 2003b; Neff et al., 2005). In this study, self-compassion measurement exhibited satisfactory internal consistency ($\alpha = .90$).

Coping

The 28-item Brief COPE (Carver, 1997) was used to assess coping strategies employed after the reported performance episode. Participants were asked to respond on 5-point Likert scales (1 *does not correspond at all*; 5 *corresponds totally*) as to the correspondence between their coping efforts and the items describing various specific coping strategies. As recommended by Skinner and colleagues (2003), items from subscales on active coping, acceptance, religion, seeking emotional support, planning, seeking instrumental support, and positive reframing were averaged to obtain scores on task-oriented coping (TOC), while items from subscales on behavioural disengagement, self-distraction, venting, humour, and denial were averaged to obtain scores on disengagement-oriented coping (DOC). A similar operationalisation of Brief COPE scores has been previously used in sport research (e.g. Amiot et al., 2008; Gaudreau et al., 2015). The internal consistency values observed in this study for TOC ($\alpha = .85$), and DOC ($\alpha = .72$) were regarded as acceptable.

Motivation

The 14-item revised Situational Motivation Scale (SIMS; Standage, Duda, Treasure, & Prusak, 2003) was used to assess current motivation towards engaging in sport. Participants rated correspondence between their motivation and items indicative of four types of motivational regulations (i.e. intrinsic, identified, external, amotivation) on 7-point Likert scales (1 *corresponds not at all*; 7 *corresponds exactly*). Consistent with earlier studies, intrinsic motivation and identified regulation items were averaged together to obtain a measure of self-determined motivation while external subscale items were averaged together to obtain a measure of externally-regulated motivation (Gaudreau & Antl, 2008; Magnus et al., 2010). The internal consistency values observed in in this study for externally-regulated ($\alpha = .88$), and self-determined ($\alpha = .83$) motivation were regarded as acceptable.

Procedure

After receiving approval to conduct the study from our institutional ethical review board, swim coaches were emailed and asked if they would distribute the online survey to their team. Athletes completed informed consent (and parental informed consent where appropriate) procedures as specified by the ethical review board before responding to the online survey containing the measures identified above. Participants completed the online survey either at a training session or at their own convenience. After completion, participants were thanked for their participation and given contact information for the principal investigator.

Data analysis

The analyses of this investigation occurred in three phases. The first phase involved descriptive analyses and testing of statistical assumptions. The second phase was focused on hypotheses testing with an alpha of .05. The small amount of data missingness as a consequence of participant nonresponse was managed by listwise deletion of cases in any given analysis. The *PROCESS* macros (Model 1; Hayes, 2012) were used to perform four separate regression analyses for each of the dependent variables (i.e. TOC, DOC, self-determined motivation, and externally-

regulated motivation). First, performance appraisal was entered as the predictor variable, self-compassion as the moderator, and each dependent variable individually. *PROCESS* automatically calculates the product term of the interaction between self-compassion and performance appraisal. Interaction probing was automatically calculated by *PROCESS*. As suggested by previous researchers, this was done to evaluate and plot any significant interaction effects (Preacher, Curran, & Bauer, 2006). Finally, the Johnson-Neyman technique (Johnson & Neyman, 1936) was selected for use within *PROCESS*, which allows the relationship between the predictor and each outcome variable to be analyzed over a variety of values of the moderator (rather than just high or low) to more precisely describe the relationship. The total effect of each model included the variance predicted by performance appraisal, self-compassion, and the interaction between performance appraisal and self-compassion. The significance of increments in explained variance for each dependent variable over and above variance accounted for by the variables already entered in the equation was accounted for by ΔR^2. The f^2 effect size was also employed to assess the potential meaningfulness of effects with the convention of small, medium, and large effect sizes being .02, .15, and .35, respectively (Cohen, 1992).

Results

The descriptive statistics for all study variables and their intercorrelations are presented in Table 1. The results of tests of the moderation hypotheses are presented subsequently by dependent variable.

