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Self-determination theory and the darker side of athletic experience: The role of interpersonal control and need thwarting

Kimberley Bartholomew, Nikos Ntoumanis & Cecilie Thøgersen-Ntoumani

Although research guided by self-determination theory has explored the conditions (i.e. autonomy support) and psychological processes (i.e. need satisfaction) that foster healthy development and effective functioning in athletes, very little research has considered the potential role of interpersonal control and psychological need thwarting in the development of athlete ill-being. To address these limitations, two new questionnaire measures were developed: the Controlling Coach Behaviours Scale and the Psychological Need Thwarting Scale. Analysis of subsequent data revealed that need satisfaction was predicted by autonomy-supportive behaviours whilst need thwarting was better predicted by coach control. In turn, athletes' perceptions of need satisfaction predicted positive outcomes (i.e. vitality and positive affect) whereas need thwarting consistently better predicted maladaptive outcomes (i.e. disordered eating, burnout, depression, negative affect, physical symptoms, and perturbed physiological functioning). Such findings have important implications for the operationalisation and measurement of interpersonal styles and psychological needs both in sport and in other life domains.

Keywords: *intrinsic motivation; basic needs satisfaction; coaching.*

THE GENERAL CONSENSUS is that participation in competitive sport will lead to positive outcomes including increased psycho-social development and physical health (Fraser-Thomas, Côté & Deaken, 2005). For many young athletes, however, the extreme mental and physical demands often placed upon them in the sport context can lead to damaged self-esteem and affective disorders, such as anxiety and depression (Fraser-Thomas & Côté, 2009; Krane, Greenleaf & Snow, 1997). Research has also shown that other serious problems, including body image concerns and disordered eating, occur more frequently amongst athletes compared to the general population (Sundgot-Borgen, 1993). Ultimately, the chronic stress associated with participation in competitive sport can lead to burnout and/or a complete withdrawal from sport (Gould, 1993; Schmidt & Stein, 1991). Thus, in order to promote healthy sport participation, it is important to understand the

social-environmental factors which contribute to indices of maladaptive and compromised functioning, as well as optimal well-being. Utilising self-determination theory (SDT; Deci & Ryan, 1985; Ryan & Deci, 2002) as a framework, the research summarised in the current article explored the social conditions that satisfy versus thwart psychological needs and, in turn, impact upon psychological and physiological functioning and athlete well/ill-being. Particular emphasis was placed on the darker side of sport participation as a greater understanding of the social-psychological stressors present in sport should enable appropriate interventions which support athletes to realise their athletic potential without compromising their health and well-being.

The three psychological needs: Beyond need satisfaction

Basic psychological needs theory (BPNT; Deci & Ryan, 2000), a sub-theory within SDT,

proposes that people function and develop most effectively as a consequence of social-environmental supports for their autonomy, competence, and relatedness needs. A plethora of research guided by BPNT has established clear empirical links between psychological need satisfaction and optimal psychological and physical well-being in sport (e.g. Reinboth, Duda & Ntoumanis, 2004; Gagné, Ryan & Bargmann, 2003).

However, beyond psychological growth and well-being, SDT recognises that people can also display cognitive, affective, and behavioural patterns that represent the non-optimal or darker sides of human existence. Such negative outcomes are hypothesised to occur when individuals perceive their psychological needs to be actively undermined (i.e. thwarted) in their immediate social environment (Ryan & Deci, 2000). Therefore, BPNT and, more specifically, its conceptualisation of need thwarting, should provide a framework through which to examine the psychological processes that link negative dimensions of the social environment to indices of athlete ill-being. However, due to the way in which psychological needs have been operationalised and measured in previous questionnaire-based research, little is known regarding the direct consequences of need thwarting (Bartholomew et al., 2011; Vallerand, Pelletier & Koestner, 2008).

