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THE COMPARISON OF PSYCHOLOGICAL WELFARE IN ATHLETIC AND NON-ATHLETIC WOMEN IN BORUJERD CITY

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ABSTRACT

The objective of the present study was to compare the psychological welfare of athletic and non-athletic women in Borujerd through a descriptive-survey. The statistical population of the present study consisted of 680 athletic and non-athletic women in Borujerd with minimum educational degree of diploma among which 245 individuals from each category (i.e. athletic or non-athletic) were included as the samples. The research variables included the aspects of psychological welfare. To analyze the hypotheses, Friedman test, Mann-Whitney u-test and Spearman correlation coefficient were used. The results show that there is a significant relationship between the psychological welfare and its items, including autonomy, domination over the environment, personality development, positive relationships, purpose in life and self-esteem ($P=0.0001$). The investigation of the relationships of the three variables of age, marriage and level of education among the subjects with their psychological welfare show that there is a significantly negative relationship between the age and psychological welfare ($p = 0/004$; $r = - 0/13$), an insignificant relationship between the marital status and psychological welfare ($P = 0/26$; $r = 0/051$) and a significant relationship between the level of education and psychological welfare of the participants ($P = 0/0001$; $r = 0/18$). It seems that exercise and physical activities have an effective role in the psychological welfare of the participants and prevention from the psychological disorders such as depression, anxiety, stress, anger and psychological pressures which originates from the secretion of tranquilizers such as Enkephalin, Endorphin and Serotonin.

Keywords: *Psychological Welfare, Environmental Domination, Self-Esteem, Autonomy*

The Comparison of Psychological Welfare of the Athletic and Non-athletic Women in Borujerd

Almost sixty years ago, the World Health Organization (WHO) defined “health” in terms of complete physical, mental and social welfare (WHO, 2001 and 2004). Health is a multi-dimensional concept which includes the patient, incapacity, feeling of happiness and welfare. Numerous studies have pointed out the negative events of life and disruption the psychological welfare of individuals. These events might lead to psychological problems such as depression, stress, anxiety and fatigue (Segrestrom and Miller, 2004).

Reef *et al.*, (1926) introduced a model of psychological welfare or positive mental health. Based on his model, psychological welfare is composed of six factors of acceptance (positive attitude towards oneself), positive relationships with others (establishing a warm relationship with others and empathy), autonomy (independence and ability to deal with social pressures), purposeful life, personality development and domination over the environment (ability of an individual to manage the environment). Reef’s model was globally acknowledged. He combined the three types of emotional, psychological and social welfares to introduce a comprehensive concept of welfare.

Later, the experts of behavioral sciences in organizations, institutions and offices introduced sports as an effective way to provide a proper level of general health among the individuals which can develop physical abilities of individuals and lead to their moral, mental and social welfare (Meshkati, 2005).

For the women as the most important members of the family, the physical training programs not only contribute to the physical and mental health of a half of the society but also play a significant role in providing proper activities for their free time through proper athletic settings which leads to an improved level of mental and physical health of families (Nazarali, 2002).

Exercise and physical activities play a significant role in the psychological welfare and prevention of mental disorders such as depression, anxiety, stress, anger and psychological pressures (Pettis and Mac

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Lever, 1967). The reason for this significance is the effect of exercise on the immune system because physical activities increase the level of anti-core which leads to increase in the number of lymphocytes as the primary carries of anti-cores. Therefore, exercise helps us to prevent the risks of antigens before their effects upon the body emerge.(89)

Some research evidence confirm the fact that this issue such as Mkstr *et al.*, (2010) found out that physical activities in Norwegian adolescents had a significant relationship with reduction of their stress and psychological performance.

Pettis and Mac Lever (1967) found out that physical exercises such as vigorous aerobic exercises decrease the level of anxiety and depression. Some theories oppose with this theory and believed that the effects of moderate physical exercises in the improvement of mental health were more. For example, Norol and Bellis (1993) believed that moderate aerobic exercises (e.g. walking, running, cycling, etc.) had more significant effects upon mental health of police officers and inhibition of job strains.