Task-oriented coping

Neither performance appraisal, $t(1,116) = -.47$, $p < .05$ nor self-compassion, $t(1,119) = -1.79$, $p < .05$, were significant predictors of TOC. A significant total effect was observed in the moderated regression model accounting for 7.7% of the variance in TOC, $F(4,107) = 4.04$, $p < .01$. A significant 2.7% of variance was accounted for by the self-compassion and performance appraisal interaction effect, $F(1,107) = 4.21$, $p < .05$ (see Table 2). A simple slopes analysis was produced to show the interaction effect (see Figure 2). The interaction of performance appraisal and self-compassion resulted in a small to medium f^2 effect size value of .071. Interaction probing indicated that the region of significance ($p < .05$) corresponds to self-compassion at −.49 *SD* below the mean (a score of 2.16 out of 5). Figure 2 shows the interaction terms for two levels of the moderator (self-compassion): lower (−1 unit) and higher (+1 unit). The relationship between performance appraisal and task-oriented coping was significant for athletes with low self-compassion, specifically under a score of 2.06 out of 5. Low self-compassionate athletes reported engaging in less TOC, especially if they also reported low performance appraisal. Therefore, hypothesis 1a was rejected and hypothesis 1b was retained (Figure 2).

Table 1. Correlations among and descriptive statistics for study variables.

Variable	*M*	*SD*	1	2	3	4	5	6
1. Performance Appraisal	4.07	1.10	–					
2. Task-oriented Coping	2.75	0.91	−.17	–				
3. Disengagement-oriented Coping	1.78	0.71	−.23*	.53**	–			
4. Self-determined Motivation	5.09	1.32	.07	.17	−.21*	–		
5. Externally-regulated Motivation	2.90	1.70	−.09	.14	.46**	−.27**	–	
6. Self-compassion	2.65	0.59	.28*	−.20*	−.39**	.22*	−.24**	–

Note: *$p < .05$, **$p < .01$.

Table 2. Summary of moderated multiple regression analyses for the dependent variables of task-oriented coping, disengagement-oriented coping, self-determined motivation, and externally-regulated motivation.

	Task-oriented Coping					Disengagement-oriented Coping					Self-determined Motivation					Externally-regulated Motivation				
Variable	*b*	*SE*	*t*	R^2	ΔR^2	*b*	*SE*	*t*	R^2	ΔR^2	*b*	*SE*	*t*	R^2	ΔR^2	*b*	*SE*	*t*	R^2	ΔR^2
Step 1																				
Self-compassion	−.23	.14	−1.63			−.43	.10	−4.12**			.49	.22	2.21*			−.67	.34	−1.96~		
Perf Appraisal	−.04	.09	−.42			−.06	.06	−.96			.10	.12	.87			−.09	.17	−.52		
Step 2				.08**	.03*				.18**	.00				.08*	.03				.07	.00
Self-compassion × Perf Appraisal	.22	.11	2.05*			.07	.08	.88			.34	.19	1.80			−.01	.32	−.05		

Note: Perf Appraisal = subjective performance appraisal, ~$p = .05$, *$p < .05$, **$p < .01$.

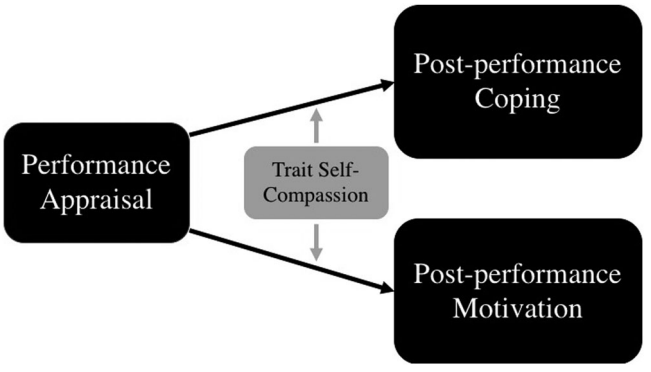

Figure 1. Self-compassion as a moderator of the relationships between performance appraisals and coping motivation outcomes.

