RESEARCH ARTICLE

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The Effect of Morning Exercise on Mental Health of Female Police Employees

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Background & Aims of the Study: According to the report of world health, organization mental disorder is one of the important causes of disability in the world and it can result in decrease in the success and advancement of employees. Thus, the purpose of this research is evaluation and comparison of mental health status and its related factors in female employees who take part in morning exercise and who are exempt in one of the police units. This is a descriptive-analytic and cross sectional study.

Materials & Methods: The population of this research included 85 female employees who took part in morning exercise as one group and the other group included 65 inactive people who were ill and exempt from exercise. The measurement tool in the research was the Goldberg and Hiller questionnaire of mental health that was consisted of 28 questions. Various studies in the world and in Iran suggest the high validity and reliability of the GHQ-28 questionnaire. The validity of the questionnaire has been approved in more than 70 countries and its reliability has been estimated to be between 82% and 92% in different researches and in different social groups. The data were analyzed using the descriptive statistics (frequency, mean and standard of deviation) and deduction statistics (independent t-test) in SPSS 16 software.

Results: Analysis of the research hypotheses at significant level ($p<0.05$) showed that morning exercise had significant effect on mental health and its subscales such as physical complaint, anxiety, social dysfunction and depression in employees. Moreover, a significant difference was observed by comparing the active and inactive groups in relation to mental health and its subscales.

Conclusions: The results of the research show that the effect of exercise and physical activities on mental health can't be denied. According to the researches that have been done, exercise is effective in two aspects of physical and mental.

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Background

Today the human beings' life is exposed to change and development. This change and development more than anything else has effect on human beings. Since man is a social creature and he finds his value in the society sometimes difficulties disorder his social life and endanger his mental health. So that he withdraw from the society to get rid of these difficulties. He sinks in himself which causes problems like depression, anxiety, lack of social functioning and even physical complaints for him. Disagreement and the presence of behavioral disorders is very obvious and abundant in human societies. In every class and profession and in every group and population there are abnormal people. So, there is the risk of being stricken by the mental disorders for all people including worker, student, doctor, engineer, farmer, professor military employees and

specially police employees (1). The welfare and comfort of women in relation to level of social-economic development, physical and emotional health is the conditions of life. Exercise activities has considerable mental effects which include decreasing anxiety, decreasing depression, protection from and opposing with mental pressure, increasing the self esteem, improving the mood and developing the mental health. One of the ways for decreasing the mental problems and improving the health is exercising (2). The women who have mental problems are exposed to sudden illnesses that are connected to lack of physical activities like diabetes and cardiovascular illnesses (3). Anyway, what is evident more than anything else is physical, mental and social welfare which is nothing but the definition of health. Health either as individual or as collective doubtlessly is the most important issue of life (4). In the past several decades, health has been recognized globally as a human right and a social aim. That is health is essential for satisfying the basic needs of man and it should be for all human beings. The health of man is influenced by many factors such as inheritance, physical activity, living environment, individual patterns and habits, medical care's and generally the style of life and other family, cultural, economic and social backgrounds (5). According to the definition of world health organization the mental health is the ability to relate to others consistently and congruently, ability to revise individual and social environment and the ability to solve the conflicts and personal tendencies in a rational, fair and proper manner (6).

Morning exercise not only has caused positive physiological and physical changes but also it has very beneficial mental and mental effects. According to some views, exercise is the medium and factor of relationship between the individual with himself or with others. This multi dimension recognition can be involved in social compatibilities and in personality (7). Peyravi (2004) concluded in his research that morning exercise is effective in decreasing depression, creating social relations, decreasing mental pressures and creating peace (8). Mosavi (2002) in his research found that generally mental pressure of professors and athlete employees in response to neurotic-behavioral factors has been lower, physical workout and exercise is a variant and effective method in mental management and decreasing the mental pressure and increasing the physical and mental health (9). Many researches have been done in Iran on examining the mental health of different groups (students, workers and so on) and on the role of performing exercise activities on improving the mental health. Among these researches, most of them suggest the high prevalence of mental disorders among the individuals of the society and the positive and effective relationship between performing a variety of exercise activities and mental health. In the researches of Hemayat Talab et al (2003) and Mosavi Gilani et al (2003) which were done with the purpose of comparing the mental health of athlete students and other students who are not athletes, the results showed that the athlete groups enjoyed higher self esteem, satisfaction, effectiveness, positive mood and mental health (9,10). The mental health of the employees of police specially the women in society is very important because they are protectors of security in every society and in the family environment in the present and in future. The presence of mental disorders can cause low performance of the employees and even in some cases leaving the job. Essentially, they are prone to losing mental health due to special conditions such as being far from the family, entering the large complex of police, marital life and growing up the children. They need receiving education and counseling in this regard. In order to this, one of the options which is recommended repeatedly by the different researchers for protecting and improving the mental health is performing regular average exercise activities (11,12).