In regard to the sexual differences and associated effects upon the variable of psychological welfare, the studies of Sheldon and Eliot showed the significant difference of the above variable between the two sexes (male and female) but Chow found out that the women, especially athletic females, have a higher level of psychological welfare compared with men. Behzadnia *et al.*, (2011) stated that hedonic welfare increases among the female students after three month of hip-hop exercises (7, 74). Pednakar *et al.*, (2008) found out that exercise and physical activities decrease the stress and increase psychological welfare of individuals.

Different studies had shown that the higher age of individuals was accompanied with lower brain weight due to the reduced oxygen and blood flow. This decrease had a negative effect upon the memory of elderly individuals and it was accompanied with the loss of 50% of their muscular mass which had a significant effect upon their quality of life (Heywood, 1993). In this regard, the results of this study show that isolation and separation from the community in women often occur in middle age one of the reasons of which is the change in the ratio of hormones such as steroid during menopause. Such a reduction leads to osteoporosis and broken bones in the elderly women.

The objective of exercise is to secure mental and physical health of individuals. The higher ages of older individuals might be threatened with diseases such as diabetes, gastrointestinal problems, stiffness and pain of joints, arthritis, blood pressure and vascular diseases in the elderly individuals, especially women. The previous evidence shows that women who have consistent physical activities are less likely to suffer from osteoporosis and loss of muscular mass before and after menopause (Bruner *et al.*, 1983; Oyster *et al.*, 1984).The physical activities, even moderate ones, can inhibit the loss of bone tissues among the adults, increase the mineral level of bones in the elderly individuals and decrease the possibility of suffering different diseases in them (Kroland *et al.*, 1982; Smith *et al.*, 1981).

The results of studies by Alaii (2011) regarding the effects of an aqueous exercise program upon the static and dynamic balance and muscular force of lower extremities of the elderly women and a study by Danghian (2010) on the effects of exercise programs and physical activities on the prevention from forgetfulness and loss of mental abilities of the elderly individuals support this issue.

Due to the fact that women create the bases of future in a society, mental disorder among mothers can lead to negative mood and mental disorders of their children. The increasing rate of women who visit consultation centers shows their mental and social problems. Therefore, the present study aims to compare the psychological welfare of athletic and non-athletic women. The results of present study can be used to improve the consultation services and mental health of women and can provide the development in the identification of effects of exercises on mental health of women.

MATERIALS AND METHODS

Methodology

The present study is a descriptive survey with a statistical population of 680 athletic and non-athletic women in Borujerd with minimum educational degree of diploma. To define the sample size, Morgan Table was used and 245 individuals for each group were selected through cluster and accidental sampling

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(i.e. those athletic women who have continuous physical activity in gyms of Borujerd and those women who lacked continuous physical activity in the past three years). The psychological welfare questionnaire was distributed.

The instrument of data collection was Reef’s Psychological Welfare Questionnaire which included the aspects of psychological welfare, including self-acceptance, purpose in life, and domination over the environment, etc. The questionnaire was standard and validated in domestic studies. In addition, demographic variables such as age, marital status and level of education among the subjects were studied. In the present study, content validity verification was followed by calculation of reliability coefficient through Cronbach’s alpha as 0.83. To analyze the data, frequency distribution and scattering distribution were used for descriptive statistics and Friedman test, Mann-Whitney u-test and Spearman correlation coefficient were used for inferential statistics.

RESULTS AND DISCUSSION

Findings

The data of present study regarding the comparison of psychological welfare of athletic and non-athletic women were tested through Mann-Whitney u-test. The results of data analysis show that the significance level of all items of psychological welfare between the two groups is less than 5% ($P=0.0001$). The first hypothesis was on the comparison of athletic and non-athletic women in terms of psychological welfare and its aspects. Data analysis of this hypothesis is shown in Table 1.

Table 1: The Comparison of Differences between Athletic and Non-athletic Women in Psychological Welfare and its Aspects

Statistic	Group	Mean	Z	Level of Significance (P)
Item				
Psychological Welfare	Athletic	270.53	-3.91	0.0001
	Non-athletic	220.47		
Autonomy	Athletic	267.7	-3.48	0.0001
	Non-athletic	223..3		
Domination over Environment	Athletic	308.5	-9.86	0.0001
	Non-athletic	182.5		
Personality Development	Athletic	248.7	-6.14	0.0001
	Non-athletic	206.3		
Positive Relationships	Athletic	313.9	-10.71	0.0001
	Non-athletic	177.1		
Purpose in Life	Athletic	274.5	-4.54	0.0001
	Non-athletic	216.5		
Self-esteem	Athletic	312.9	-10.54	0.0001
	Non-athletic	178.1		

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As shown, one can conclude that there is a significant difference between athletic and non-athletic women in terms of psychological welfare and its aspects.