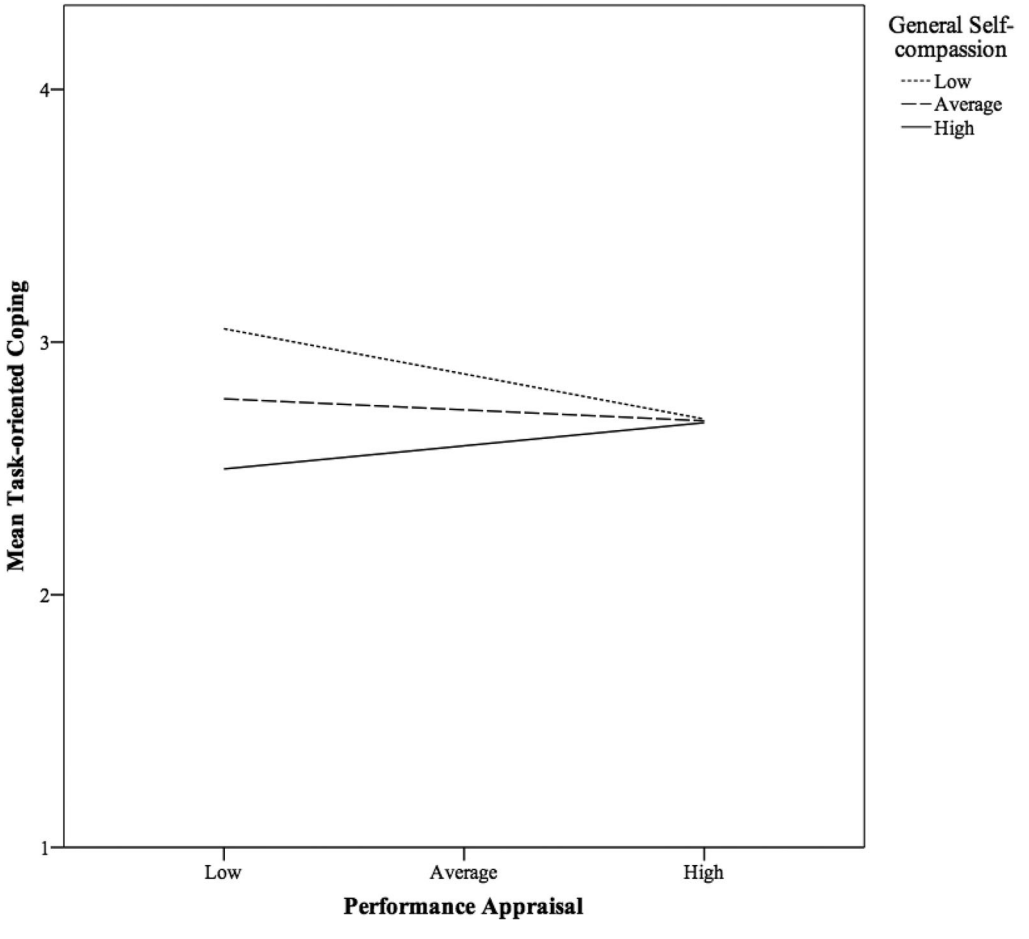

Figure 2. Interaction effect of performance appraisal and self-compassion on TOC.

Disengagement-oriented coping

Self-compassion was the only individual significant predictor of DOC following a performance episode in the moderated multiple regression modelling, $t(1,116) = -4.31$, $p > .01$, with athletes higher in self-compassion using less DOC than those low in self-compassion (see Table 2). The total effect in the model accounted for 17.91% of variance in DOC, $F(4,107) = 6.69$, $p < .001$. Hypothesis 2a was partially retained as a consequence but hypothesis 2b was rejected because a significant self-compassion by performance appraisal interaction effect was not observed.

