Type-D personality and body image in men: The role of exercise status

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ABSTRACT

The 'Distressed' or Type-D personality is described by the interaction between high levels of negative affectivity and social inhibition. This study investigated the prevalence of Type-D personality in men of different exercise status, the association between Type-D and body image perceptions, and the moderating effect of exercise status. Participants were 564 British males aged between 18 and 55 years. Of these 200 were classified as sedentary, 148 as active and 216 as weight trainers. Participants completed the DS14 and Multidimensional Body-Self Relations Questionnaire. Results showed that more individuals were classified as Type-D in the sedentary group (45%) than the two active groups, and in the weight training (24.5%) than the active (14.2%) group. Both Type-D and a sedentary lifestyle were associated with a significantly poorer body image. However, exercise mode was not associated with body image differences. Sedentary Type-D men scored significantly lower in Body Areas Satisfaction and higher in Self-Classified Weight than both active groups. Regular exercise might provide a pathway for Type-D men to develop a more positive body image.

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Introduction

It has long been assumed that interacting personality traits can have a negative effect on health and behavior. Based on this idea Denollet, Sys, and Brutsaert (1995) delineated the ‘Distressed’ personality type. The ‘Distressed’ or Type-D personality type describes individuals who have a tendency to experience emotional and interpersonal problems. In particular, Type-D personality is characterized by high levels of the familiar personality construct negative affectivity (NA) and social inhibition (SI) (Denollet, 2005). Individuals high in NA experience negative emotional states across time and situations (Watson & Clark, 1984). For example, NA individuals experience more distress, anxiety, irritability, pessimism, worry, and have a negative view of oneself, the world, the future, and others. SI, on the other hand, is associated with inhibiting the expression of emotions, thoughts, and behaviors in social interactions (Kupper & Denollet, 2007). Individuals high in SI are more tense, have fewer personal ties, and are uncomfortable in meetings with other people (Denollet, 2005; Larsen & Ketelaar, 1991). When high on both NA and SI an individual is said to have a Type-D personality. It is the synergetic effects of negative affectivity and social inhibition that defines Type-D personality (Kupper & Denollet, 2007).

Type-D personality has been shown to be a common personality construct with prevalence between 13 and 38.5% (Kupper & Denollet, 2007; Williams et al., 2008) in the normal population, and has received considerable attention recently in the health literature. Individuals with Type-D personality have been shown to have increased levels of chronic stress, emotional and social difficulties and adverse health effects (Denollet, 1998, 2005). For example, in non-clinical populations Type-D personality has been associated with higher levels of stress in healthcare workers (Oginska-Bulik, 2006), and greater cardiovascular and neuroendocrine reactivity (Habra, Linden, Anderson, & Weinberg, 2003) and increased cardiac output (Williams, O’Carroll, & O’Connor, 2009) in response to acute laboratory stressors. In clinical populations, Type-D has been associated with disruption of the hypothalamic-pituitary-adrenal axis function (e.g., Molloy, Perkins-Porras, Strike, & Steptoe, 2008). Previous research has also shown that individuals high in NA appear to be dissatisfied with their circumstances including their own characteristics (Larsen & Ketelaar, 1989, 1991). As such, Type-D individuals would be expected to have more negative body image perceptions in comparison to non-Type-D individuals. However, to date this proposition has not been investigated. This is an important issue because holding a negative body image perception can have detrimental clinical implications and could influence health risk behaviors adversely.

The failure by both men and women to achieve society aesthetic standards in physical appearance has resulted in an increase in the prevalence of body image disturbance. Because a negative body image is associated with a variety of health problems, researchers...
have examined factors which might influence such perceptions. One such factor which has been associated with a more positive body image is exercise status (Hausenblas & Fallon, 2006; Hausenblas & Symons Downs, 2001). For example, in a large scale study by Løland (1998) in Norway it was found that regular exercise (in particular moderate to high activity levels) was associated with enhanced evaluation of physical appearance, higher satisfaction with body parts and weight, and a more favorable attitude towards physical fitness and health as assessed by the Multidimensional Body-Self Relations Questionnaire (MBSRQ). However, different modes of exercise have the potential to influence body image perceptions in different ways. For example, aerobic exercise might result in increased fitness and reduction or maintenance of fat mass yet weight training might be required to obtain the muscle tone which resembles the ideal body shape. Hausenblas and Symons Downs did not find that sport-type was associated with body image concerns but acknowledged that only a relatively small number of studies have examined body image in weight-dependent sports. In addition, the numbers of participants in such studies are generally low (Smith, Thompson, Racynski, & Hilner, 1999; Pickett, Lewis, and Cash (2005), for example, found that competitive body builders (n = 40) and regular weight trainers (n = 40) had a more favorable overall appearance scores, indexed by a higher score on the Appearance Evaluation and Appearance Orientation scales and three items of the Body Areas Satisfaction Scale (BASS; satisfaction mid torso, upper torso and muscle tone) of the MBSRQ, and lower levels of social physique anxiety than active controls (n = 40). In an intervention study by Williams and Cash (2001) it was found that a 6-week circuit-weight training program resulted in significant improvement in the Appearance Evaluation and BASS of the MBSRQ for the intervention group (27 women and 12 men) but not the matched control group. This study showed that only gains in strength but not aerobic fitness were associated with enhanced body image perceptions. Finally, McDonald and Thompson (1992) suggested that men involved in building a muscular and bulky body (e.g., weight training mode) might be more satisfied with their body image than those engaging in regular exercise for fitness reasons only.

