

ASSOCIATION OF EXERCISE ADDICTION WITH EMOTIONAL DISTRESS AMONG INJURED OR NON-INJURED REGULAR EXERCISORS

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Abstract

Background: Exercise addiction is an undesirable fixation on physical wellness and exercise. It's frequently an aftereffect of self-perception issues and dietary problems. In exercise addiction we cope mood disorder with physical activity. Many sports man was suffering in depression and anxiety due to injury. So, this study was conducted to see the relation between depression and exercise addiction among injured and non-injured exercisers.

Objective: To find out the association of exercise addiction with emotional distress among injured or non-injured regular exercisers.

Methodology: This was the cross-sectional study in which continent sampling technique was used to To find out the association of exercise addiction with emotional distress among injured or non-injured regular exercisers. Sample Participants selected in this study on basis of inclusion and exclusion criteria. Analysis of data was conducted by SPSS version 21.

Results: In this study we find out that the minimum age is 18(0.6%) and maximum is 64(0.6%) respectively. Compared with LREA-exercisers, more HREA exercisers were depressed In current study we also see that 33(20.25%) are at low risk and 7(4.29%) are at high risk of exercise addiction with no symptoms of emotional stress. 79(48.47%) are at low risk and 44(26.99%) are at high risk of exercise addiction with symptoms of emotional stress. There is significant association between PSS and EAI category (p-value = 0.032).

Conclusion: In end it was concluded that that the depression and emotional stress is more common among high risk exercise addiction individuals. And the risk of depression and mental illness is increased with musculoskeletal injury. Mental appraisal and advising might be helpful enhancements to substantial injury intercessions for tending to enthusiastic trouble

INTRODUCTION

Physical action involves all types of developments which require vitality consumption to support work

performed by the skeletal muscles, sports and exercise are its two subcategories [1]. Exercise is an arranged arrangement of physical movement with the point of

profiting wellbeing or potentially aching a physical ability. It has a reasonable example, and in the event that it is normally performed, it has a quantifiable volume depicted as far as recurrence, term, and force. Game is likewise a type of activity, yet notwithstanding deliberately arranged development, it additionally includes rules and challenge making it more authority situated rather than openly arranged or composed types of activity, which are regularly fun and wellbeing focused (counting physical appearance and psychological well-being[2].

Research evidence reveals that physical activity yields numerous health benefits[3, 4]. There is also scholastic evidence linking regular exercise and/or sport with positive mental wellbeing[5], as well as lower psychophysiological reactivity to mental stress[6]. The acute psychological benefits of exercise on various measures of affect and state anxiety are consistently demonstrated in the literature[7]. Since a solitary episode of intense exercise yields prompt mental advantages, it might be viewed as an appropriate non pharmaceutical remedy to pressure and various state of mind issues, notwithstanding other medical advantages. It is, consequently, to be expected that the American College of Sports Medicine propelled the "Activity is Medicine" program activity [8] to make physical exercise part of both prevention and treatment of various morbidities.

Regular physical exercise has been proved to promote psychological and physical health and to improve quality of life[9]. Surely, physical action upgrades one's personal satisfaction as well as improves body working, diminishes protection from weariness, propels adaptability, and improves solid quality and perseverance that prompts better work proficiency and diminished danger of lower-back issues, aids weight the board, diminishes rate of cardiovascular sickness, lessens the event of type 2 (grown-up beginning) diabetes mellitus, brings down the danger of stress, sorrow, nervousness and adds to the support of a person's general wellbeing[10, 11]. Furthermore, exercise may decrease the effects of ageing through improved functioning during regular tasks of everyday life[12].

The number of adults who perform regular exercise has increased significantly during the last few decades[13]. In particular, exercise in fitness centers is popular[14]. Notwithstanding, there might be a

drawback to making progress toward physical wellness and substantial acknowledgment. Dependence on practice has been portrayed as unnecessary and fanatical exercise designs that may bring about physical injury and over-burden[15].

One of the essential troubles associated with indisputably setting up whether somebody may really be battling with practice habit is the regular abuse of the term. Somewhat this can be credited to Glasser who sorted apparently 'all' unnecessary sound practices as 'positive addictions'[10]. The term 'negative addiction' was eventually inaugurated to express unhealthy associations common amongst all addictions [16]. With specific reference to physical activity, someone who was negatively addicted would continue exercising regardless of physical injury, personal inconvenience or disruption in other areas of their life[17]. In addition, more noteworthy than 33% recognize the inconvenient outcomes however keep on spiraling descending. These incorporate conjugal strain, wounds, mental issues, for example, crabbiness and fixation on running, impedance with work and absence of time for different exercises[18].

