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# The relationship between physical activity and job burnout in university of misan employees, Iraq

**Seyed Hosein Marashian, Mohamad Havat Hosein Aljamali, Amin Khatibi, Esmaeel Veisia**

Department of sport management, Faculty of sport sciences, Shahid Chamran University of Ahvaz, Ahvaz, Iran

**Abstract**

The present study was conducted with the aim of determining the relationship between physical activity and job burnout in university of Misan employees, Iraq. This research was applied in terms of purpose; as well, it is a descriptive study of the type of correlation in terms of the data collection method. The statistical population included all the employees of university of Misan in Iraq in 2021, whose number was about 3500. The size of the statistical sample was determined 346 people using Morgan's table. The sampling method was in a clustered and accessible manner. Data collection tools were Beck physical activity questionnaires in the three components of physical activity related to work, related to leisure time, and related to sports; And the Maslach Burnout Inventory (2001) was used in the three components of emotional exhaustion, depersonalization and the lack of personal accomplishment. The form and content validity was confirmed by using the opinions of 9 sports management professors. Also, the reliability of the physical activity questionnaire and job burnout questionnaire was obtained 0.87 and 0.88 using Cronbach's alpha method, respectively. Kalmogorov-Smirnov and multiple regression tests were used to analyze the data. The findings showed that physical activity had an inverse effect on all components of job burnout among the employees of university of Misan in Iraq. Hence, sports can play a role in reducing work stress and burnout in university employees; increasing their efficiency, effectiveness and productivity, consequently. Therefore, it is suggested that the welfare organization of the university of Misan should consider structured and regular sports programs and necessary motivational arrangements for the employees' participation in sports.

**Key Words**: physical activity, job burnout, University of Misan, Iraq

Address for correspondence:
Amin Khatibi,
Department of sport management, Faculty of sport sciences,
Shahid Chamran University of Ahvaz, Ahvaz, Iran
E-mail: a_khatibi@scu.ac.ir

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## INTRODUCTION

In addition to providing financial needs, work can satisfy some basic human needs such as physical mobility, social relations, feeling of sufficiency, ability, self-confidence and so on. However, work is an important factor in meeting basic needs and improving social conditions; It may become the main source of psychological pressure, which causes a satisfactory job to gradually turn towards dissatisfaction and lack of motivation [1]. In recent years, attention to job pressures and research regarding this matter has expanded and gained great importance. It is an undeniable and concrete fact in today's new organizations that all employees experience some level of nervous pressure or stress in the work environment. burnout is one of the consequences of long-term pressures in the work environment (Rahimi et al., 2014). Also, burnout is associated with psychological symptoms such as depression, sleep disorder and physical diseases such as cardiovascular diseases and physiological reactions such as increased blood sugar and inflammation, which occurs mostly in human service professions (Nwabuoku, and Adebayo, 2010). Acquiring knowledge, improving economic capabilities and achieving social well-being depend on the proper use of the country's potentials and human resources in the current turbulent and competitive working conditions. The more effective the human resources used in different organizations and parts; The progress and success of that country will be greater in various scientific, social and economic fields. Therefore, the management and control of psychological pressures is one of the basic and significant principles in maintaining and empowering employees in any organization [2].

People's jobs are one of the main reasons for tension in their lives. There is more tension in jobs that involve human interaction. Psychological pressures caused by work are among the pressures that, if they are excessive, can endanger a person's health by

