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Influence of Physical Fitness on Job Burnout and Mental Health among Female Physical Education Teachers

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Abstract: The present study aimed to investigate the relationship of physical fitness with job burnout and mental health among female physical education teachers in Gorgan, Iran. The study data were collected via a questionnaire survey. The study population included all female physical education teachers in Gorgan; 82 participants were selected via simple random sampling. The data obtained from the questionnaires were analyzed using descriptive and inferential statistics; calculations were done using SPSS 16 software and Lisrel 8.8. The study hypotheses were evaluated using structural equation modeling. The results supported the research hypotheses and indicate that physical fitness has a significant negative relationship with mental health and job burnout. We also found a significant positive relationship between mental health and job burnout. The data analysis also indicates that mental health mediates the relationship between physical fitness and job burnout.

Keywords: physical fitness, job burnout, mental health, physical education teacher.

体能对女体育教师职业倦怠及心理健康的影响

摘要: 本研究旨在调查伊朗戈尔甘女性体育教师的身体素质与职业倦怠和心理健康的关系。研究数据通过问卷调查收集。研究人群包括戈尔甘的所有女体育教师;通过简单随机抽样选择了82名参与者。从问卷中获得的数据使用描述性和推理性统计进行分析;使用SPSS16软件和利瑞尔8.8进行计算。使用结构方程模型对研究假设进行了评估。结果支持了研究假设,并表明身体健康与心理健康和工作倦怠呈显著负相关。我们还发现心理健康与工作倦怠之间存在显著的正相关关系。数据分析还表明,心理健康在身体健康和工作倦怠之间起中介作用。

关键词: 身体素质、职业倦怠、心理健康、体育教师。

1. Introduction

Physical activity can increase well-being, self-esteem, mood, self-efficacy and self-esteem, as well as social adjustment and cognitive functioning [1]. Physical exercise has been used to treat depression and can improve emotional and behavioral responses. In

depressed patients, exercise can reduce anxiety, psychosomatic disorders, obsession, and psychosis and increase longevity and quality of life [1]. An immobile lifestyle is associated with disorders such as cardiovascular disease, poor ability to cope with stress, increased risk of depression, low productivity, and increased absenteeism at work. In contrast, many

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studies have shown that regular participation in moderate levels of exercise plays a significant role in maintaining health.

1.1. Physical Readiness

An individual's physical fitness can affect many other factors, including physical and psychological health. Psychological factors, such as life satisfaction and attitudes on the job and at work, may be impacted by physical fitness. Positive attitudes at work are an important factor in organizational psychology and play an important role in the quality of one's working life [2]. People who exercise feel better about their bodies and physical health [3]. In recent years, sports researchers have explored how physical fitness and a foundation of physical power help individuals cope with stress and impact life satisfaction [4, 9]. Physical fitness can be measured by engagement in sports activities. Adequate physical fitness means that a person's body can adapt to and accomplish different work-related tasks efficiently and without excessive fatigue and still retain sufficient energy for them to enjoy their leisure time [1].

1.2. Mental Health

According to the World Health Organization (WHO), mental health "features harmonious relationships with others, change and modify the individual and social environment, conflict resolution and personal desires fairly, reasonably and suitably" [12]. The relationship of mental health with many variables, including anxiety, flexibility, responsibility, happiness, and talent, has been studied. Bageri-Yazdi et al. [5] define mental health as a balance between one's conscious, semiconscious, and unconscious character and desires. He also identified this feature as flexibility. Thus, flexibility in its general sense in defining the spiritual characteristics of individuals is one criterion of mental health. Weir [13] defines mental health as emotional and physical well-being. For individuals with a mental illness, mental health is the ability to live a full, active and to flexibly cope with the pressures of life.

Elahi et al. [1] explore the relationship between physical fitness and mental health among staff at a military university. Their analysis shows that men had higher levels of physical fitness and mental health. They also observed a significant relationship between physical fitness and mental health. A physical flexibility test explained a large part of the variance (5.13%) in mental health (particularly the physical dimensions of obsession-compulsion, depression, anxiety, and aggression). Body mass index also had a significant positive relationship with the physical components of mental health; obese individuals in their sample were more likely to report negative physical symptoms.