The comparison of descriptive information of psychological welfare and its aspects in the two groups of athletic and non-athletic women is shown in Figure 1.

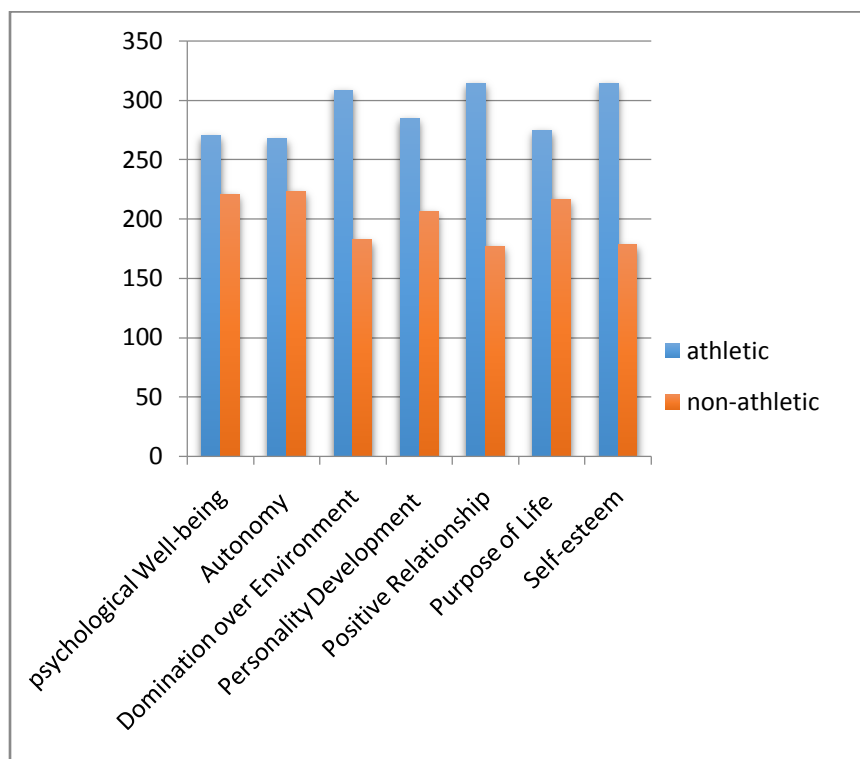


Figure 1: Difference of Psychological Welfare and its Aspects in Athletic and Non-athletic Women

The second hypothesis investigates the relationship of age, marital status and educational level of subjects with psychological welfare. The results of data analysis for this hypothesis are shown in Table 2.

Table 2: Results of Analysis of the Relationship of Age, Marital Status and Educational Level with Psychological Welfare

Index	Number (N)	Correlation Coefficient (R)	Level of Significance (P)
Item			
Age	245	-0.13	0.004
Marriage	245	0.051	0.26
Educational Level	245	0.018	0.0001

As shown, there is a significantly negative relationship between age and psychological welfare. It meant to state that the increase of participants’ age is associated with decrease in their level of psychological welfare which is significant in the level of 0.004. Based on the significance level of 0.26, one could conclude that there is no relationship between marriage and psychological welfare of subjects.

In regard to the educational level of subjects and based on the values of correlation coefficient (i.e. 0.18) and level of significance (i.e. 0.001), one could conclude that there is a positively significantly positive relationship between the educational level of subject and their psychological welfare. The third hypothesis is on the comparison of subscales rating of psychological welfare among the athletic and non-athletic women.

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Table 3: Rating of Subscales of Psychological Welfare in Athletic and Non-athletic Women based on Friedman Test

Group	Subscales of Psychological Welfare	Mean Rating	Chi-square	Level of Significance
Athletic Women	Positive Relationship	4.89	498.1	0.0001
	Domination over Environment	4.42		
	Self-esteem	3.01		
	Autonomy	3.01		
	Personality	2.38		
	Development			
	Purpose in Life	2.02		
Non-athletic Women	Positive Relationships	4.2	148.2	0.0001
	Autonomy	4.13		
	Domination over Environment	3.77		
	Purpose in Life	3.21		
	Self-esteem	3.17		
	Development of Personality	2.52		

As shown, the positive relationships of subscales of psychological welfare in athletic and non-athletic women are observed. The purpose in life for athletic women and personality development for non-athletic women has the lowest rank.