causing physical and mental complications. On the other hand, the existence of these pressures may cause a decrease in the quality of a person's work, then, threatening organizational goals [3]. Based on Okhli (2019) point of view, the set of factors that put pressure on a person and force him in various ways to use his physical and mental energy to confront these stresses, is considered as occupational stress [4]. Job stress is one of the five basic risks of the work environment, along with the biological, chemical, physical and ergonomic risks of the work environment. Job stress occurs when there is no harmony between the job requirements and the desires, potentials, skills and abilities of a person [5]. According to the findings of various researches, there is a direct relationship between stress and job burnout, and interventions to reduce work stress and strengthen ways to deal with it can lead to a reduction in job burnout among employees [6]. Job burnout is observed in jobs where a person interacts with people more times. From Maslach's point of view, job burnout is a type of intra-personal response to stressful conditions in the work environment, during which the high amount of work and repeated encounters with other people cause negative feelings and attitudes towards oneself and others [7]. In this case, a person loses his importance in work, is always tired, pessimistic, aggressive, negative and angry. A person who suffers from burnout will soon make all his colleagues suffer from burnout too and this issue can affect the performance of the individual and consequently the organization.

The three different dimensions of job burnout include emotional exhaustion (long and chronic fatigue, sleep disorder, various physical symptoms), depersonalization (negative reaction, without emotion and with a lot of indifference towards clients and colleagues, feeling of shame, isolation, reduced activity and daily work) and the lack of personal accomplishment (reduced sense of adequacy and success in the job, dissatisfaction with work, feeling of failure, loss of understanding and recognition, constant feeling of oppression and exploitation and finally reduced job performance) (Marvian and Lari, 2014).

People do various actions, one of the most important of these actions is exercise and physical activity in order to deal with stress and mental pressure and achieve mental health, [8]. Many studies have been conducted on the effect of physical and sports activities on mental pressures such as stress, job burnout, and other mental disorders in different jobs. Exercise and physical activity act as a defensive shield against the negative effects of stress and its consequences that may endanger a person's health [9]. Various scientific interventions have been proposed with the aim of managing burnout and psychological pressures. to do regular sports exercises is as a proposed intervention to reduce mental pressure and increase happiness [10]. Azad Marzabadi and Nik Nafs (2014) concluded that physical activity is effective on occupational stress and even the level of occupational stress can be predicted from the level of physical activity [11]. Studies show that exercise and activity can reduce mental pressure.

Exercise makes more endorphins and serotonin available to the body. They can be maintained for a longer period of time during exercise. One of the positive consequences of exercise is coping with pressure and stress. Regular activity increases the muscle strength of people to endure work. Regular muscle work improves muscle efficiency, and for this reason, in a similar activity, the level of muscle fatigue in those who are more prepared is lower than those who are not prepared (Jalali, 2014). Therefore, sports and physical activities can increase people's potential to deal with some psychological pressures, including work-related burnout. Physical activity will be done done in different forms like work, leisure and sports. Job burnout also appears in different forms such as emotional exhaustion, depersonalization, and the lack of personal accomplishment. The problem of the present research is to determine which of the components of physical activity is related to various types of job burnout. Therefore, the main problem of the current research is whether there is a relationship between physical activity and job burnout of University of Misan employees. If there is a relationship, which of the dimensions of physical activity are more effective in job burnout? And which of the dimensions of job burnout are probably more affected by physical activity?

## METHODOLOGY

This research was applied in terms of purpose; as well, it is a descriptive study of the type of correlation in terms of the data collection method. The statistical population included all the employees of university of Misan (Faculty members and official staff) in Iraq in 2021, whose number was about 3500 persons. The size of the statistical sample was determined 346 people using Morgan's table. The sampling method was in a clustered and accessible manner. Finally, 340 questionnaires were returned correctly through the distribution of online questionnaires. Data collection tools were Beck's physical activity questionnaires in the three components of physical activity with 16 physical activity questions related to work, related to leisure time, and related to sports; And the Maslach Burnout Inventory (2001) with 22 questions and on a five-point Likert scale in the three components of emotional exhaustion, depersonalization and the lack of personal accomplishment [12]. The form and content validity were confirmed by using the opinions of 9 sports management professors. Also, the reliability of the physical activity questionnaire and job burnout questionnaire was obtained 0.87 and 0.88 using Cronbach's alpha method, respectively.

In order to analyze the data, frequency tables and charts were applied in the descriptive statistics section; And Kalmogorov-Smirnov tests and multiple regression were used in the inferential statistics section. Statistical operations were performed using SPSS software version 23 and at a significance level of 0.05.