Since most of the time of people is spent on work environment and under different conditions, most of the life events and activities have deep effect on their physical and mental health. The effect of difficulties and stressor factors in the work time on mental and physical health is very important (13). Mental health and prevention of the side effects of its shortage and also being satisfied with life and helping people in order to increase their physical and mental health has particular importance. On the other hand, growing increase of referring to medical centers in female employees and sometimes their separation from the work confirm the existence of social and mental problems for them. Knowing these requires intervention and counseling examinations. Fewer researches have been done on military and security forces population because of the military position of them in society. Thus, the present study is done with the purpose of understanding the difficulties of employees and identifying the vulnerable and suspicious people (those who are suspicious of having mental disorders). So that using the results offer counseling services to female workers and in the meantime prepare the conditions for them to increase their mental health level and prevent from the side effects and consequences of low performance in the work and wasting the human force and economic resources (14). According to the researches that have been done in this regard and the role of exercise on mental health, researchers are trying to find out how is the state of mental health of female employees in a police unit? And whether a selected aerobic plan which include collective morning walking in the work place can influence on the domains of mental health like depression, anxiety, social dysfunction and physical complaint or not? So for facing with the disorders of mental health which all classes of the society especially female workers suffer from them, the researchers are going to deal with the examination and comparison of the mental health among female workers who take part in morning exercise activities (athletes) and those who are excused of exercise (non athletes).

Materials & Methods

This research is done with the method of case study and in a periodical manner. The present study is a descriptive and comparative study. The population of the research is from among female employees of a police unit who take part regularly 3 times a week in morning exercise (85 people) and the employees who do not take part in morning exercise (65 people) accidentally selected as sample. In order to increase the precision of the people in filling the information, prior to giving the questionnaire two orientation sessions were held. One session was for those who took part in morning exercise and the other session was for those who did not take part in it. The questionnaires were distributed and the sessions were held after giving complete explanation to them that this test would have not any effect on their job status and other personal matters.

The tool that has been used in the research is questionnaire, which includes two parts: a) the information about knowing the population and b) the standard 28 items questionnaire of general health. The 28 items questionnaire includes 4 scales of physical complaint, anxiety, social performance and depression. In the present research, Likert Scale (0-1-2-3) has been used for grading. In this test, the cutting point for screening was assigned 23. That means those testers who gained the grade lower than 23 were not considered patient. In investigating quadripartite subscales including physical signs, anxiety and insomnia, disorder of social function and severe depression, if the

grade of the tester is more than 14 in the mentioned scales, she has problem in that scale (14). For gathering required information two female specialists in physical education were selected as questioners who were out of the organization and had no prior knowledge of the people involved and after that they have been instructed about how to question and fill the questionnaires, they distributed and collected the questionnaires from among the research groups without writing the personal specifications of the testers and orienting them in filing the questionnaire.

Different studies in the world and in Iran suggest the high validity and consistency of GHQ-28 questionnaire. The validity of the research has been confirmed in more than 70 countries and its reliability estimated to be between 82% and 92% in different researches and among different social groups (19). In the end, the data have been extracted and encoded and for analyzing them SPSS 16 has been used. For analyzing of data, the descriptive statistics (frequency, mean, and standard of deviation) and inferential statistics (independent t- test) have been used. All the tests have been done with the 95% level of statistical confidence and critical of 0.05.

Results

The personal characteristics of the testers have been shown on table 1 for the two groups of the research. As you can see there is no difference in measured personal characteristics of the two groups ($p<0.05$).

After analyzing the statistical data and testing the assumptions of the research, it was found that the mental health status of active female employees has significant difference with inactive female employees. So active women are in better state in all dimensions of physical signs, anxiety signs, sleep disorders, social function signs and depression signs ($p<0.05$) (Table 2).