Self-determined motivation

Self-compassion was the only individual significant predictor of self-determined motivation following a performance episode in the moderated multiple regression modelling, $t(1,116) = 2.21$, $p > .05$, with athletes higher in self-compassion reporting significantly more self-determined motivation than those low in self-compassion (see Table 2). The total effect in the model accounted for 7.74% of the variance in self-determined motivation, $F(3,116) = 3.97$, $p < .01$. The interaction effect of performance appraisal and self-compassion trended towards significance, $F(1,116) = 3.22$, $p = .075$, accounting for an additional 3.0% the variance in self-determined motivation. Based on these findings, hypothesis 3a was partially retained. The trending but non-significant interaction effect, however, did not provide substantive support for hypothesis 3b.

Externally-regulated motivation

Self-compassion was tenuously the only significant predictor of externally-regulated motivation following a performance episode, $t(1,116) = -2.43$, $p = .05$, in the moderated multiple regression modelling with athletes higher in self-compassion reporting less externally-regulated motivation than those low in self-compassion (see Table 2). Nonetheless, the total effect of the predictors in the modelling was nonsignificant, $F(4,107) = 1.42$, $p > .05$, $R^2 = .07$. Hypothesis 4a was partially retained and 4b was rejected because a significant self-compassion by performance appraisal interaction effect was not observed.

Discussion

The present study was conducted to investigate the potential moderating effects of self-compassion on subsequent motivational and coping outcomes following athletes' appraisals of a performance episode. We found some support for our hypotheses regarding self-compassion and performance appraisal as predictors of post-episode motivational and coping outcomes. We also observed indications that self-compassion may play a moderating role in the relationship between performance appraisal and post-performance episode motivational and coping outcomes. Both significant and nonsignificant results have theoretical and practical implications, as discussed below.

With regard to primary focus of our investigation, self-compassion was found to be a significant moderator of the relationship between post-performance episode performance appraisal and TOC, albeit not in the direction hypothesised. Athletes lower in self-compassion who appraised their performances as being poorer tended to self-report greater utilisation of TOC than those higher in self-compassion. As depicted in Figure 1, self-compassion was most strongly associated with TOC when swimmers reported lower performance appraisals. This unexpected finding may result from overlapping key features of TOC and self-compassion. Specifically, acceptance is an

integral feature of the mindfulness component of self-compassion (Neff, 2003a) that was also a strategy captured in TOC measurement. Further, the TOC strategy of seeking emotional support (Carver, 1997) has similarities to the common humanity feature of self-compassion (Neff, 2003a). In both of these, individuals use interpersonal relationships as a means to cope. Finally, the TOC strategy of positive reframing (Carver, 1997) may also overlap with common humanity (Neff, 2003a), as actively choosing to understand that other people may experience the same problems globally is a way of reframing.

It may be that individuals higher in self-compassion, by their nature, have a general propensity to employ task-oriented coping strategies or, as suggested by Allen and Leary (2010), that individuals use their self-compassion as a coping strategy. More specifically, higher self-compassionate athletes may effectively cope using self-kindness, common humanity, and mindfulness because these tendencies buffer against anxiety during ego-threatening situations (e.g. championship swim meet), while also affording less rumination and greater emotional regulation (Leary et al., 2007; Neff et al., 2005; Neff, Kirkpatrick, et al., 2007). Additionally, self-compassionate individuals generally report greater positive affect and may view threatening situations more broadly (Leary et al., 2007; Mosewich et al., 2011; Neff, 2003a; Neff, Rude, et al., 2007; Reis et al., 2015), which may aid problem solving. Overall, this unexpected moderation finding suggests that the overlap between self-compassionate qualities and task-oriented coping strategies is in need of further investigation.