1.3. Burnout

Job burnout is a professional risk that impacts employees' physical and psychological energy consumption [6]. Amiri et al. [10] explore burnout at work among bank employees and suggest ways to prevent it. Their results show that the studied variables, such as workplace facilities, interest in the job, sex, education, and satisfaction with income, are sensitive, and their study is necessary. Managing burnout, which can cause fatigue, occupational stress, and negative performance evaluations, is key. Amiri et al. [10] find that gender, marital status, number of children, education, place of work, and work history impact job burnout. In the long run, job burnout causes stress to the individual. Therefore, one of the main reasons for job burnout in employees is the imbalance between the physical and mental condition of individuals and the characteristics of working conditions [7]. Farahany et al. [11] explore the relationship between personality and job burnout among male physical education teachers in Zanjan, Iran.

In our study, a Pearson's correlation test revealed a significant relationship between dimensions of personality (extraversion, openness to experience, conscientiousness, emotional stability, and adaptation) and aspects of burnout (emotional exhaustion, depersonalization, and a lack of personal accomplishment). There were significant relationships between emotional exhaustion and openness to experience, between depersonalization and extraversion, and between openness to experience and depersonalization. No significant relationships were observed among the other variables. In the present study, the Maslach model of job burnout and the Goldberg model of mental health were used. The physical fitness of female teachers was measured using body mass index and several fitness tests: flexibility, swimming, sit-ups and cardiovascular endurance. The blood pressure was measured. The main objective of this research is to determine whether physical fitness has a significant relationship with job burnout or mental health among female physical education teachers. According to the theoretical literature, the conceptual model is presented in Fig. 1.

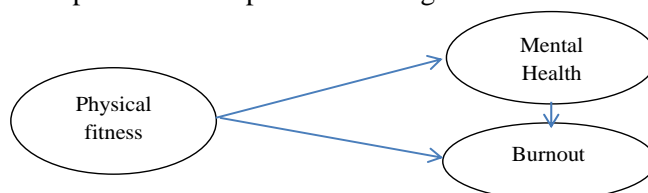


Fig. 1 The conceptual model

2. Methodology

The present study based on the objective demonstrates applied research. In terms of data collection, descriptive study (non-experimental) is a branch of survey studies and, in terms of the relationship between variables, implies the correlation.

A survey method examined the relationship between physical fitness, job burnout, and mental health in women's sports teachers of Gorgan city. Concerning the relationships between variables in the conceptual model, the proposed hypotheses are as follows:

1. There is a significant relationship between Physical fitness and mental health;
2. There is a significant relationship between Physical fitness and job burnout;
3. There is a significant relationship between mental health and job burnout;
4. Mental health is a mediator of the relationship between Physical fitness and job burnout.

For collecting information, mental health [14] and job burnout [8] questionnaire was used whose validity and content have been confirmed by the experts. The questionnaire has been set of the closed type and in Likert scale. Table 1 indicates research variables, the number of questions for each variable, reliability coefficient, and designed references. To check the status of physical fitness in female sports teachers in Gorgan city, the authors used mass index, the swimming speed in a minute, the number of sit-ups in one minute, the flexibility of body (in centimeters), and a test of endurance of the cardiovascular system, as the following formula indicates.

$$O2 = \frac{\text{distance (m)} - 504.9}{44.73} \quad (1)$$

Table 1 Three-line representation

Cronbach's alpha coefficients	Number of Questions	Variables
0.858	28	Mental Health
0.870	22	Job burnout

According to the results of Cronbach's alpha reliability of variables is confirmed. The study statistics sociality included 105 female sports teachers of Gorgan city. Therefore, according to the Cochran formula, the employees' sample size was 82 people. The questionnaires were randomly distributed among all teachers, collected, and analyzed.

