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Do Emotion Regulation Intentions and Strategies Differ Between Situations?

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Abstract - The present study examined relationships between actual and desired emotional states, meta-beliefs concerning the utility of distinct emotions, and emotion regulation strategies used by individuals in a sport situation as well as an emotion-eliciting situation from a different aspect of their lives. Participants ($N = 924$) reported their emotions, meta-beliefs for optimal emotional states, and their use of emotion regulation strategies across two broad categories of situations: Before sports competition, and a situation from daily life. Results indicated that prior to competition, high activation emotions such as anger, anxiety and excitement were preferred. In terms of strategy use, analyses revealed greater intention to use of strategies intended to increase pleasant and unpleasant emotions were associated with daily life. In conclusion, results indicated that meta-beliefs for optimal emotional states, and strategies used to regulate emotions vary between situations. We suggest that the ability to regulate emotions in a flexible manner to suit the specific dynamics of various situations is proposed to be helpful in the pursuit of personally meaningful goals and that training of a variety of emotion regulation skills could be beneficial.

Keywords- *Affect; Psychological Skills; Self-Regulation; Stress; Performance*

I. INTRODUCTION

An individual's emotional experience intensifies in situations involving the pursuit of personally relevant goals^[1, 2], and the achievement of such goals could be hindered by ineffective efforts to regulate emotions. Emotion regulation involves changing one's feelings in the pursuit of hedonic and instrumental goals^[3]. Choosing the most appropriate emotion regulation strategy is particularly important in activities where people experience intense, and sometimes unwanted, emotions. The ability to regulate emotions in a flexible manner to suit the specific dynamics of various situations can be helpful in the pursuit of personally meaningful goals^[4].

Different situations and the goal individual's pursue can influence the emotions an individual wishes to experience. Tamir^[5] proposed individuals prefer to experience emotions that they believe help them pursue their goals; that is, an instrumental approach. Tamir et al.^[3] stated that although it is often assumed that emotion regulation involves wishing to increase pleasant (happy, excited, calm), and decrease unpleasant emotions (anger,

anxiety, downhearted)^[6], this is not always the case. This is especially noticeable when situational demands are considered. Tamir et al. argued if hedonically unpleasant emotions are perceived to facilitate the pursuit of certain goals, people might deliberately choose to experience or induce these emotions in order to increase the likelihood of success^[7].

A recent literature review on emotion regulation in sport highlighted Tamir's^[5] instrumental approach as a worthwhile framework to apply to the study of emotion regulation^[8]. Research indicates success in competitive sport can involve experiencing high activation, intense and sometimes unwanted emotions such as anger and anxiety^[9, 10]. Further, some athletes hold beliefs that supposedly unpleasant emotions such as anxiety and anger might aid goal pursuit whilst supposedly pleasant emotions, such as happiness and calmness might hinder it^[9, 10].

Recent research has begun to examine people's intentional use of various strategies to increase the intensity of pleasant or unpleasant emotions^[11]. The development and validation of the Emotion Regulation of Others and Self scale (EROS) provides a measure for use in non-specified situations that occur daily life^[11]. The scale has also been validated for use specific situations^[12]. Using the EROS scale, Lane, Beedie, Devonport, and Stanley^[13] found 15% of runners reported meta-emotion beliefs that strategies aimed at increasing anxiety and/or anger would enhance their performance, while 85% of participants reported beliefs that strategies intended to reduce the same emotions before competition would help performance. It is therefore important to consider the emotions an individual wishes to experience across situations to achieve their goals, and their beliefs of which emotions will facilitate this.

Sport has been proposed to be a training ground for developing one's emotion regulation abilities^[4] and has been highlighted for the applicability of such emotion management skills to a number of other performance domains including education^[14], military^[15], and business^[16]. The competitive nature of sports often involves the pursuit of confrontational goals. Most sports are based on the premise that competitors are attempting to limit their opposition's resources (e.g., territory,

possession), and accrue greater rewards than their opponents (e.g., goals, points) and self-improvement by striving to achieve personal bests. These challenges share similarities with many of those faced in everyday life situations, although sports competition tends to occur publically with an immediate result (win/loss/time/position etc).