Specifically, the positive conceptualisation of the three needs means that assessment tools fail to take into account the active nature and intensity of need frustration that characterise states of need thwarting (Deci & Ryan, 2000). Need thwarting should not simply reflect the perception that need satisfaction is low, but moreover the perception that need satisfactions are being actively obstructed or frustrated within a given context. In addition, assessments of need thwarting must capture the intensity of negative feeling that occurs when an individual's psychological needs are actively frustrated (i.e. one feels oppressed, inadequate, and rejected). Thus, the traditional bipolar

approach (i.e. need satisfaction – need dissatisfaction) does not capture the negative experiential state of need thwarting and, therefore, cannot adequately investigate the hypothesised detrimental effects of need thwarting on health and well-being (Bartholomew et al., 2011). This argument is in line with previous research in which low levels of need satisfaction have not reliably predicted athlete ill-being (e.g. Gagné et al., 2003; Quested & Duda, 2010).

It is, therefore, of theoretical and empirical interest to explore how a more direct assessment of need thwarting can contribute to the prediction of psychological well/ill-being. As such, a series of three studies were carried out in a youth sport context to develop and provide initial evidence for the validity and reliability of the Psychological Need Thwarting Scale (PNTS; Bartholomew et al., 2011). The measure demonstrated good content, factorial, and predictive validity, as well as internal consistency and invariance across gender, sport type, competitive level, and competitive experience. As expected, the assessment of need thwarting added especially to the prediction of negative outcomes (i.e. emotional and physical exhaustion). Subsequent analyses also suggested that perceived need satisfaction and need thwarting were best viewed as independent constructs which can co-occur within the same context. Thus, it is likely that assessments of both need satisfaction and need thwarting more fully address the multiple impacts of sport participation on the psychological and physical well/ill-being of athletes.

The social environment: Beyond autonomy-supportive behaviours

A key tenet of BPNT is that significant others (e.g. coaches) play a central role in determining the quality of experience afforded to individuals in the setting in question via the nature of the social environment they create (Ryan & Deci, 2002). Specifically, a coach's behaviour can be viewed in terms of two interpersonal styles (Vallerand & Losier,

1999). The first of these is known as the autonomy-supportive style. Autonomy-supportive behaviours foster self-initiated strivings and create conditions for individuals to experience a sense of personal autonomy, competence, and relatedness (Adie, Duda & Ntoumanis, 2008; Gagné et al., 2003). However, autonomy support is just one aspect of the social environment that can affect psychological needs. Those in a position of authority can also exhibit a controlling interpersonal style. For example, coaches can behave in a coercive, pressuring, and authoritarian way in order to impose a specific and preconceived way of thinking, feeling, and behaving upon their athletes (Bartholomew, Ntoumanis & Thøgersen-Ntoumani, 2009).

Research conducted to date has primarily focused on autonomy-supportive interpersonal styles (Amorose & Anderson-Butcher, 2007; Gagné et al., 2003); however, studies which have explored the two interpersonal styles independently indicate that controlling behaviours may not be the exact opposite of autonomy-supportive behaviours (Pelletier et al., 2001). It is possible, therefore, that those in a position of authority engage in both controlling and autonomy-supportive behaviours simultaneously and to different extents (Silk et al., 2003; Tessier, Sarrazin & Ntoumanis, 2008). Thus, it is vital to identify and assess those behaviours associated specifically with a controlling coaching style. As such, a series of four studies were carried out in a youth sport context to develop and confirm the validity and reliability of the Controlling Coach Behaviours Scale (CCBS; Bartholomew, Ntoumanis & Thøgersen-Ntoumani, 2010).

Four separate controlling motivational strategies salient in the context of sport were identified: the controlling use of rewards, negative conditional regard, intimidation, and excessive personal control. The scale demonstrated good content and factorial validity, as well as internal consistency and invariance across gender and sport type. Additional analyses revealed that the CCBS scores were only moderately correlated with

perceptions of coach autonomy support. Thus, considering these related but distinct constructs independently should reflect a more comprehensive examination of features of the social environment which impact upon athletes' experiences of need satisfaction and need thwarting.