3. Results and Discussion

Data analysis is of particular importance for verifying the hypothesis of any research. Raw data are analyzed using statistical software and, after processing, are provided to users as information. Among the respondents to the questionnaire in terms of age, most respondents were 26-30, and the lowest number was in the age group of 51 years and above. Also, in terms of education level, 23% had an advanced diploma, 44% - a Bachelor's degree, and 33% - a Master's degree or higher. Finally, 39% of the respondents to the questionnaire had 0-10 years of work experience, 35% - 11-20 years of work experience, and 26% - 21-30 years of work experience.

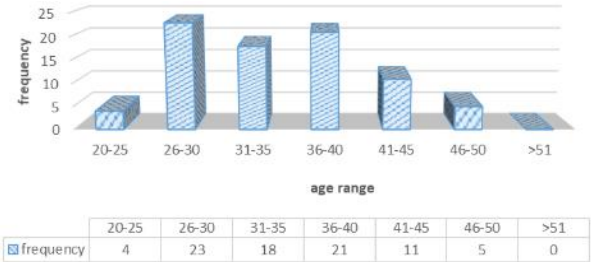


Fig. 2 Percentage of age groups frequency

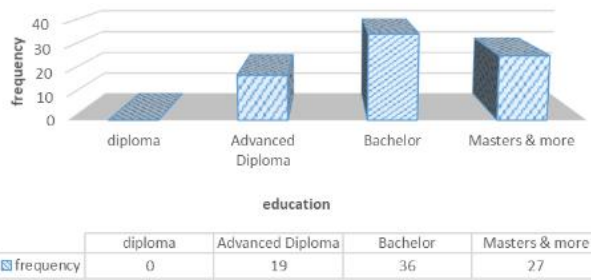


Fig. 3 Percentage of education frequency

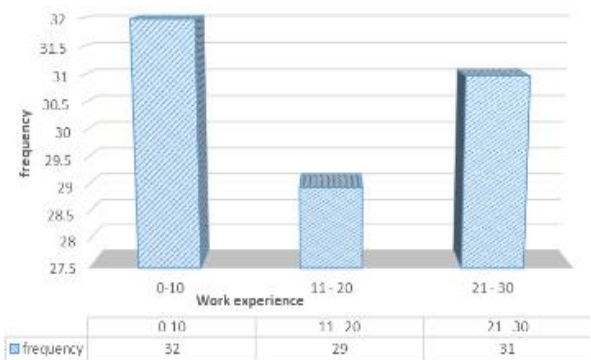


Fig. 4 Percentage of work experience of teacher's frequency

The descriptive statistics of all research variables in terms of statistical indicators are in Table 2.

To estimate the model from the maximum probability method and to evaluate the model fit from the Chi-square ratio index to the degree of freedom, comparative fit index (CFI), fitness index (GFI), adjusted of fitness index (AGFI), settled fitness index (NFI) non-settled fitness index (NNFI), root mean square error of approximation (RMSEA) were used.

Table 2 Descriptive statistics of criteria for measuring research variables

Variance	Standard deviation	Average	Research Variable
1.56	1.25	24.01	BMI
7.96	2.82	8.48	Swim
5.93	2.44	14.18	Flexibility
13.77	3.71	25.62	Sit-Up
4.72	2.17	28.81	Cardiovascular System
0.42	0.65	2.79	Mental Health
0.51	0.72	3.90	Job Burnout

As observed in the table above, all the fitted coefficients are on the acceptable threshold. Ratio Chi-square to degrees of freedom equals to 1/77, the coefficients of the CFI, GFI, AGFI, NFI, and NNFI are

all higher or equal to 0.9, and RMSEA is also less than 0.1.