The improvements in body image associated with regular exercise participation have been attributed to perceptions of one’s body being closer to the ideal body and athletic accomplishments (Yuen & Hanson, 2002). However, the influence of exercise behaviors associated with body appearance (i.e., mode of exercise influencing body image perceptions) has had only limited attention in men (Cafri & Thompson, 2004; Hausenblas & Fallon, 2006). The body image literature on adults (≥18 years), in this respect, has mainly focused on females’ body image perceptions and dissatisfaction (McCabe & Ricciardelli, 2004). In their meta-analysis on differences in body image between athletes and non-athletes, Hausenblas and Symons Downs (2001) found that only 19.2% of the studies included male athletes. Although there appear to be no changes in dissatisfaction with muscularity or physical attributes in Caucasian males between 1983 and 2001, a significant number of them (16%) reported problems with their body image (Cash, Morrow, Hrabosky, & Perry, 2004).

The scant research investigating men has focused mainly on body satisfaction and evaluation (McCabe & Ricciardelli, 2004). Both Muth and Cash (1997) and Smith et al. (1999) showed that men generally reported higher Appearance Evaluation (greater overall appearance satisfaction) than women. In addition, women appear to be more preoccupied with their weight (Cash et al., 2004). A proportion of males, in this respect, would like to be slimmer (e.g., lose weight) whereas others prefer to strive for a muscular but lean mesomorphic body type (Leit, Pope, & Gray, 2001; McCready & Sasse, 2000; Pope, Philips, & Olivardia, 2000). Males appear to be dissatisfied with their stomach, chest and arms and would like to increase the size (e.g., muscular appearance) of these body parts (McCabe & Ricciardelli, 2004; Ridgeway & Tylka, 2005). Muth and Cash and Smith et al. (1999) also found that women invested more in their physical appearance (i.e., grooming) than men. Conversely, men have been found to invest more into how well their bodies’ function, in terms of fitness and physical prowess, rather than appearance (McCabe & Ricciardelli, 2004).

Personality can have a significant effect on how individuals appraise and create different environments for themselves (Depue & Monroe, 1986). In the past, there has been research investigating which personality traits predispose individuals to physical activity or exercise participation or adherence. Consistent with Eysenck’s personality theory (Eysenck & Eysenck, 1991), exercisers are more likely to score high on Extraversion and low on Neuroticism in comparison to sedentary individuals (Courneya & Hellsten, 1998; Potgieter & Venter, 1995; Szabo, 1992). Also, Neuroticism has been associated with body dissatisfaction and weight preoccupation in both males and females (Davis, 1997). As such, correlational studies have shown that individuals high in Neuroticism are more likely to exercise for body image or general appearance motives (Courneya & Hellsten, 1998; Davis, Fox, Brewer, & Ratnusy, 1995). Courneya and Hellsten (1998) also found that individuals high in Neuroticism exercised less likely for fun or enjoyments motives, and perceived lack of energy and physical fitness evaluation as barriers. Similarly, Yeung and Hemsley (1997) found that Neuroticism was a predictor of negative affectivity. Davis, Karvinen, and McCreary (2005) recently found that Neuroticism and Perfectionism correlated significantly with Appearance Orientation but not Fitness Orientation in a male sample. Taken together, these findings suggest that personality has an influence on how individuals perceive themselves as well as how much they invest in their appearance, fitness or health. However, few studies have investigated the relationship between personality and exercise preferences (e.g., weight training vs. aerobic exercise).

The aims of the present study were to investigate the prevalence of Type-D in men which could either be classified as regular weight trainers, active (regular exercisers), or sedentary. We also examined the relationship between Type-D personality and body image and whether this relationship was moderated by exercise status. We predicted, based on the characteristics of Type-D individuals, that they would report lower levels of body satisfaction in comparison to non-Type-D individuals. We also predicted that regular engagement in either aerobic exercise or strength training could moderate these effects. Finally, based on the previous empirical findings, body image perceptions were expected to be more positive in those engaging in regular exercise (independent of the mode) than in sedentary individuals.

**Method**

**Participants**

Participants were 564 British males aged between 18 and 55 years (M age = 26.24 years, SD = 7.93). Of these 216 were classified as regular weight trainers (M age = 25.74 years, SD = 8.35), 148 as active (regular exercisers) (M age = 23.64 years, SD = 4.66) and 200 as sedentary (M age = 28.70 years, SD = 8.68). The sample consisted of 539 Caucasian and 14 Black/Asian participants (11 missing entries). All of the participants completed an informed consent form prior to study participation. The study was approved by a University Research Ethics Committee.

**Questionnaires**

Demographics: Various demographic information was collected in this section, including age, ethnicity, income, and exercise...
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