## Findings

From the perspective of descriptive statistics, 17.1% of the participants were between 21 and 30 years old from the total of 340 participants in the survey, as well, 30.6% were between 31 and 40 years old, 34.1% were between 41 and 50 years old, and 18.2% were 51 years old and older. Therefore, most of the employees were between 41 and 50 years old. In terms of education, 28.2% had a bachelor's degree or lower, 34.1% had a master's degree, and 37.7% had a doctoral degree. Therefore, most of the employees had doctorate degrees. Also, 71.5% of the participants were male and 28.5% were female. In terms of work experience, most of the employees (22/4) had less than 5 years of experience. After that, 6 years to 10 years of work experience and more than 26 years of work experience were the next groups in terms of abundance.

**Tab. 1.** Predicting emotional exhaustion based on physical activity components

| physical activity* emotional exhaustion | (β) | B | Sig | $R^2$ | F | Sig |
|---|---|---|---|---|---|---|
| Total | | 0/24 | | 0/46 | 66/65 | 0/01 |
| Work-related activity | -0/18 | 0/32 | 0/01 | | | |
| Sports-related activity | -0/30 | 0/38 | 0/01 | | | |
| Leisure related activity | -0/35 | 0/47 | 0/01 | | | |

According to the results of Table 1, it is clear that there is a linear relationship between physical activity and emotional exhaustion considering that the significance level is less than 0.05. The value of f is 65/66 in this relationship. The independent variables have been able to predict 46% of the variance of the dependent variable according to the Coefficient of Determination ($R^2$) obtained. Three variables of physical activity related to work, exercise and leisure time are significant predictors for emotional exhaustion; The obtained regression equation is as follows:

Emotional exhaustion = -0.18 (work) -0.30 (exercise) - 0.35 (leisure time) + 0.24

**Tab. 2.** Predicting depersonalization based on physical activity components

| physical activity* depersonalization | (β) | B | Sig | $R^2$ | F | Sig |
|---|---|---|---|---|---|---|
| Total | | /540 | /010 | /350 | /4152 | /010 |
| Work-related activity | 0/06- | /340 | /240 | | | |
| Sports-related activity | 0/25- | /350 | /010 | | | |
| Leisure related activity | 0/27- | /250 | /010 | | | |

According to the results of Table 2, it is clear that there is a linear relationship between physical activity and depersonalization considering that the significance level is less than 0.05. The value of f is 52/41 in this relationship. The independent variables have been able to predict 35% of the variance of the dependent variable according to the Coefficient of Determination ($R^2$) obtained. Three variables of physical activity related to work, exercise and leisure time are significant predictors for depersonalization; The obtained regression equation is as follows:
Depersonalization = -0.25 (work) -0.27 (leisure time) + 0.54

**Tab. 3.** Predicting the lack of personal accomplishment based on physical activity components

| physical activity* the lack of personal accomplishment | (β) | B | Sig | $R^2$ | F | Sig |
|---|---|---|---|---|---|---|
| Total | | /430 | /010 | | | |
| Work-related activity | 0/09- | /140 | /140 | | | |
| Sports-related activity | 0/32- | /450 | /010 | /390 | /8158 | /010 |
| Leisure related activity | 0/22- | /370 | /010 | | | |

According to the results of Table 3, it is clear that there is a linear relationship between physical activity and the lack of personal accomplishment considering that the significance level is less than 0.05. The value of f is 58/81 in this relationship. The independent variables have been able to predict 39% of the variance of the dependent variable according to the Coefficient of Determination ($R^2$) obtained. Three variables of physical activity related to work, exercise and leisure time are significant predictors for the lack of personal accomplishment; The obtained regression equation is as follows:
The lack of personal accomplishment = -0.32 (exercise) -0.22 (leisure time) + 0.43