Athlete well/ill-being: A function of the social environment and psychological needs

The aforementioned arguments were supported in three further studies which explored the concurrent relationships between athletes' perceptions of autonomy-supportive and controlling coaching behaviours, psychological need satisfaction and need thwarting, and a number of well/ill-being outcomes (Bartholomew et al., 2011). At both the general and daily level, perceptions of autonomy-supportive coach behaviours primarily predicted need satisfaction which, in turn, lead to optimal functioning (i.e. vitality; Study 1) and well-being (i.e. positive affect; Studies 2 and 3). Contrastingly, athletes' perceptions of coach control predicted need thwarting only. Thus, although controlling strategies can sometimes appear to be adaptive in that they evoke desired behaviours and performance outcomes in the short term, the current research suggests that such techniques thwart athletes' feelings of autonomy, competence, and relatedness. In turn, perceptions of need thwarting were associated with the development of disordered eating behaviours and depression in Study 1 and burnout symptoms and negative affect in Study 2. Moreover, athletes who perceived their needs to be actively thwarted in the sport environment were more likely to show enhanced physiological stress (i.e. elevated levels of secretory immunoglobulin A) immediately prior to training. In addition, in the final study, daily experiences of need satisfaction and need thwarting during training predicted daily fluctuations in well/ill-being (i.e. positive and negative affect and physical symptoms) in accordance with the pattern observed at the general level in Studies 1 and

2. These findings allow strong inferences to be made regarding the value of directly assessing perceptions of interpersonal control and feelings of psychological need thwarting in the prediction of athlete ill-being.

Summary and future directions

The present research is the first to examine outcomes associated with both the satisfaction and thwarting of psychological needs simultaneously and in relation to both supportive and controlling inputs within the same domain. As such, it provides unique empirical evidence to support the processes outlined by BPNT in relation to the darker and brighter sides of human functioning. In particular, assessing perceptions of interpersonal control and need thwarting alongside autonomy support and need satisfaction, should allow researchers to make better predictions regarding variability in maladaptive and compromised functioning, as well as optimal well-being. Further research examining the dynamic interplay between the motivational constructs examined in the current studies (e.g. autonomy-support/control, need satisfaction/need thwarting) alongside other aspects of the wider SDT framework (e.g. motivational regulations) and in relation to additional outcomes

would clearly be of value. Finally, the practical implications stemming from these findings should be put into practice. That is, coaches must be equipped with the skills to identify and avoid the use of controlling interpersonal behaviours.

Author note

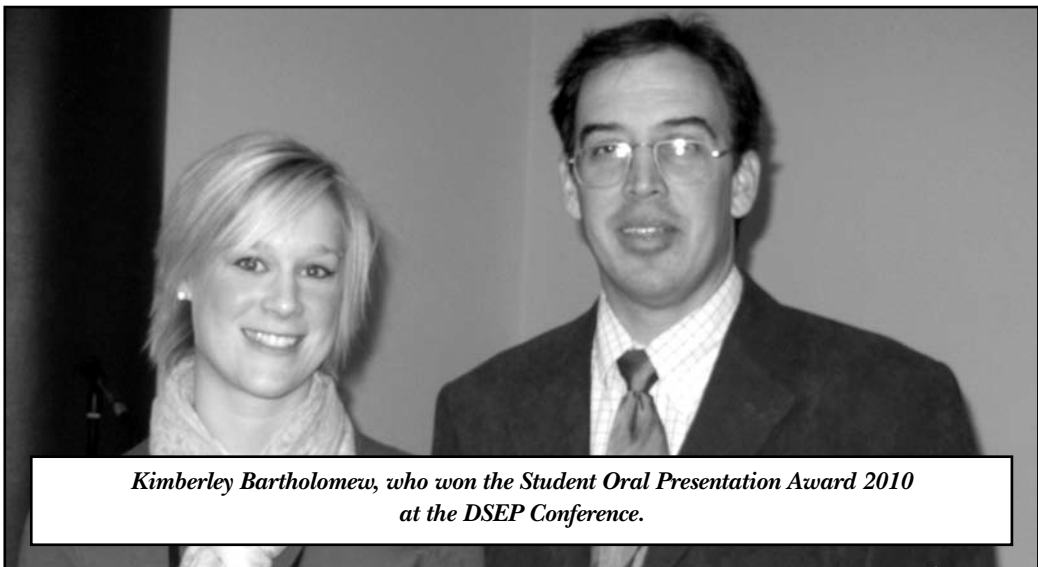
The current article provides an overview of the first author's doctoral thesis, which was completed in the School of Sport and Exercise Sciences at the University of Birmingham. Kimberley Bartholomew is now in the Division of Psychology at Nottingham Trent University.

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