Self-compassion was not observed to be a moderator of the relationship between performance appraisal and post-performance episode self-determined motivation for swimming, but it was, nonetheless, the only significant positive predictor of the self-determined motivation variable. This finding aligns with previous research. Neff, Rude, and Kirkpatrick (2007), for example, found that self-compassionate individuals had greater personal initiative, which reflects being motivated intrinsically (e.g. for interest and enjoyment) and through personal identification (e.g. for own good and because it is meaningful). Neff (2003a) suggested that higher self-compassionate individuals tend to report greater self-esteem that is focused on an athlete's personal values, which relates strongly to integrated motivation (i.e. important to one's personal values). These studies may be indicative of mechanisms explaining how core components of self-compassion and self-determined motivation are interrelated.

Self-compassion was not observed to significantly interact with performance appraisals in the prediction of post-performance episode DOC or externally-regulated motivation. Nonetheless, self-compassion was, as hypothesised, a significant inverse predictor of post-performance episode DOC and trended toward being a significant inverse predicator of post-performance episode externally-regulated motivation. These associations are interesting. Mindful self-compassion, for example, is essentially opposite to disengagement (Neff, 2003a) and would therefore discourage the use of DOC. This finding adds to extant research regarding self-compassionate individuals' tendency to engage in less maladaptive coping strategies (Leary et al., 2007; Mosewich et al., 2011; Neely et al., 2009; Reis et al., 2015; Shapiro & Schwartz, 2000). Self-compassion has also been linked to higher levels of self-determined motivation through perceived autonomy (Mosewich et al., 2011). Perhaps athletes higher in self-compassion tended to be less externally-regulated in motivation post performance episode, in part, due to these links to autonomy. Further investigation of the conceptual overlaps between self-compassion and these variables may be revealing and foster greater understanding of practical implications of being self-compassionate in sport involvement.

As with all studies, this investigation had some limitations. First, the cross-sectional design employed does not afford causal inferences, nor claims about effects over time. As well, psychological measurements may be subject to a variety of reliability issues such as bias in scoring (e.g. ceiling and floor effects, etc.) and unreliability (Jensen, 1980). Further, there are inherent concerns

with using self-reported data including the inability to verify psychological construct measures by other means or making discrete predictions from abstract reasoning and the common method variance problem (Podsakoff & Organ, 1986). Finally, McClelland and Judd (1993) have discussed the difficulty of detecting moderation interaction effects in descriptive, as opposed to experimental, studies. We found a trending interaction effect in the present study, demonstrating the necessity for more research on this matter.

Future investigation of self-compassion and established productive coping strategies aimed to elucidate stress management processes among self-compassionate athletes may be revealing. Such research should also utilise a longitudinal design to best encapsulate the process of psychological adaptation following a performance episode. Additionally, self-compassion is more often stigmatised with the "more pain, more gain" culture of sport for upper level and elite athletes (Hughes & Coakley, 1991) rather than emphasising the usefulness of such positive intrapersonal qualities. This mentality does not always have positive outcomes so more research on utilising self-compassion in sport is also warranted. The majority of self-compassion research in sport has focused on self-critical female athletes to combat self-criticism within the pain equals gain culture (Mosewich et al., 2011; Mosewich et al., 2013). Although such studies are valuable, extant research and the present investigation suggest the potential for self-compassion to be important for all athletes through performance-enhancing (i.e. TOC, self-determined motivation) and performance-detracting (i.e. DOC, externally-regulated motivation) psychological factors.

In summary, self-compassion was significantly related to all of the key variables in this study. Athletes higher in self-compassion tended to perceive their performance more positively, report less TOC, DOC, and externally-regulated motivation as well as more self-determined motivation towards swimming following that performance than their less self-compassionate counterparts. Given these findings, incorporating self-compassion (i.e. self-kindness, common humanity, and mindfulness) as a part of an athletic regimen perhaps warrants empirical examination in the future. As TOC has been found to positively associated with sport performance (Gaudreau et al., 2015), the overlap between self-compassionate tendencies and TOC strategies may facilitate athletes' ability to excel in sport. Future research should aim to preserve or enhance self-compassion in athletes to track performance-related coping and motivational outcomes throughout their athletic careers. Overall, these findings contribute to the established findings of coping and motivation in sport and suggest that self-compassion may be a useful tool for athletes.

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