The present study examined relationships between actual and desired emotional states, meta-beliefs concerning the utility of distinct emotions, and emotion regulation strategies used by individuals in a sport situation as well as an emotion-eliciting situation from a different aspect of their lives. We expected there to be significant differences between emotional states experienced in sport and daily life; further discrepancies between actual and desired emotional states would influence the use of emotion regulation strategies.

II. METHOD

A. Participants

Participants were 924 volunteers (400 males and 522 females, 2 did not report gender; mean age = 33.4 years, $SD = 13.1$) who reported currently participating in competitive sport. Participants provided a number of demographic details including their gender, age, sport participation, current and highest standard of competition, and the number of hours of sport they undertake per week. The most commonly reported activities included athletics, badminton, basketball, boxing, cycling, golf, hockey, martial arts, netball, rugby, running, soccer, squash, swimming, tennis and triathlon.

B. Measures

Experienced and ideal emotions across situations: Emotions were measured using items from the UWIST mood adjective checklist^[17]. Items assessed emotions representing all areas of the circumplex model of emotion^[6, 8]. Items assessed low activation pleasant emotions ('Calm' and 'Happy'), low activation unpleasant emotions ('Gloomy' and "Sluggish"), high activation unpleasant emotions ('Anxious' and 'Angry'), and high activation pleasant emotion ('Energetic'). Items were rated on a 7-point scale from 1 (*not at all*) to 7 (*a great extent*).

We asked participants to recall a recent sporting competition (i.e., within the preceding 4 weeks) in which they experienced intense emotions. To assist with recall, participants were asked: "What was the competition?", "When did the competition occur?" and "Where did the competition take place?" With regard to emotions experienced in everyday life, we asked participants to remember a recent situation or incident when they experienced intense emotions, and to provide similar information about it in terms of its location, duration and characteristics.

Emotion Regulation Strategy Use: The EROS scale^[11] was used to examine emotion regulation strategy use. Scale items regarding regulating others' emotions were omitted. Subscales include strategies intended to increase pleasant emotions (e.g., "I thought about something nice to try and make me feel better") and strategies intended to increase unpleasant emotions (e.g., "I looked for problems in my current situation to try to make me feel worse"). Participants were instructed to rate their frequency of use of the respective strategies rather than whether they perceived the strategies as effective. Ratings were given using a 5-point scale from 1 (*not at all*) to 5 (*a great deal*).

In the present study, participants reported the strategies they used in the hour before the sporting competition. They also reported strategy usage before the stressful situation identified in daily life. Confirmatory factor analysis results indicated support for the hypothesized two factor model in sport, $\chi^2(52) = 101.24$, CFI = .96, RMSEA = .04; and daily life, $\chi^2(52) = 99.99$, $p < .001$, CFI = .95, RMSEA = .04. Internal consistency values for the scale were found to be acceptable (strategies to increase pleasant emotions in sport $\alpha = .82$, in life $\alpha = .83$; strategies to increase unpleasant emotions in sport $\alpha = .82$, in life $\alpha = .87$).

Meta-beliefs for optimal emotional states and emotion regulation strategies. We asked participants to consider the emotions they felt influenced performance and to consider which emotions they believed were optimal in this regard. Participants were encouraged to think about past situations when they experienced optimal performance, occasions when they performed poorly, and identify the emotions associated with both performances. They then rated the emotions they wanted to feel before their designated sport performance and the general life experience, using the previous 7-item response format.

C. Procedure

Following institutional ethical approval of the study from the institution of the lead author, participants were recruited via a mass emailing initiative targeting a variety of international sport organizations, educational institutions, community groups, and sport centers. This approach of sampling people across a wide variety of sports and levels of ability was used to overcome some of the limitations of alternative data collection methods (e.g., exclusive use of undergraduate students or athletes from a limited number of regional sport organizations). Participants completed the measures online.