As shown in table 2 the mental health grade of active women group (18.35) is lower than the mental health grade of inactive women group (28.05) and according to the cutting point we can see that the active group is lower than this point and the inactive group is more than this point. In other words, the active group enjoys better mental health status than the inactive group. ($p=0.0001$)

The present research also showed that in every of the 4 scales of physical signs, anxiety signs and sleep disorders, signs of social dysfunction, and depression signs the grades of the active group has been lower than the inactive group and put it in other words the athletes enjoy better state

Table 1: Personal characteristics of the testers

Statistic / group	Age (mean and standard of deviation)	P_{value}	Weight (kg) (mean and standard of deviation)	P_{value}	Height (meter) (mean and standard of deviation)	P_{value}
Active women	32.12+- 5.357	0.231	63.75+-8.32	0.0874	161.43+-10.64	0.105
Inactive women	35.15+- 5.645		70.65+-6.42		163.36+-8.47	

Table 2: Grades of mental health of the testers

Mental health / group	Physical signs		anxiety		Social function		depression		total	
	mean	Standard of deviation	mean	Standard of deviation	mean	Standard of deviation	mean	Standard of deviation	mean	Standard of deviation
Active women	4.20	2.57	4.58	2.70	7.95	3.90	1.62	1.24	18.35	9.41
Inactive women	6.58	3.14	7.02	4.19	11.56	3.71	2.89	3.35	28.05	14.39
P_{value}	0.0001		0.0001		0.0002		0.0001		0.0001	

Discussion

After collecting the information and analyzing the statistical data the results showed that active women enjoy better mental health state than the inactive women and there was significant difference between these two groups ($p<0.05$). The results also showed that the women who take part in public exercise have better physical state than the inactive women. This issue conforms to the research of Brach and et al (2004) and Okandomiaki (2004) (11,20,21). These researchers suggested that any kind of physical activity better prevent the functional restrictions than inactivity but regular exercise has more effective and greater preventive advantage for the physical aspect (11,20,21).

Nevertheless Plant (1999) after reviewing some of the researches suggests that perceiving the physical fitness in relation to real physical fitness with physical progress in physical function has more effect on women's health. So, maybe the women who take part in public exercise feel more general health under the influence of the role of health beliefs. Because it may be useful and healthy for some women even to imagine that they are in physical fitness than being really in physical fitness (22).

The very issue is true in this research, probably the light and mild physical activity has caused the testers have positive feeling and understanding of real health or the imagination of health. The issue has even great history and background about the remedial function of exercise (3,23). In addition this finding conforms to the results of Selgi and et al (2009) and Mosavi Gilani and et al (2002) (6,13). Brashington and et al (2003) also have reported the level of mental health of the athlete high school students better than non athletes (5). Karmack and et al (1999) know the recreational physical activity and aerobic fitness as the factors that remove the light anxiety and stress among the students (24).

Also in this regard, the results of the study of Mosavi and et al (2002) show that physical complaint; anxiety and sleep disorder of the athlete group is lower than the non athlete group (13). The results of the research of Hosseini and et al (2006) show that the mean depression grades of the athlete students are lower than the non athlete students (25). As noted in the introduction there are two kinds of paradoxical evidences regarding the relationship of exercise and mental health.

In one hand the research findings (13,14,15) show the effect of exercise activities on improving the mental health and in other hand some findings (12) note that the exercise

activities have no remedial effect. It has been suggested in many researches that physical health causes growing and development of mental health. Different researches have been done about the possible relationship and connection between physiological changes, arising from exercise, and the changes in mental actions. These researches have represented that every kind of exercise causes different physical changes, and thus the mental changes also may be variant and particular according to the type of physical activities (26). The exercise activities can result in mental health of people in different ways. According to the researches that have been done exercise is effective in two dimension of physical and mental health. Physically, it is for centuries that human beings know the wondrous effects of exercise. But the mental dimension has attracted the researchers in recent years. According to these matters, the necessity of exercise in life (especially for those who work in the military forces) is very obvious. Filling their free times with exercise activities, encouraging them to take part in tournaments, paying the costs as much as possible, building the sport locations specific for each field of sport and developing the public sports can be among the possible options for reaching to development of public mental health in the society.

Conclusion

The results of the present research show that the effect of exercise and exercise activities on mental health cannot be denied. It is hoped that the future researches investigate respectively the effective role of different fields of sport (football, basketball and so on) on mental health of all people of the society especially in military and security places and report the effects of each of them on successes and fails of individuals. It is hoped that all employees of public security forces take part in regular exercise activities and prepare themselves for a healthy life. Because this research has been done in a military environment the restrictions in gathering and publishing the statistics and figures was among the difficulties of the research.

Footnotes

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Conflict of Interest:

The authors declare no conflict of interest.

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