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03

MENTAL INDICATORS AND PHYSICAL ACTIVITY

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INTRODUCTION

The physiological benefits of physical activity are well known, as they may promote a better quality of life by substantially reducing the risk of developing diabetes, heart conditions and a number of other conditions that are aggravated by a sedentary lifestyle (Richardson et al., 2005). Research studies in this area have reported a 60% reduction in chronic physical conditions (Richardson et al., 2005). Moreover there is growing literature supporting the psychological benefits of regular physical activity ranging from improved mood to reduction of depression, anger, anxiety (Hassmen et al., 2000), while improving self-efficacy and complex cognitive and physiological processes that can ameliorate conditions such as clinical depression (Hassmen et al., 2000).

Over the last few decades mental health disorders have become an increasingly pressing problem of public health systems. This problem has led to the exploration of alternative systems to support and complement medical and psychiatric treatment in light of increasing evidence for the benefits of physical activity on medical disorders. People suffering

from mental disorders are more likely to have a sedentary lifestyle accompanied by higher probabilities to develop diabetes and high blood pressure due to the medication, poor diet and low activity rates (Richardson et al., 2005). Therefore, the potential benefits of physical activity on mental disorders are significant as it can help ameliorate the side effects of medication, while improving multiple psychological aspects such as the mood, self-perception, emotional stability, confidence, memory and self-control (Taylor et al., 1985).

Physical activity, exercise and fitness are three terms that are commonly used, and quite frequently interchangeably as synonyms. However, it is important to clarify that these concepts are not the same. According to Caspersen et al. (1985) physical activity consists of any bodily movement produced by muscles that result in energy expenditure (i.e. occupational, sports, or other activities). Exercise, on the other hand, can be defined as any sub-category of physical activity that is planned and structured, to improve physical fitness. Lastly, physical fitness refers to a set of attributes that are health or skill related. In the context of this policy report, the broader concept of “physical activity” will be used

throughout.

The influence of physical activity can be seen from a number of perspectives. It can help an individual change his daily routine, interact with others, increase self-esteem and confidence, master physical challenges, gain new skills, have a better body awareness and benefit from its positive physical impacts (Callaghan, 2003; Ströhle, 2009; White et al., 2009). It can be used to promote the well-being and positive psychology via the positive effects of physical activity (physiological and psychological (Daley, 2002), while on the other hand it can help prevent and treat mental illness and disorders (Fox, 1999). The majority of the articles and research addressing the benefits of physical activity on mental health deal mainly with depression. However there is growing research and need for more with respect to the benefits of physical activity in more serious mental illnesses.

Statement of the Problem: The purpose of the present policy paper was to address the above issues and discuss the evidence based benefits of physical activity upon individuals with a variety of mental health illnesses, such as depression, anxiety disorders, schizophrenia, bipolar disorder, etc.

METHOD

In order to identify what is known about the aspects associated with physical activity and mental health, a narrative literature review was conducted. Narrative reviews embrace a less formal approach than systematic reviews, however there are still very “useful in gathering together a volume of literature in a specific subject area and summarizing and synthesizing it” (Cronin et al., 2008, p.38). The identification of the sources for this narrative literature review was carried out by employing a systematic keyword search into relevant scholarly databases (Web of Science, PsycINFO, Scopus, Google Scholar, SportsDiscus) to identify a wide range of relevant literature. These searches were conducted including controlled keywords such as ‘physical activity’, ‘mental health’, ‘mental disorders’, ‘exercise’, ‘psychological effects’, and ‘sport’. The search was limited to scholarly academic articles and conference proceedings in English.

REVIEW OF THE LITERATURE

DEPRESSION

Recognizing the importance of mental health, mental health services in the UK have reached a consensus that there is a positive association between physical activity and mental health. Physical activity and exercise are perceived as helpful supplements for the treatment of anxiety disorders and may benefit emotionally people of all ages regardless of their sex (Callaghan, 2003). Depression seems to be related to one’s perception of the physical self on which physical activity can have some positive influence upon (White et al., 2009). In most studies physical activity has a positive effect on depression comparable to that of psychotherapy (Fox, 1999; Ströhle, 2009) and improvement can be equivalent to that of cognitive therapy (Richardson et al., 2005).