III. RESULTS

Descriptive statistics for emotions experienced in sport and daily life and use of emotion regulation strategies are displayed in Table 1. Meta-emotional experiences are contained in Table 2. Results indicate an overall significant effect for differences in emotions experienced

between sport and daily life with a large effect size (Wilks' Lambda $_{9, 922} = .22, p < .0001$, Partial Eta² = .78).

As Table 1 indicates, univariate analyses revealed that for sport, participants reported feeling happier, calmer, more energetic and angrier than in their daily life scenario participants. Further, in sport, participants reported greater use of strategies to increase pleasant emotions and fewer use of strategies to increase unpleasant emotions. In terms of the extent to which meta-emotional beliefs differed by situation, results indicated a significant difference with a large effect size (Wilks' Lambda $_{9, 922} = .24, p < .001$, Partial Eta² = .76). As Table 2 indicates, optimal emotional states related to pre-competitive emotions indicated

participants preferred to feel higher scores for energetic, angry and anxious, and lower scores for gloomy and sluggish when compared to daily life. In terms of strategy use, analyses revealed that the regulation of emotions in daily life associated with a greater intention to use of strategies intended to increase pleasant and unpleasant emotions.

Correlation results to investigate associations between strategy use revealed strong relationships between usage of both strategies to increase pleasant emotions (current vs ideal: $r = .77, p < .001$) and strategies to increase unpleasant emotions (current vs ideal: $r = .82, p < .001$).

TABLE I. EMOTIONS, IDEAL EMOTIONS, REGULATION STRATEGIES AND SELF-EFFICACY TO CONTROL EMOTIONS IN SPORT/EXERCISE AND DAILY LIFE SITUATIONS

	Recent sport/exercise experience		Ideal emotions for sport/exercise experience		Recent daily life experience		Ideal emotions for daily life experience	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Happy	4.79	1.33	5.85	1.04	2.29	1.60	6.20	0.92
Anxious	3.56	1.82	3.27	1.36	4.61	1.71	2.06	1.08
Calm	4.00	1.55	4.68	1.40	2.74	1.40	5.43	1.26
Energetic	4.71	1.47	6.36	0.91	3.26	1.65	5.82	1.07
Sluggish	2.43	1.54	1.20	0.52	2.52	1.57	1.40	0.72
Angry	1.62	1.27	1.74	1.00	3.78	1.97	1.44	0.76
Downhearted	1.78	1.37	1.15	0.44	3.97	2.02	1.33	0.81
Strategies used to increase pleasant emotions	23.19	8.43	22.86	7.28	22.60	7.76	30.98	7.85
Strategies used to increase unpleasant emotions	8.09	3.79	11.63	4.10	9.31	4.97	9.51	5.33

TABLE II. DIRECTION FOR PREFERENCES IN EMOTION REGULATION

Emotion	Sport	Direction of emotion regulation			Total
		Life Reduce	Maintain	Increase	
Happiness: $\chi^2 = 34.9, p < .001$	Reduce	31	54	18	103
	Maintain	60	229	79	368
	Increase	11	50	46	107
	Total	102	333	143	578
Anxiety: $\chi^2 = 7.80, p = .10$	Reduce	26	59	16	101
	Maintain	66	221	64	351
	Increase	22	70	34	126
	Total	114	350	114	578
Calm: $\chi^2 = 12.46, p = .01$	Reduce	31	77	17	125
	Maintain	62	204	66	332
	Increase	22	62	37	121
	Total	115	343	120	578
Energetic: $\chi^2 = 29.95, p < .001$	Reduce	30	43	9	82
	Maintain	65	212	68	345
	Increase	18	90	43	151
	Total	113	345	120	578
Sluggish: $\chi^2 = 84.27, p < .001$	Reduce	26	79	8	113
	Maintain	64	332	31	427
	Increase	4	14	20	38
	Total	94	425	59	578
Angry: $\chi^2 = 15.25, p < .001$	Reduce	22	45	10	77