**Tab. 1.** Predicting job burnout based on physical activity components

| physical activity* job burnout | (β) | B | Sig | $R^2$ | F | Sig |
|---|---|---|---|---|---|---|
| Total | | 0/65 | 0/01 | | | |
| Work-related activity | -0/12 | 0/17 | 0/03 | | | |
| Sports-related activity | -0/29 | 0/45 | 0/01 | 0/41 | 60/83 | 0/01 |
| Leisure related activity | -0/33 | 0/37 | 0/01 | | | |

According to the results of Table 1, it is clear that there is a linear relationship between physical activity and job burnout considering that the significance level is less than 0.05. The value of f is 60/83 in this relationship. The independent variables have been able to predict 41% of the variance of the dependent variable according to the Coefficient of Determination ($R^2$) obtained. Three variables of physical activity related to work, exercise and leisure time are significant predictors for job burnout; The obtained regression equation is as follows:
Job Burnout = -0.12 (work) -0.29 (exercise) -0.33 (leisure time) + 0.65

## DISCUSSION

The purpose of this study was to determine the relationship between physical activity and job burnout in university of Misan employees, Iraq. For this purpose, the relationship between the components of physical activity (physical activity related to work, related to sports and related to leisure time) with each one of the components of job burnout (emotional exhaustion, depersonalization, the lack of personal accomplishment) was investigated through multiple regression test.
Regarding the first hypothesis, the findings showed that there was a significant linear relationship between physical activity and emotional exhaustion of the employees of University of Misan, Iraq; and three variables of physical activity related to work, sports, and leisure time were significant predictors for emotional exhaustion. It means that the emotional exhaustion of employees decreased with any increase in the physical activity components.

Emotional exhaustion is the most important and obvious degree of job burnout and makes employees feel a lack of energy. The experts believe that moderate to severe level of emotional exhaustion can be due to role conflict and ambiguity, taking on too many tasks, intra-personal and interpersonal conflicts, lack of autonomy and reward. Examining the results of research and studies conducted in the field of the effect of physical activities on mental stress and its various indicators such as anxiety, depression, excitement, lack of self-esteem, etc., indicates that physical health is directly related to mental health, and people who have a high level of physical activity suffer less from mental stress and its complications and feel more refreshed and healthier than inactive people. Aerobic exercise prevents the release of tension-causing and stressful hormones, especially when it is done in groups. It creates relaxation and relieves anxiety. Considering that anxiety and occupational stress are considered to be one of the most important causes of job burnout; Also, regular physical activities play an important role in reducing this anxiety and stress; Probably, one of the reasons for reducing job burnout in athletes is the lower level of anxiety and stress caused by regular sports activities [13]. Tsai et al.'s study (2013) showed that exercising at work with high intensity can reduce psychological pressures caused by work, lower systolic blood pressure, and thereby improve employee burnout [14]. De Vries et al. (2017) investigated the effect of exercise on work-related fatigue. These researchers reported that sports interventions have lasting effects on work-related fatigue, including emotional fatigue, and are prescribed as medicine to improve the well-being of employees who are facing work fatigue.

Regarding the second hypothesis, the results indicated that there was a significant linear relationship between physical activity and depersonalization in University of Misan employees, and two variables of physical activity related to sports and leisure time were significant predictors for depersonalization, in the way if they increase, depersonalization will be decreased., people experience a kind of coldness combined with excessive indifference towards their profession and clients with the continuation of emotional fatigue, which is referred to as depersonalization. Depersonalization means having negative attitudes and having a sense of pessimism towards oneself, job, colleagues, customers, organization and life in general [15]. According to the study of Dunn et al. (2005), in people who do regular sports exercises at least 2 or 3 times a week, the prevalence of depression and extreme anger is lower and they experience less stress, suspicion and a sense of lack of trust compared to non-athletes. These people have a better understanding of health, hygiene and wellness and have higher levels of sense of belonging and have stronger social connections. Most researches have confirmed the effect of exercise in reducing negative psychological characteristics, including anxiety, fear, depression, stress, tension, anger, and insomnia, and its effect in increasing positive psychological characteristics, including happiness, self-confidence, good mood, self-esteem, and socialization [16].

