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The predictive ability of perfectionistic traits and self-presentational styles in relation to exercise dependence☆,☆☆

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ABSTRACT

Exercise dependence is a harmful pattern of exercise behaviour that research suggests is associated with trait perfectionism. The current study extends previous research by examining the relationship between symptoms of exercise dependence, trait perfectionism (self-oriented, socially prescribed, and other-oriented perfectionism) and perfectionistic self-presentational styles (perfectionistic self-promotion, non display of imperfection, and non disclosure of imperfection). In doing so, we examined the unique predictive ability of the three trait dimensions of perfectionism; the relationship between perfectionistic self-presentational styles and exercise dependence symptoms; and the incremental predictive ability of perfectionistic self-presentational styles beyond trait perfectionism. Two-hundred and forty-eight gym members (age $M = 25.74$, SD 11.39, range 18–75) completed paper-and-pencil measures of the variables of interest. Analyses revealed that of the traits, self-oriented perfectionism was the most important unique predictor of exercise dependence. In addition, perfectionistic self-presentational styles were all positively related to symptoms of exercise dependence. Finally, after controlling for trait perfectionism, perfectionistic self-presentational styles explained additional variance in four of seven symptoms of exercise dependence (withdrawal, lack of control, reduction, and time). The findings suggest that, beyond exhibiting trait perfectionism, when exercisers are committed to portraying an image of perfection it may contribute to an unhealthy commitment to exercise.

1. Introduction

It is well-documented that regular exercise has a number of physical and psychological health benefits and, unfortunately, too few people participate in recommended amounts of exercise (World Health Organisation, 2010). However, there are also individuals who engage in excessive amounts of exercise, become dependent on exercise, and for who exercise has a negative influence on their health (Veale, 1995). As described by Hausenblas and Symons Downs (2002), exercise dependence is a craving for leisure-time physical activity that results in uncontrollable excessive exercise behaviour and physiological and/or psychological symptoms. Its symptoms include *withdrawal* (withdrawal symptoms for exercise or use of exercise to relieve or avoid withdrawal symptoms), *continuance* (exercise is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the exercise), *tolerance* (a need for increased amounts of exercise to achieve the desired effect or diminished effect with continued use of the same amount of exercise), *lack of control* (a desire or unsuccessful effort to cut down exercise), *reduction* (social, occupational, or recreational activities are given up or reduced because of exercise), *time* (a great deal of time is spent in activities necessary to obtain exercise), and *intention effects* (exercise is taken in larger amounts or over a longer period than was intended). Other models and measures of exercise dependence exist (e.g., Ogden, Veale, & Summers, 1997). However, this is the most commonly used and has the advantage of capturing a range of symptoms based on clinical criteria for substance dependence (Hausenblas & Symons Downs, 2002; Symons Downs, Hausenblas, & Nigg, 2004).

Exercise dependence can be an end in itself (primary exercise dependence) or associated with an eating disorder (secondary exercise dependence) (Veale, 1995). Its development has been explained using both psychobiological and psychosocial mechanisms (Hamer & Karageorghis, 2007; Szabo, 2010). In terms of the latter, this includes eating disorder aetiology and personality factors that encourage a reliance on exercise behaviour. For instance, Hausenblas and Giacobbi (2004) suggested that primary exercise dependence may develop through two related psychological processes. Firstly, it may develop

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when individuals use exercise as a coping mechanism to ameliorate worry regarding health, appearance, and other stressors. Secondly, it may develop due to irrational beliefs regarding how improvements in physical appearance might be used to gain increased attention, expressions of love, and self-esteem. Both mechanisms heavily implicate factors that predispose individuals to high stress, promote an excessive focus on appearance, or engender a belief that self-worth is contingent on appearance. In accord, factors such as trait anxiety (Spano, 2001), neuroticism (Hausenblas & Giacobbi, 2004), and perfectionism (Hausenblas & Symons Downs, 2002) have been found to predict exercise dependence symptoms.

1.1. Perfectionistic traits and exercise dependence

Perfectionism is a multidimensional personality trait that entails the perceived or actual need to perform perfectly (Hewitt & Flett, 2004). According to Hewitt and Flett (1991), trait perfectionism can be imposed on the self (self-oriented perfectionism), imposed on others (other-oriented perfectionism), and believed to be imposed by others (socially prescribed perfectionism). Research has supported the distinction between these forms of perfectionism and suggests they predict different outcomes. Self-oriented perfectionism is highly motivating but is also considered a vulnerability factor for psychological difficulties under conditions of stress (Flett & Hewitt, 2006). Other-oriented perfectionism is typically unrelated to personal problems but is strongly related to interpersonal difficulties (e.g., Stoeber, 2014). Finally, socially prescribed perfectionism is the most problematic trait and is related to various pathological outcomes, such as depression and suicide ideation (O'Connor, 2007).