	Maintain	90	308	49	447
	Increase	18	24	12	54
	Total	130	377	71	578
Downhearted: $\chi^2 = 18.73, p < .001$	Reduce	31	37	13	81
	Maintain	90	262	114	466
	Increase	5	14	12	31
	Total	126	313	139	578

IV. DISCUSSION

The present study compared experienced and desired emotions experienced in sport, and associated emotion regulation strategy use, with the same variables for emotions experienced in everyday life situations. Results (see Table 1) indicate individuals experienced intense emotions in both sport and daily life. Findings indicate that across a variety of situations in both sport and daily life, it is not necessarily the case that pleasant emotions are always desirable and unpleasant emotions undesirable. These findings lend support to a great deal of research in the sport psychology literature that has found emotions such as anger^[18, 20] or anxiety^[9, 10] can be perceived as aiding goal pursuit and also that pleasant emotions such as happiness do not.

We argue that the instrumental approach to examining emotion regulation provided a useful model for interpreting the results^[3]. Our results show that although many individuals express a desire to base the regulation of their emotions on hedonic outcomes^[6], this is not the exclusive motive driving attempts to regulate emotions. We suggest that the examination of emotion regulation should consider identifying individuals' intended direction of emotion regulation rather than assume that particular emotional profiles are desirable for performance and goal striving, and generalize across individuals^[9]. For example, anger might augment some athletes' performance by heightening their motivation in pursuit of optimal outcomes^[19, 20]. However, while anger might be helpful for sport performance, it can potentially hinder performance in other domains (e.g., sitting an exam, attending a job interview). Thus, knowledge of a variety of emotion regulation strategies is very important, as is learning to be flexible in how and when to apply different strategies in the pursuit of one's goals across situations. Therefore, we propose that the training of a variety of emotion regulation skills could be of benefit to individuals, and represents an important direction for future research.

In terms of emotion regulation, scores on the EROS scale^[11] indicate that emotion regulation strategies used to increase unpleasant emotions related to higher ratings of hedonically unpleasant emotions in both situations^[3]. Individuals might perceive hedonically unpleasant emotions as helpful to their pursuit of certain goals, and engage in strategies to make them feel angrier or more anxious^[7, 9, 12]. In terms of why unpleasant emotions might help performance, it has been suggested that some athletic tasks benefit from experiencing unpleasant high arousal emotions^[18, 19]. However, the arousal generated might be useful, it is argued that meta-emotional beliefs on whether

an individual believes this emotional state will help or harm performance are also important [9, 21]. For example, an athlete aware that increased anger facilitates their sport performance may seek to experience greater anger in particular situations^[21]. Intervention based research has also found that an individual can learn to interpret sensations of pre-competitive anxiety as being helpful for performance^[22].

However, we propose that there could be conditions in which there are negative performance consequences for individuals using emotion regulation strategies to increase unpleasant emotions, particularly if the use of these strategies results in an excess of emotions (e.g., anxiety) that could overwhelm the individual. Hanin and Hanina^[23] suggest that in many instances, controlling emotions can help one to attain an optimal performance state (emotion-focused coping). However, in other cases, if errors occur in sub-components of performance such as skill execution, this could trigger an individual to experience emotions that may cause further deterioration of performance, particularly skilled performance^[24]. In those instances, research^[23] has recommend an individual's regulatory efforts could be directed toward action-focused coping; that is the individual should focus on what is required to successfully complete the task-at-hand. They recommend that although emotion-focused coping could still be of some help in such a situation, it is possible that the emotion is not targeting the true cause of the problem, which is the breakdown in skill performance. Similarly, in more general terms of emotion regulation across situations, an individual's use of a strategy may serve a beneficial function in one situation (e.g., increasing anger prior to engaging in a contact sport), but in another situation could bring about detrimental outcomes (e.g., increasing anger in a domestic situation could precipitate distressing conflict). We therefore recommend and reiterate that future emotion regulation interventions should involve teaching a range of skills to encourage the flexible use of strategies appropriate to the situation^[4].