The benefit is greater for people with moderate depression and studies carried out on larger populations have shown that people who engage in physical activity regularly over longer periods of time have significantly lower depression scores regardless of age (Hassmen et al., 2000; Morgan, 1997). The type of physical activity, aerobic or anaerobic, does not seem to make a difference and can bring up to 50% reduction of symptoms. Even in severe cases of depression, 30 min of treadmill training, for 10 consecutive days produced statistically significant reduction in depressive symptoms (Ströhle, 2009).

Moreover, apart from reducing the negative effects of depression, physical activity has an important effect on increasing positive aspects such as increased coping efficacy, better memory function (Foley et al., 2008), sense of coherence, perceived health and fitness, and an increased sense of social integration (Hassmen et al., 2000). In addition physical activity can improve the quality of the sleep cycle, which is generally affected when depressed or under stress, thus, promoting the effectiveness of antidepressants (Stathopoulou et al., 2006).

The procedural path of intervention is not fully understood and needs to be further explored. Nevertheless the fact that physical activity can bring similar and sometimes superior results to those of psychotherapy is

noteworthy and significant enough to consider physical activity when comparing the costs of traditional treatments like psychotherapy (Morgan, 1997). Furthermore, the health benefits of physical activity, such as improved mood, self – esteem and restful sleep provide a compelling argument for adopting physical activity as an alternative or a parallel type of therapy (Atkinson, 2007).

ANXIETY DISORDERS

Intense physical activity reduces state anxiety, which can be attributed to the effect of the distraction element (Morgan, 1997), and physical activity can have anxiolytic effects on healthy population, but this has not been yet generalized on clinical populations. The majority of the studies show that physical activity brings about various physiological changes that cannot be associated with other relaxations techniques. Sports are consistently more effective in reducing stress as opposed to more purposeful physical activities such as housework and cycling to work. This might be attributed to the perceived linkage between the activity and its purpose, leading to reduced enjoyment of the activity itself (Asztalos et al., 2009).

The most noticeable changes in people with anxiety disorders are shown to be induced by following a physical activity regime accompanied by medical treatment. However, caution is required as some of the sensations brought up by physical activity can be perceived as those experienced under stress i.e increased heart rate, sweating etc (Stathopoulou et al., 2006; Ströhle, 2009).

Overall, the benefits of physical activity and exercise on reducing anxiety has received some attention from scholars, however, there is still a need for further evidence as this is a field that is not sufficiently explored.

BIPOLAR DISORDERS AND SCHIZOPHRENIA

Bipolar disorder and schizophrenia can be debilitating psychiatric disorders accompanied by high mortality rates, and increased risks of developing cardiovascular disease, diabetes,

obesity, hypertension and dyslipidemia (Vancampfort et al., 2012). The reason for these increased risks is not attributed to a single factor, but rather the interaction of the treatment, genetics and lifestyle. As the majority of the people suffering from schizophrenia or bipolar disorders do not engage in regular intense physical activities (Wright et al., 2009), and especially in those that include social interaction, the adoption of physical activity as part of a multidisciplinary treatment is of special importance (Vancampfort et al., 2012).

Studying and monitoring the effect of physical activity in people with serious mental illnesses is particularly challenging due to different barriers ranging from the medication side effects, to stigmatization and limited access to the mental health system. These factors along with the lack of sufficient research in this area make the adoption and maintenance of incorporating physical activity in the mental rehabilitation program especially difficult (Hodgson et al., 2011).

Nevertheless, based on the limited studies on bipolar disorders, there is enough evidence to support the positive effect of physical activity on the physical and mental health in people with serious mental disorders. In people with schizophrenia, exercise can help reduce auditory hallucinations, improve the sleep pattern and self-esteem (Callaghan, 2003). As weight gain and cardiovascular disease is almost inevitable, while the cost effectiveness of physical activity has already been highlighted, its integration in the treatment of serious mental illness such as bipolar disorder and schizophrenia is essential (Vancampfort et al., 2012). On the other hand, exercise can help people with serious mental illness by promoting social interaction, which is important for mental recovery (Hodgson et al., 2011).

Benefits to physical well-being were not reported as much, whereas aspects such as the feeling of attainment, the sense of structure, the voluntary aspect as opposed to the ‘must follow your treatment’ approach, the social interaction and the increased confidence seemed to be the more important benefits to the participants (Hodgson et al., 2011). Physical activity has the potential to help people with schizophrenia be optimistic as it can help them experience success, take control, maintain relationships, find meaning, and achieve a sense of normality (Hodgson et al., 2011). Despite the benefits there are serious obstacles, such

as accessibility and expense that make the adoption of physical activity difficult, whilst monitoring and support by sensitive staff is also essential to adhere to any regular activity in the long term (Hodgson et al., 2011).