Less is known about potential negative aspects of exercise, however such as psychological distress due to musculoskeletal injury and harmful consequences of addiction to exercise[19]. Exercise dependence is a pathological pattern of exercise that includes craving, uncontrollable excessive exercise behavior, physiological symptoms indicative of tolerance and withdrawal, and psychological symptoms such as anxiety and depression[15]. Post-injury mental trouble and personal satisfaction have not recently been investigated in ordinary exercisers with high danger of habit, nor contrasted and levels in harmed exercisers without enslavement.[19]

The point of the current examination was to research the relationship between danger of exercise addiction and psychological distress, and whether this affiliation was adjusted by injury status. We speculated that exercisers with high danger of exercise addiction (HREA) would have higher pervasiveness extent of sadness and stress indications and diminished personal satisfaction contrasted and exercisers with generally low risk exercise addiction (LREA). We further guessed that the relationship between practice habit and mental pressure would be exacerbated in case of injury.

MATERIALS AND METHODS:

This study employed a cross-sectional observational design. Data was collected from different gyms across Lahore, targeting individuals who engaged in regular physical activity. A total of 163 participants were included in the study through convenient sampling. The inclusion criteria comprised individuals of both genders, aged between 15 to 65 years, who participated in physical activity at least once a week in their spare time, such as running or fitness workouts. Participants were excluded if they had a history of trauma or congenital abnormalities. Data collection involved pre-defined questionnaires administered to participants meeting the eligibility criteria after obtaining informed consent.

The pre-defined questionnaire was used in this study. Questionnaire was consisted of two parts, the first part was consisted of demographic data and second part consisted of four questionnaire such as major depression inventory, perceived stress scale, exercise inventory scale and EQ-5d-5l scale. The individuals were selected on basis of inclusion and exclusion criteria. Prior to questionnaire the consent was taken from the participants.

Outcome measure

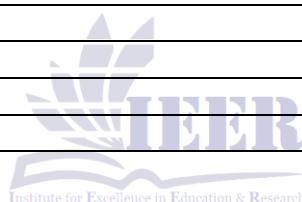
The primary outcomes of interest were depressive symptoms and emotional stress. The secondary outcome was self-rated quality of life in terms of mobility, self-care, usual activities, pain/discomfort, and depression/anxiety.

Result:

Variable	Frequency (n)	Percentage (%)
Gender		
Male	144	88.3
Female	19	11.7
Injury Status		
Injured	89	54.6
Non-injured	74	45.4

Descriptive statistics of age (n=163)

Minimum	Maximum	Mean	Std. Deviation
18.00	64.00	31.37	8.927



Coefficients^a

category of the participants	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
injured	1	(Constant)	22.487	7.578		2.967	.004
		Body mass index	-.535	.231	-.221	-2.313	.023
		Major depression inventory total	.103	.039	.250	2.623	.010
		PSS total	.559	.156	.358	3.587	.001
		EQ-VAS	-.014	.027	-.052	-.516	.607
non-injured	1	(Constant)	9.794	8.935		1.096	.277
		Body mass index	-.044	.179	-.028	-.245	.807
		Major depression inventorytotal	.146	.056	.359	2.632	.010
		PSS total	.051	.103	.068	.492	.624
		EQ-VAS	.100	.076	.156	1.318	.192

a. Dependent Variable: EAI_total

DISCUSSION

This study was performed on individuals who are regular exercisers to the effect of effect of high and low risk exercise addiction on mental stress, depression and quality of life.

Among category of injured people 19 are low risk, whereas 70 athletes are at high risk of exercise addiction. Among non-injured 43 are at low risk and 11 individuals are at high risk of exercise addiction. There is significant association between the variable (p-value=0.004).

In a study of Kessler et.al we found that approximately 5% of population of non-injured exercisers at low risk of exercise addiction had MDI scores indicating symptoms of moderate or severe depression [20]. The result of current study also supported by the results of Kessler as in our study the value is around of 21.3 %. Depressed mood is the most common emotional reaction to injury and, if untreated, this can develop into a psychiatric disorder with severe negative consequences and psychosocial disability as indicated by Pietrzak et. al in 2013 [21].

emotional stress was picked as an essential result on the suspicion that sports injury be a day to day existence stressor as it is connected with torment and physical disability. We found that HREA exercisers revealed fundamentally more passionate misery than LREA exercisers, and that harmed exercisers indicated more, however not factually essentially, enthusiastic trouble than non-harmed exercisers [22]. More than half of the injured exercisers in the high risk exercise addiction group had clinical stress compared with 35% of the injured LREA exercisers. However, non-injured high risk exercise addiction exercisers reported similarly high levels of stress, indicating that high risk exercise addiction may be associated with a high basic level of stress. This is presumably also reflected in the significantly higher proportion of high risk exercise addiction exercisers who reported fear of future injuries compared with the non-injured exercisers at low risk of exercise addiction [23].

When we see about health related quality of life, we found that the mean comparison between low risk exercise addiction and high risk exercise addiction. Low risk exercise addiction showed high mean value on EQ-VAS i.e. 75.133 with maximum value of 95 which indicated good health status. The mean of high

risk exercise addiction is 56.66 with indicate poor health status.

The EQ-5D results demonstrated that current injury had negative effect on versatility, self-care, capacity to do regular exercises, and agony/uneasiness in the two gatherings. Be that as it may, high hazard exercise addiction harmed exercisers were twice as liable to have passionate issues (uneasiness/discouragement) than generally safe exercise addiction non-harmed exercisers as bolstered by the aftereffects of Thornton [24].