Discussion and Conclusion

Most of the researchers consider mental health as an equivalent of positive psychological functioning and conceptualize it as “psychological welfare”. They believed that lack of disease was an insufficient condition for feeling healthy and feeling of satisfaction with life, calmness, security, energy, and positive mood, proper relationship with the society and effective interaction with the world were the characteristics of a healthy individual.

These items are the most basic needs of human beings and exercise is one of the ways to attain them (8). The main objective of present study was to compare the difference between athletic and non-athletic women in terms of aspects of psychological welfare. Based on the results of present study, there is a significant difference in the level of psychological welfare between athletic and non-athletic women.

Findings

Physical exercises (aerobic and anaerobic) can enhance the positive mood among individuals (Mahmoodi, 2013). This might be due to the release of endogenous tranquilizers such as enkephalin in the anterior part of pituitary gland or release of serotonin (or hydroxyl- Tryptamine) as one of the mono-amine neurotransmitters which are secreted by neurons of digestive system or central neural system.

Almost 40 million neural cells are directly or indirectly influenced by serotonin. These cells are associated with the mood, sexual appetite, appetite, sleep, memory, learning, regulation of body temperature and some social behaviors of humankind which increase energy and happiness in individuals (Piyestra, 1998).

The findings of present study are supported by the results of Behzadnia (2011) regarding positive effects of hip-hop exercise programs upon psychological factors of female students. It is also supported by the findings Mkstr *et al.*, (2010) regarding the effect of physical exercises among Norwegian adolescents

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upon reduction of their level of stress and psychological functioning. Based on the existing evidence and findings, the effects of exercise and physical activities on secretion and regulation of hormones, which lead to enhancement of psychological welfare among athletes, should not be ignored.

For example, physical activities lead to significant increase of growth hormone (GH). This increase is more in elderly women with physical activity compared with young individuals. This increase might be due to the metabolic endeavor of the body to store glycogen and decline in break-down of protein molecules and release of fat (Haywood, 1993).

Regular exercise can contribute to regulation of sexual glands in women; it can assign order to their menstrual cycle and reduce osteoporosis during menopause. Physical activities, even moderate ones, can prevent the loss of bone tissue in the elderly women and increase the mineral materials in their bone (Krolner *et al.*, 1982; Smith *et al.*, 1981). Due to the findings of present study, exercise and physical activities have significant and positive effects upon quality of life for women and their psychological welfare.

Of other findings of present study, one can point to the significant difference of autonomy between athletic and non-athletic women because the athletic women have higher confidence due to consistent participation in the sports relationships and activities and higher communication with others; they also have higher autonomy in their decisions. These findings are supported by Anvaralkholi (2005) that found out that high confidence and domination as well as characteristics such as pride and narcissism are more found athletes than normal individuals.

In the present study, there is a significant difference between athletic and non-athletic women regarding domination over the environment. Kingsburg believe that skill and domination in relationship with the environment occur in three living setting (i.e. love, work and entertainment). Based on this theory and results of present study, one could state that place of living has a significant relationship with the feeling of welfare. This is because belonging to a place and ability to manage one's life is effective upon the feeling of welfare. These findings are supported by a study by Baharifar (2010) who found out that location of living has a significantly positive relationship with the identity and psychological welfare of students of Islamic Azad University. Based on the findings of present study, physical activities such as slow running, cycling and walking can improve memory and time of reaction to the environmental stimuli because regular exercise increases the current of blood in the brain and this is accompanied with increase of oxygen level and nutrition of neural cells as well as inhibition of its vasoconstriction. Physical exercises lead to the release of B.D.N.F Factor which can make neurons resistant against damage and prevention of Alzheimer and Parkinson. The effects of physical exercises upon the improvement of memory have been proved by Dughian (2010) and Wilmer and Castillo (2008). The results of present study show that personality development of athletic and non-athletic women shows significant difference. George Kelly defined personality as "distinctive method of an individual to search and find an interpretation of life". Based on this theory, one could say that when someone believes in him/herself, he/she can influence others through cooperation with them. The findings of present study also show that success and enjoying physical activity contribute to the development and improvement of social communication. Playing and exercise are closely connected to development of personality in the sense that they get an individual to a high level of social awareness. Exercise not only leads to a feeling of satisfaction in women but also helps them to be patient and ready in dealing with problems. These findings are supported by Pardakhtchi (1996), Abdoli (2008), Aziz (1994) and Hashemi (2012). The findings of present study also show that there are significant differences regarding positive relationships among athletic and non-athletic women. Based on Diener's theory (1992), happy individuals are extrovert and they show their happiness in the presence of others. Based on this theory, exercise can be an effective cultural factor in the improvement of interpersonal relationships and socialization. These findings are supported by Koshafa (2003), Anvarakhaloli (2005), Abdoli (2008) and Torkaman (2010) regarding the positive effects of physical activities upon domination of personal behaviors of an individual with others. Based on the findings, there is a significant difference between the athletic and non-athletic women in regard to purpose in life. On this issue, Adler stated that a person with psychological welfare in life is