Our participants reported that they were closer to their desired emotions in sports competition (see Table 1). The intense emotions and psychological preparation associated with sports competition has contributed to arguments that similar mental preparation could be used to develop emotional control in other performance domains^[15, 16]. We argue that the process of identifying individuals' optimal emotional states, and then examining strategies that help attain these, could provide a useful starting point to this process of performance enhancement^[21]. Related meta-experiences (i.e., knowledge or beliefs about the impact of experiences and strategies upon performance) are highly

influential in determining athletes' selection, implementation and effectiveness of coping responses in the face of intense emotions^[25]. Therefore, to increase the likelihood of an emotion regulation intervention being successful with certain individuals, it may be of paramount importance to explore individuals' beliefs about emotions and the degree to which they can be controlled; in the absence of beliefs about the controllability of emotions the intervention may not prove successful^[7]. Similarly, an individual might believe emotions are malleable but experience failure in attempts to control emotions, possibly bringing about further difficulties. For example, athletes who feel overwhelmed by the emotions they experience in competition (e.g., anxiety) may be motivated to regulate the emotions but are unable to manage their intensity and frequency. Evidence from existing interventions indicates that individuals can learn to manage unwanted thoughts associated with anxiety even if the intensity of the feelings are not altered^[10].

The present study has some acknowledged limitations; the first pertains to recall of emotions. We argue that the present study has extended past research on instrumental emotion regulation by comparing preferred and actual emotions in two recently experienced naturally occurring situations (as opposed to artificially created laboratory based situations/settings). This approach relied on participants providing self-report data pertaining to past events, which has the associated shortcoming of retrospective recall. However, participants were requested to focus on recent events to limit any such effects. That said, the recall of past performances as a means to gaining insights on individuals' emotions is common with athletes and is used with greater frequency (and arguably greater effectiveness) within sport psychology research and practice than in research within other domains of psychology^[25].

A second aspect of study design worth considering is that participants provided data regarding self-selected emotional situations they had recently experienced. The kind of everyday situation was not specified beyond it involving intense emotions. Given that participants reported feeling significantly happier, calmer, more energetic, and less angry, anxious, and downhearted in their sport experience than in the daily life situation, it is possible that participants fixated mainly on negative or unpleasant everyday experiences for the daily life ratings. Providing participants complete freedom to select the everyday situation they reported on introduced challenges to the identification of the particular context in which they rated their preferred and experienced emotions (e.g., approach versus avoidance situations as analyzed^[26]). We argue that this represented a sort of trade off versus the procedure of presenting participants with artificial/contrived situations, such as approach or avoidance computer games, and analyzing preferred emotions as a function of such tasks. Future research could endeavor to bridge the gap between these two research

approaches (i.e., real life recalled situations versus artificial situations). For example, approach/avoidance situations naturally occur in sport and could be analyzed to explore emotional preferences and associated strategy use between the two, while retaining high ecological validity. Alternatively, diary studies would yield rich descriptive data on individuals' preferred emotions across situations, and could be used to gain detailed description of the contexts being rated.

V. CONCLUSIONS

In summary, this study provides support for the notion that discrepancies between actual emotions experienced and desired emotions in a given situation drive efforts to regulate emotions. Such individual differences and meta-beliefs regarding different emotions may play an influential role in determining the quality of relationships, performance, and well-being experienced by individuals in both sporting, and everyday life situations, and merit further research attention. It is also recommended that future research should consider the instrumental perspective of emotions regulation when investigating individuals' experiences and emotion management efforts.

VI. KEY POINTS

- Choosing the most appropriate emotion regulation strategy is particularly important in activities where people experience intense, or sometimes unwanted, emotions.
- Self-report data from 924 participants found that before competition, they preferred to experience high activation emotions such as anger, anxiety and excitement, coupled with a less of a desire to experience feeling gloomy and sluggish when compared to daily life. In terms of strategy use, people wanted to use of strategies intended to increase pleasant and unpleasant emotions were associated with daily life.
- Conclusion. We suggest that developing protocols that lead to flexible emotion regulations skills would be helpful.

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