Regarding the third hypothesis, the findings showed that there was a significant linear relationship between physical activity and the lack of personal accomplishment of the employees of University of Misan, and two the variables of physical activity related to sports and leisure time were significant predictors for personal inefficiency, so that as they increase, the lack of personal accomplishment of the employees decreases. the lack of personal accomplishment caused by job burnout is associated with reduced self-confidence, reduced job satisfaction, failure to accept organizational responsibilities, increased relocation and leaving the profession. From the point of view of De Vries (2017), continuous physical activities increase the amount of blood flow in the brain, which increases oxygenation and better nutrition of brain neurons, then, it prevents narrowing of brain vessels. These effects, in turn, lead to the prevention of forgetfulness and deterioration of mental abilities during the service period. Employees who have less physical activity face a lower level of endorphins (with anti-pain effects) and serotonin (pleasant feeling) and are more likely to suffer from mental and physical pain, depression and mood disorders (De Vries, 2017). On the other hand, employees whose physical activity is an inseparable part of their life have a higher level of motivation for work activities. Physical and sports activities are effective in relieving mental pressures, and people who are more physically fit are better able to

adapt to mental pressures than inactive people.

The results of the fourth hypothesis indicated that there was a significant linear relationship between physical activity and job burnout of the employees of University of Misan, and the three variables of physical activity related to work, sports, and leisure time were significant predictors of job burnout, so that when these factors increase, employee burnout decreases. Any factor that reduces a person's mental pressures will reduce his job burnout according to the research conducted on the relationship between job stress, other mental pressures, and job burnout. Probably, physical and sports activities cause the attention to be transferred from unpleasant external stimuli such as mental pressure caused by work to pleasant stimuli of physical activity such as recreation, entertainment, etc. In their research, Moradi et al. (2013) concluded that employees who devote more hours to sports have less burnout [17]. Gerber et al. (2013) investigated the effect of aerobic exercise in men suffering from job burnout [18]. The results showed that exercise significantly reduces the symptoms of job burnout [19]. Rahimi et al. (2013) in a study titled comparing the level of burnout in athlete and non-athlete military personnel, concluded that the level of burnout in all three dimensions of emotional exhaustion, depersonalization and reduction of the lack of personal accomplishment of military athletes is lower than their non-athlete counterparts [20]. Mohammad Gholinejad P (2019) investigated the effect of increasing physical activity on the burnout of faculty members. They observed a decrease in burnout due to doing physical activity. Also, the research findings of Saif Panahi and Perondi (2018) showed that eight weeks of aerobic exercise reduces job burnout in male employees of Ghorveh branch, Islamic Azad University. considering at all the researches, it may be possible to claim that since exercise increases positive characteristics such as happiness, self-confidence, good mood, self-confidence, and socialization on the one hand; And it reduces negative characteristics such as anxiety, fear, depression, stress, tension, anger, insomnia, and mental stress relief, on the other hand; Therefore, it increases the quality of life in general and reduces psychological pressure. Finally, it can be effective in preventing job burnout [21-23].

In general, it can be argued that if job burnout increases, lower the productivity of the employee and consequently the productivity of the university will be expected. Since the university is the center for the production of science and training of human resources, it can affect the society. Various scientific interventions have been proposed to manage burnout, and one of the best suggested ways is to do regular physical and sports activities. We can claim that regular physical activity as a non-pharmacological intervention leads to many physiological and psychological benefits and can improve overall health, quality of personal, and work life regarding the effect of physical activities on employee burnout. Therefore, we suggest to the authorities of University of Misan as well as other Iraqi universities, for the purpose of personal and organizational productivity of employees, to include sports programs in a regular and organized manner in their employees' schedule. They must provide the necessary motivational mechanisms to encourage employees to physical and sports activities.

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