A number of studies have examined the relationship between trait perfectionism and exercise dependence. These studies have illustrated that trait dimensions of perfectionism predict exercise dependence or similar forms of excessive exercise such as obligatory exercise. This has been illustrated in students, clinical groups, recreational runners, and other regular exercisers. However, most of these studies used unidimensional measures of perfectionism (e.g., Bratland-Sanda et al., 2011; Hagan & Hausenblas, 2003; Hausenblas & Symons Downs, 2002) and/or exercise dependence (e.g., Coen & Ogles, 1993; Hall, Kerr, Kozub, & Finnie, 2007). These studies therefore failed to capture a full range of perfectionism dimensions alongside a full range of exercise dependence symptoms.

Two recent exceptions that adopted Hewitt and Flett's (1991) model of perfectionism found that both self-oriented and socially prescribed perfectionism were associated with higher symptoms of exercise dependence (Hall, Hill, Appleton, & Kozub, 2009; Miller & Mesagno, 2014). However, there are a number of limitations of these two studies. Notably, in the case of Hall et al. (2009), a measure of exercise dependence was used that is not based on clinical criteria for substance dependence (EDQ; Ogden et al., 1997) and other-oriented perfectionism was not included. The inclusion of other-oriented perfectionism is warranted for two reasons. Firstly, its inclusion provides a test of discriminant validity of this model of perfectionism (i.e., as an interpersonal dimension of perfectionism one would not expect other-oriented perfectionism to predict exercise dependence). Secondly, as other-oriented perfectionism is typically positively correlated to self-oriented perfectionism, the inclusion of other-oriented perfectionism is required in order to examine the *unique* predictive ability of self-oriented perfectionism having controlled for this shared variance.

This latter issue is also evident in Miller and Mesagno's (2014) study. Specifically, while a suitable measure of exercise dependence was used, when regressing exercise dependence on trait perfectionism they included only self-oriented perfectionism. The predictive ability of self-oriented perfectionism was consequently examined without controlling for its relationship with the other two dimensions of perfectionism and its unique predictive ability, along with the unique predictive ability of the other two traits, were unexamined. Miller and Mesagno (2014) also reported only on total exercise dependence, rather than individual symptoms which may have different patterns of association with perfectionism. Overall, then, despite the valuable contributions of these two studies, the unique predictive ability of the three trait dimensions of perfectionism in relation to clinical criteria based exercise dependence symptoms are unclear.

1.2. Perfectionistic self-presentational styles and exercise dependence

An additional limitation of research more broadly is that, so far, research examining the association between perfectionism and exercise dependence has focused solely on trait perfectionism and ignored its other important elements. In Hewitt and Flett's model (Hewitt et al., 2003), perfectionism can also manifest in how people seek to present themselves to others. Perfectionistic self-presentational styles capture attempts to create and maintain an image of perfection in public settings. They include perfectionistic self-promotion (seeking opportunities to demonstrate one's perfection), non display of imperfection (minimising the public display of mistakes, flaws, and shortcomings), and non disclosure of imperfection (minimising admission of mistakes, flaws, and short comings). These are distinct from the three traits of perfectionism in that they are not concerned with whether perfectionism is imposed on the self, others, or perceived to be imposed by others, rather they are focused on whether, instead, an individual seeks to project a perfect image to others (Hewitt et al., 2003). As such, those who report higher levels of these styles stake considerable self-esteem on presenting oneself perfectly and gaining acceptance of others (Hewitt et al., 2003). These are features that are central to experiences of those who exhibit exercise dependence (Bamber, Cockerill, & Carroll, 2000).

To date, no study has examined the relationship between perfectionistic self-presentational styles and exercise dependence. However, there are a number of notable findings in this regard. Firstly, perfectionistic self-presentational styles are associated with a range of adverse outcomes, including more pronounced negative emotional experiences, such as general negative affect, anxiety, and depression (Hewitt et al., 2003). This emotion will require additional regulation and exercise offers a means of doing so. Secondly, perfectionistic self-presentational styles are associated with factors that may precede exercise dependence, such as low levels of self-esteem (Hewitt et al., 2003), appearance-related concerns (Sherry et al., 2009), and eating disorder symptomology (McGee, Hewitt, Sherry, Parkin, & Flett, 2005). Finally, perfectionistic self-presentational styles predict a range of outcomes beyond trait perfectionism (Hewitt et al., 2003). Based on this evidence, perfectionistic self-presentational styles may be associated with higher exercise dependence, and may predict exercise dependence after controlling for trait perfectionism.

In summary, the current study had three purposes: (1) to examine the unique predictive ability of the three trait dimensions of perfectionism (self-oriented, socially prescribed, and other -oriented perfectionism) in relation to exercise dependence symptoms; (2) to examine the relationship between perfectionistic self-presentational styles and exercise dependence symptoms; and (3) to examine the incremental predictive ability of perfectionistic self-presentational styles beyond trait perfectionism. Based on the aforementioned reasoning and research, it was hypothesised that self-oriented perfectionism would be the largest unique predictor of exercise dependence relative to socially prescribed perfectionism and other oriented perfectionism would not predict exercise dependence. Perfectionistic self-presentational styles (perfectionistic self-promotion, non display of imperfection, and non-disclosure of imperfection) would be positively related to exercise dependence. Finally, perfectionistic self-representational styles would predict variance in exercise dependence beyond that explained by trait perfectionism.