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"I need to go to the gym": Exploring the use of rational emotive behaviour therapy upon exercise addiction, irrational and rational beliefs

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ABSTRACT

Extant research suggests that irrational and rational beliefs may play an important role in both substance and behavioural addictions. However, the influence of irrational and rational beliefs pertaining to exercise addiction has yet to be investigated. Rational emotive behaviour therapy (REBT) is a cognitive-behavioural approach that provides a theoretical framework to identify and change irrational beliefs through cognitive restructuring and endorsing rational beliefs. The principal aim of the current study is to examine the effectiveness of a one-to-one REBT programme in decreasing irrational beliefs and exercise addiction symptoms, and increasing unconditional self-acceptance, in three male exercisers. The exercisers present high symptoms of exercise addiction, and high irrational beliefs. A single-case, staggered multiple-baseline across participant A-B design is used in the current study to examine the effects of a six-week REBT program comprising six 45 min one-to-one counselling sessions and 5 homework assignments. Visual and statistical analyses and social validation data indicate strong reductions in low-frustration tolerance, composite irrational beliefs, and exercise addiction from pre- to intervention phase. In addition, all participants report increased unconditional self-acceptance. This is the first study to report the effects of REBT in an exercise population, and the first to demonstrate that exercise addiction symptoms can be attenuated using REBT. This study supports literature suggesting that irrational and rational beliefs are an important mechanism in exercise addiction and provides important implications for the development of its treatment.

1. Introduction

A large corpus of empirical evidence exists associating regular practice of physical exercise with a plethora of psychological and physical benefits (Bouchard, Shephard, & Stephens, 1994). However, research has shown that, as with behaviours such as gambling or internet-use, the practice of physical exercise can acquire an addictive character (Sussman, Lisha, & Griffiths, 2011). In such cases, the person adopts a behavioural pattern that is meticulous, and inflexible, making it difficult to reduce intensity, frequency, or time committed to exercise, this occurs even in the presence of negative consequences such physical injury and disregarding social and professional obligations (Freimuth, Moniz, & Kim, 2011), in such instances of behaviour this relates to exercise addiction.

Exercise addiction is described as a pathological pursuit of exercise behaviour, that is marked by psychological dysfunction in which exercise behaviour becomes out of control, compulsive and dependent, resulting in a plethora and psychological and physical impairments (Little, 1969, Szabo, Griffiths, & Demetrovics, 2016). At present, nosology of exercise addiction remains equivocal with no official diagnostic criteria, due to this very few documented cases have emerged. At present, the diagnosis of exercise addiction is largely determined by clinical judgment. Clinicians screen patients to identify underlying motivators pertaining to an individual's exercise behaviour, emotional connection to exercise, and influence on other facets of their life. This information is then corroborated using a valid assessment tool (i.e. Exercise dependence scale; Hassenblas & Hassenblas, 2002b) to ascertain the severity of exercise addiction symptoms. To this end, pathogenic exercisers (i.e. exercise addiction) can be discerned from high-frequency/or committed exercisers (i.e. healthy habit), like athletes or avid exercisers who maintain control over exercise, have meticulous training regimes, however, maintain social and professional obligations, and

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encounter no deleterious or negative consequences as a result of their exercise practices.

Exercise addiction is often classified as a behavioural addiction (Egorov & Szabo, 2013), analogous to gambling addictions. However, as it stands the DSM-5 in its subsection of "Non-substance-related disorders" includes only gambling addictions as a behavioural addiction (American Psychiatric Association, 2013), with exercise addiction residing as a "compensatory behaviour" of eating disorders such as Anorexia and Bulimia Nervosa. Consequently, scholars working in the area of exercise addiction have relied on theoretical models derived from two kinds of criteria: (1) those proposed and derived from the substance dependence subsection in the DSM-IV (American Psychiatric Association, 1994, Hausenblas and Symons Downs, 2002a, 2002b) or (2) those proposed for behavioural addictions by Griffiths (1996, 2005). Extant literature utilising both criteria have proposed prevalence rates of 2–3% for the general exercising population (Mónok et al., 2012). However, endurance exercise populations have yielded prevalence rates of up to 20% (Griffiths et al., 2015).

De Coverley Veale (1987) discerned between primary and secondary exercise dependence. Primary exercise dependence entails pathological exercise behaviour which is driven solely for psychological gratification from exercise behaviour alone (Bamber, Cockerill, & Carroll, 2000), whereas secondary exercise dependence relates to the use of exaggerated exercise as means to regulate and control another disorder (e.g. Anorexia Nervosa, Bulimia Nervosa). Thus, to avoid conceptual confound, when considering exercise addiction this paper will adopt a "primary" conceptualisation, therefore utilising Hausenblaus and Symons-Downs (2002b) perspective to assess, describe and define exercise addiction. To this end, exercise addiction is defined as "a craving for leisure time physical activity that results in uncontrollable excessive exercise behaviour that manifests physiological and/or psychological symptoms" (Hausenblaus & Symons-Downs, 2002b). Therefore, exercise addiction is marked by psychological, behavioural and social factors including unhealthy exercise intensity/frequency, exercising more than intended, lack of control over exercise, withdrawal symptoms, a great deal of time pursuing exercise, reduction in other activities due to exercise, and continuing to exercise despite recurring physical and/or psychological problems.