Table 3 Estimating the model from the maximum probability method

Results	Value	Acceptable range	Fit Index
Appropriate	1.77	<3	Chi-square
Appropriate	0.95	>0.09	CFI
Appropriate	0.93	>0.09	GIF
Appropriate	0.91	>0.09	AGFI
Appropriate	0.90	>0.09	NFI
Appropriate	0.94	>0.09	NNFI
Appropriate	0.098	<0.01	RMSEA

3.1. Testing Research Hypotheses

After confirmatory analysis, the proposed model was tested using LISREL 8.8 software to establish the relationships between independent and dependent variables of the research. This multivariate analysis method is one of the strongest analysis methods in behavioral and social sciences research because the nature of such issues is multivariate. They cannot be solved in a two-variable way. Multivariate analysis refers to a set of analysis methods whose main features are simultaneous analysis of K independent variables and N dependent variables to test the main research hypotheses of the conceptual model of research in estimation mode. The standard is used. In this case, if the T-value is greater than 1.96 or less than -1.96, hypothesis zero is rejected and hypothesis one is confirmed.

First hypothesis: There is a significant relationship between physical fitness and mental health.

According to the model, we can say that the path coefficient is -0.77 in the relationship between physical fitness and mental health. T-statistics for this coefficient equal -6.57, which means this relationship is negative and its value is less than the significance threshold of -1.96. Therefore, the first hypothesis of this study that a relationship exists between physical fitness and mental health is confirmed.

The second hypothesis: There is a significant relationship between physical fitness and job burnout.

Under the direction of the model, we can say the path coefficient of the relationship between physical fitness and job burnout is -0.25. The T-statistic for this coefficient is -2.35, which also means that the relationship is negative and its value is less than the statistically significant threshold value (-1.96). The second hypothesis of this study, which states there is a significant relationship between physical fitness and job burnout, is proven.

The third hypothesis: There is a significant relationship between mental health and job burnout.

According to the model, the path coefficient of the relationship between mental health and job burnout can be no more than 0.64. The T-statistic for this coefficient is 5.05, which means that this relationship is positive and the value obtained is significantly higher than the threshold of 1.96. This confirms the third hypothesis of

this study, which states that a relationship between mental health and job burnout exists.

The fourth hypothesis: Mental health has a mediator role in relation to physical fitness and job burnout

As the coefficients of the model are observed, the significance for the coefficient between physical fitness and mental health is -0.77, and the coefficient of the relationship between mental health and job burnout is 0.64. Multiplying these two path coefficients (0.64×-0.77) is equal to -0.49; this value shows the mediator role in the relationship between physical fitness, mental health, and job burnout. According to the results, it is observed that the indirect effect (-0.49) is more than the direct effect (-0.25). Therefore, the role of mental health as a mediator variable is accepted. Consequently, it has a mediator relationship between physical fitness and job burnout.

4. Conclusion

Due to the relationship between physical fitness and mental health, and also the relationship between physical fitness and job burnout, offering support programs can improve the physical fitness of female teachers. Therefore, creating extracurricular courses and holding classes for physical fitness, will increase the teachers' physical activity and improve their fitness. As the results show, teachers who achieved higher scores on tests of physical fitness had fewer symptoms of mental illnesses, and those who achieved lower scores had more symptoms. Because of the relationship between mental health and job burnout, it is suggested to take measures such as creating a flexible work environment and schedule and paying attention to the conditions of staff such as anxiety, social dysfunction, and depression. As employees' job burnout symptoms increase, it is likely that mental illness symptoms will also increase, and by decreasing the teachers' job burnout, mental health symptoms will also reduce. As a general rule, job stress reduction techniques should be used in preference to companies and organizations to create better conditions for workers, but these various activities cannot completely destroy career anxiety. For this reason, the best way to control and reduce job stress and anxiety is to combine organizational change and stress management.

Program creation, group meetings, and increased communication with employees (horizontal and vertical) is emphasized by the social function of the staff in an organization. Because of increased social interactions amongst employees, their performance is reduced, and to reduce the job burnout and improve the mental health in teachers, performance improvement is necessary. In the end, the work program of an organization can be designed to allow employees to experience less stress in doing their job duties. Increasing the staff's depression increases their job burnout; it is necessary to improve employee performance by reducing these symptoms. They may

be discouraged because of excessive fatigue and may distrust and feel unsafe in the workplace. Perhaps discouragement outside their work environment may have influenced their work hours.

5. Limitations and Further Study

No study covers all aspects of a research problem. For this reason, the limitations of this research include geographical limitations and the number of people surveyed in this study.

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