Our sample of high risk exercise addiction exercisers was portrayed by higher degrees of week by week exercise, an inclination to exercise despite agony and injury, and a sentiment of being excessively dependent on exercise. These unreasonable exercise examples be hazard factors for over-burden wounds. Mentors, health specialists, and wellbeing experts in clinical settings (particularly physiotherapists and therapists) who survey and treat high hazard exercise addiction exercisers would profit by more information about the psychosocial working of these patients and the effect of injury. We expect this would assist them with detecting and forestall extreme passionate post-injury issues identified with exercise addiction.

Conclusion:

In end it was concluded that that the depression and emotional stress is more common among high risk exercise addition individuals. And the risk of depression and mental illness is increased with musculoskeletal injury. Mental appraisal and advising might be helpful enhancements to substantial injury intercessions for tending to enthusiastic trouble.

REFERENCES:

- 1.Caspersen, C.J., K.E. Powell, and G.M. Christenson, Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. Public health rep, 1985. 100(2): p. 126-31.
- 2.Szabo, A., M.D. Griffiths, and Z. Demetrovics, Psychology and exercise, in Nutrition and enhanced sports performance. 2019, Elsevier. p. 63-72.

3. Bellocco, R., et al., Effects of physical activity, body mass index, waist-to-hip ratio and waist circumference on total mortality risk in the Swedish National March Cohort. *European journal of epidemiology*, 2010. **25**(11): p. 777-788.
4. Powell, K.E. and S.N. Blair, The public health burdens of sedentary living habits: theoretical but realistic estimates. *Medicine and science in sports and exercise*, 1994. **26**(7): p. 851-856.
5. Biddle, S., Exercise and psychosocial health. *Research quarterly for exercise and sport*, 1995. **66**(4): p. 292-297.
6. Norris, R., D. Carroll, and R. Cochrane, The effects of aerobic and anaerobic training on fitness, blood pressure, and psychological stress and well-being. *Journal of psychosomatic research*, 1990. **34**(4): p. 367-375.
7. Biddle, S.J. and N. Mutrie, *Psychology of physical activity: Determinants, well-being and interventions*. 2007: Routledge.
8. Jonas, S., E. Phillips, and A.C.o.S. Medicine, 's Exercise Is Medicine. 2009, Philadelphia, PA: Lippincott Williams & Wilkins.
9. Chen, W.-J., Frequent exercise: A healthy habit or a behavioral addiction? *Chronic diseases and translational medicine*, 2016. **2**(4): p. 235-240.
10. Landolfi, E., Exercise addiction. *Sports medicine*, 2013. **43**(2): p. 111-119.
11. Blair, S.N., et al., Physical fitness and all-cause mortality: a prospective study of healthy men and women. *Jama*, 1989. **262**(17): p. 2395-2401.
12. Corbin, C.B. and R. Lindsey, *Concepts of physical fitness*. 1997.
13. Lichtenstein, M.B., et al., Is exercise addiction in fitness centers a socially accepted behavior? *Addictive behaviors reports*, 2017. **6**: p. 102-105.
14. Fester, M. and P. Gottlieb, *Idrætten i tal 2016- Status på foreningsidrætten i Danmark*. 2017, Brøndby, Copenhagen: The National Olympic Committee and Sports Confederation
15. Hausenblas, H.A. and D.S. Downs, Exercise dependence: a systematic review. *Psychology of sport and exercise*, 2002. **3**(2): p. 89-123.
16. Rozin, P. and C. Stoess, Is there a general tendency to become addicted? *Addictive Behaviors*, 1993. **18**(1): p. 81-87.
17. Adams, J. and R. Kirkby, Exercise dependence: A problem for sports physiotherapists. *Australian journal of physiotherapy*, 1997. **43**(1): p. 53-58.
18. Polivy, J. and V. Clendenen, *Exercise and Compulsive Behavior*. 1993.
19. Lichtenstein, M.B., et al., Exercise addiction is associated with emotional distress in injured and non-injured regular exercisers. *Addictive behaviors reports*, 2018. **8**: p. 33-39.
20. Kessler, R.C. and E.J. Bromet, The epidemiology of depression across cultures. *Annual review of public health*, 2013. **34**: p. 119-138.
21. Pietrzak, R., et al., Subsyndromal depression in the United States: prevalence, course, and risk for incident psychiatric outcomes. *Psychological Medicine*, 2013. **43**(7): p. 1401.
22. Villella, C., et al., Behavioural addictions in adolescents and young adults: results from a prevalence study. *Journal of gambling studies*, 2011. **27**(2): p. 203-214.
23. Weinstein, A., G. Maayan, and Y. Weinstein, A study on the relationship between compulsive exercise, depression and anxiety. *Journal of behavioral addictions*, 2015. **4**(4): p. 315-318.

24. Thornton, L.K., et al., Recruiting for addiction research via Facebook. Drug and Alcohol Review, 2016. 35(4): p. 494-502.