Despite a large corpus of research investigating this phenomenon and its detriments, there remains a paucity of research identifying underlying mechanisms that contribute to the onset, development, and maintenance of exercise addiction. Moreover, scant attempts of treatment have been reported within literature, however, as with other behavioural addictions, cognitive behavioural therapy (CBT) has been recommended to help exercisers to reconstruct their maladaptive beliefs concerning exercise (Weinstein & Weinstein, 2014).

To date, etiology studies of exercise addiction have proposed both neurobiological and psychological explicative models (Szabo, 1995; Thompson & Blanton, 1987; Weinstein & Weinstein 2014). Egorov and Szabo (2013) postulated that exercise addiction could manifest by utilising exercise as a coping mechanism arising from the interaction between adversity and one's interpretation of such events. Once this coping method of stress is adopted, the individual becomes reliant on it to function adequately. Furthermore, the individual believes that he/she is engaging in a seeming health behaviour for stress management given scholastic and public health resources, providing the rationalization for their pathogenic exercise behaviour that begins to impede upon social and professional obligations. However, eventually when life-obligations forces the individual to reduce the frequency of exercise bouts, causing exercise privation, consequently, psychological hardship resurfaces and manifests as withdrawal symptoms (e.g. anxiety, depression, agitation, irritability). Moreover, theoretical postulates have highlighted psychological traits such as trait anxiety (Coen & Ogles, 1993), perfectionism (Cook, 1996), and obsessive compulsiveness (Spano, 2001) as predispositions to the development of exercise addiction. Finally, Egarov and Szabo (2013) conceived the notion of a "black box", relating to the idiographic mindset of an individual with exercise addiction. The black box describes the possible interactions between personal and situational factors, which increase the onset, development and maintenance of exercise addiction. Key components of the black box entail ongoing, unbearable or suddenly appearing adversities (e.g. loss, breakups, bullying) which causes pain that the individual has no control over. This also interacts with attentional cognition in that prior experience, inter- and intra-personal thought, beliefs and conviction will influence exercise behaviour as means for an escape path. Considering the aforementioned, one psychological construct that has been linked to the above, and thus could be valuable in understanding exercise addiction, is that of irrational and rational beliefs.

Derived from the postulates of rational emotive behaviour therapy (REBT; Ellis, 1957), irrational and rational beliefs allude to the cognitive pattern in which individuals holds in the face of adversity (rejection, failure, loss). Rational emotive behaviour therapy is a cognitive-behavioural approach to the promotion of psychological health and well-being, and postulates, that all disturbance occurs as a consequence of dysfunctional information processing Ellis, 1962; Ellis, 1994). REBT delineates between irrational (e.g., demandingness, low frustration tolerance, awfulizing, and self-, other-, or world-depreciation) and rational beliefs (e.g., preferences, high frustration tolerance, anti-awfulizing, and self-, other-, or world-acceptance; Ellis & Dryden, 1997), and adopts a binary theory of emotional distress, discerning between dysfunctional and functional emotions, thus being qualitatively different than quantitatively. Irrational processing to internal stimuli (e.g., a pain in your leg) or external stimuli (e.g., receiving negative feedback) are hypothesised to produce unhealthy or maladaptive emotions reactions (i.e., UNEs; anxiety, rage, depression). In contrast, rational processing of stimuli is hypothesised to produce healthy or adaptive emotional reactions (i.e., UNEs; concern, assertiveness, sadness). Beliefs are evaluative or appraisal mechanisms and are consistent with Albeson and Rosenberg's (1958) conceptualisation of hot cognitions. Beliefs evaluate representations of reality in terms of their personal significance to that individual. Therefore, the primary objective of REBT is to change irrational beliefs through cognitive restructuring and to promote rational beliefs to propagate psychological health and well-being (Ellis & Dryden, 1997; MacInnes, 2004). Indeed, REBT holds that neurotic disturbances are a by-product of escalating one's rational, flexible, preferences into irrational, inflexible, demands. To this end, people develop their irrational beliefs by what they greatly desire. Furthermore, REBT posits that beliefs, irrational/and or rational, engender emotional experiences that create specific action tendencies. Thus, irrational beliefs facilitate behaviour tendencies to engage in escape or avoidant behaviours, contrarily rational beliefs generate emotions that facilitate approach behaviours (Dryden, 2009; Ellis, 1994). More precisely, Dryden delineates a gamut of behaviours/action tendencies associated with holding irrational beliefs, viz. withdrawing from reinforcement, isolation, avoiding feared situations, self-harming, searching for constant reassurance, repetitive behaviour, ignoring attempts to restore social equilibrium. Examples of overt operant behaviours include avoiding anxiety-provoking situations because we have endorsed the belief that we must not experience it because to do so would be completely awful, and we could not stand it. Such postulates, may provide understanding to the psychological processes of an exercise addiction, with the exerciser holding irrational beliefs about the prospect of missing an exercise bout, and therefore displaying an array of unhealthy negative emotions (i.e. anxiety, guilt), and

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