Similarly to depression and anxiety disorders, the mechanism and the extent to which physical activity helps improve serious mental health disorders cannot be easily determined, and can differ from person to person. Yet, physical activity helps increase confidence and self-esteem and offers a means of distraction from the effects of the illness.

OTHER AREAS OF POSITIVE BENEFIT

In non-clinical population studies assessing the impact of physical activity and especially that of aerobic exercise, an inverse relationship between exercise, emotional well-being and depressive symptoms was reported. The intensity of the activity seems to be important contrary to the findings of other studies, pinpointing to the fact that increased aerobic power is required for a stronger relationship between physical activity and low rates of depression (Galper et al., 2006).

An earlier large scale study on a non-clinical population that took place in California (Camacho et al., 1991) showed that the risk of developing depressive symptoms is dramatically reduced by following a regular physical activity routine. What is also interesting is that the regency of the physical activity is relevant as people who gave up physical activity over time were one and a half times as likely to develop depression as were those who maintained their daily levels (Camacho et al., 1991).

Taking into consideration certain gender differences, women are twice as likely to develop depression compared to men (Chu I-Hua, 2009). The experience of symptoms during menopause can be detrimental to their mental health (Elavsky & McAuley, 2007). A study using a sample consisting of women at different stages of menopause showed that women experienced an increase in the positive effects of physical activity and a reduction in the negative effects associated with their condition (Elavsky & McAuley, 2007).

Further, there is increasingly supporting evidence about the benefits of physical activity

in people with diabetes, obesity, and certain types of cancer such as colon and breast cancer (Bauman, 2004). Other areas where the benefit of physical activity has been shown to be effective is in cases of substance and alcohol abuse. Adopting physical activity alongside a rehabilitation program is more effective helping to reduce cravings, anxiety and depression, compared to usual treatment (Stathopoulou et al., 2006).

Considering the cost and the stigma related with traditional therapies, physical activity presents a cost effective alternative since most studies have shown that it helps to manage and lower depressive symptoms.

POSITIVE PSYCHOLOGY

It is well known and proven that physical activity has various benefits on human health strengthening the body and the mind and promoting one's well-being, which is not defined only in terms of not being depressed or stressed. Being well is subjective and there are a number of positive feelings that once evoked they can promote positive psychology (Hefferon & Mutrie, 2012). Positive psychology helps increase resilience and overcome negative situations by increasing positive emotions. Since the majority of the studies show an increase in the 'feel good' effect after a physical activity, it can be concluded that physical activity is a positive psychological intervention (Hefferon & Mutrie, 2012). This can be taking place by improving self-acceptance, autonomy, environmental mastery, positive relationships, personal relationships, and purpose in life through physical activity (Hefferon & Mutrie, 2012).

Approaching physical activity from a different perspective bringing together the body and the mind is currently being put to practice in Australia, where an 'exercise clinic' uses intervals of 'high intensity' physical activity as a 'drug' to manage different chronic health problems (Clarke, 2017). People are empowered this way to take control of their physical and mental health. Working together with the patients' doctors and therapists, people are empowered to take control of their physical and mental health supporting the evidence for following a combined treatment (Clarke, 2017).

CONCLUSION

Physical activity has been shown to reduce a number of health risks such as obesity, diabetes, high blood pressure, benefits the patients of certain types of cancer, reduce depressive symptoms, anxiety as well as the negative effects of different mental health illnesses. Even though the mechanism is not fully understood and further research is required, the benefits of physical activity and exercise are undoubtedly significant bringing together the body and the mind of humans in order to achieve well-being.

When it comes to design any type of health intervention program, patients' opinions and perceptions are of great significance and should be taken into account. In a study conducted by Daley (2002) on the value of physical activity to mental health clinical populations it was reported that more than 50% of the patients recognize the value of physical activity and they also regard it as the treatment that helped them most.

Nevertheless, when employing any physical activity program the specific needs and characteristics of the targeted group should be taken into consideration, especially when it comes to clinical populations, which quite frequently are accustomed to a sedentary lifestyle. Physical activity should be used in conjunction with counselling and medical therapies in order to enable patients sustain a regular program that promotes the respective positive aspects (Daley, 2002).

Given the evidence of the benefits, both at physiological and psychological level, and the cost associated with mental health, physical activity should be further encouraged to become part of the therapeutic treatment recognizing the importance of both the mind and body (Daley, 2002).

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