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purposeful and his/her actions are to follow some objectives. In his theory, selection of an objective and targeting are fundamental signs of psychological welfare of an individual because selection of an objective gives him/her a direction and saves him/her from confusion. Some of the advantages of participation in physical activities are the selection of targets and following them to achieve success in sports. These findings are denied by Behzadnia *et al.*, (2011) that did not regard exercise as an influential factor in determination of objectives in the life of an individual but they are supported by studies of Berzonski *et al.*, (2011), Omid Shakeri (2008) and Agha and Sharif (2011).

The results also showed that there is a significant difference in the level of self-esteem between the athletic and non-athletic women. Janoff (1989) believes that self-esteem is an individual's sufficient knowledge of him/herself and his/her level of satisfaction. The feeling of valuableness and confidence can influence the life of an individual in relation with his/her wishes, stimulus, talent, success and communication.

Participation in the physical activities can provide opportunities for individuals and especially women to evaluate their personal skills and to participate in social activities to influence others. In addition, presence in sports circles can increase the confidence of women and feeling of acceptance and appreciation towards them. These findings are supported by Payamani (2011), Sunstrom (1984), Mel-Roman (1996) and Murtagh (1998) regarding the positive effects of exercise upon the confidence and mental health of individuals.

Another finding is the negative relationship between the age of subjects and their psychological welfare. Increase in the age of women is accompanied by significant reduction in their psychological welfare because higher age results in reduction in the weight of brain due to gradual decrease of blood flow and available level of oxygen. This phenomenon has a negative influence upon the memory of old individuals. During late years of one's life, immobility and low physical activity cause different diseases such as diabetes, gastrointestinal problems, stiffness and pain of joints, arthritis, blood pressure and cardiovascular diseases which threaten the life of elderly individuals and lead to their isolation and separation from society. Such a condition has a negative influence upon their life.

It is obvious that the objective of exercise is to provide physical and mental health of individuals. In higher ages, design of sports techniques should be based on the principles of movement therapy. Encouraging the elderly individuals to participate in group-based activities, monitoring their nutrition program and attention to their individual differences can help families to improve the level of psychological welfare of the elderly, especially women. These findings are supported by Alaii (2011), Danghian (2010), Krazoski (2000) and Pednakar *et al.*, (2000) regarding the significant effects of physical activities on psychological welfare of women. Based on the results, there is no significant relationship between the marital status and psychological welfare of subjects. These results are supported by Habibi *et al.*, (2010) regarding positive effects of marital status on psychological welfare of physical education teacher. The results also show that there is a significant relationship between the educational level of subjects and their psychological welfare. It means that increase in the educational level of subjects is followed by enhancement of their psychological welfare because increase in educational level of women leads to their better understanding of ways of living, enhancement of self-esteem, purposefulness and personal and social development. These results are supported by Mahmodi (2013).

Conclusion

Due to the fact that physical exercise has a significant effect upon psychological welfare of women and their significant role in the families, provision of solutions to enhance their psychological welfare are important such as cultural and social education of families, increase in duration of exercise hours for female students, foundation of gyms for ladies, development of public sport and establishment of specialized facilities for old women (e.g. hydrotherapy centers, massage therapy centers, etc.).

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