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Studying the effect of aerobic exercise on the rational action of women (case study of women aged 25 to 40 in Tehran)

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Abstract

Rational action towards the peace and comfort of people's lives is closely related to sports; As an important sports factor, aerobics can make an important contribution in expanding and strengthening rational action. This research has investigated the effect of aerobic exercise with the rational action of women present in sports clubs in Tehran. Rational action has been investigated based on the theory of rational action by Eisen and Fishbein (1986) and aerobic exercise based on the theory of athletic motivation by Leiter et al. (2008). This research has a quantitative approach and descriptive-correlation strategy. The studied population was women between the ages of 25 and 40, active in sports clubs in Tehran. The researcher selected 60 women using the purposeful sampling method. The reliability coefficient for the variables of aerobic exercise and rational action were determined as 0.89 and 0.74 respectively, and convergent validity was determined as 0.52 and 0.44 respectively. Descriptive and inferential statistics were used to analyze the hypotheses using SPSS software. The findings showed that lack of motivation has no significant effect on the rational action of women in Tehran. The internal motivation variable of rational interaction has a significant effect. The external regulator has a significant effect on the rational action of women in Tehran. Mixed regulation does not have a significant effect on the rational action of women in Tehran. Self-accepting regulation has a significant effect on the rational action of women in Tehran. The internalized regulation has a significant effect on the rational action of women in Tehran. By creating internal motivation, external regulator, mixed regulation, self-sustaining regulation, introjected regulation, the rational action of women can be strengthened.

Keywords: Aerobics, Women, Rational Action, Tehran City, Sports.

1. Introduction

Sports, as a comprehensive social phenomenon, is considered the best mechanism for ensuring physical health and mental health, and therefore, investing in it leads to a reduction in costs in the health and treatment sectors and centers for fighting against social corruption, and lowers the level of individual and social anomalies (Mehtab and others, 1398:12). Aerobic exercise refers to exercises that are performed to improve heart and lung strength, increase physical endurance and reduce body weight. This type of exercise increases heart rate and oxygen consumption in the body and has a direct effect on the mental system. Today, it is known that aerobic exercise is beneficial for the whole body, even the brain. This exercise increases the blood flow in the whole body and of course the blood flow in the brain also increases. It seems that increasing the blood flow in the brain slows down the process of loss of brain tissue that starts around 40 years of age. Therefore, this article seeks to answer the question whether there is a meaningful relationship between aerobic exercise and women's rational action based on the theory of rational action?

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2. Methodology

This research is an experimental type with a pre-test-post-test design with a control group. The statistical population was women attending sports clubs in Tehran, according to the information obtained from the website of the Ministry of Sports and Youth Affairs (1402), the number of clubs in Tehran is estimated to be 265, and including the amount of tuition and facilities, there are 20 active units with 100 people participating in Each unit is estimated and unlimited sampling was done with 60 people into two experimental and control groups. Among them, 27 and 33 people were randomly selected and placed in two experimental and control groups. The criterion for selecting members of the experimental group was the participation in sports activities. The reason for choosing a larger number of the control group was to accurately measure the findings. At first, a pre-test was conducted on aerobic exercise information for both groups, and after four weeks of aerobic exercise with the information testing group, using the field method and distributing Eisen and Fishbein (1996) questionnaire for rational action with subscales (beliefs, attitude, behavioral intention) and the reliability coefficient was reported by Cronbach's alpha method as 0.98, the validity of this questionnaire was reported as 0.82 by retest method, and the sports motivation questionnaire of Littir et al. (2008) with subscales (lack of motivation, internal motivation, external regulator), mixed adjustment, self-adjusting adjustment, introjected adjustment), the reliability coefficient was reported by Cronbach's alpha method as 0.81 and the validity of this questionnaire was reported as 0.89% using convergent validity method and using SPSS software. Anova analysis of variance was used with a significant level (0.05).

3. Data analyze

As shown in Table 5, the results of the one-way analysis of variance test, in the first hypothesis, the variable of lack of motivation in the post-test, the average of the experimental group with the control was (0.659) and was higher than the significance level (0.05), indicating a large difference between the groups. The experiment is controlled, as a result, it can be said that lack of motivation has a significant effect on the rational action of women in Tehran. So it can be said that lack of motivation plays an important role in the rational action of women. For example, if a person believes that aerobic exercise will lead to slimming and weight loss, he is likely to find more motivation to do this exercise and do regular exercise programs. The second hypothesis of the internal motivation variable with (1.69) the average difference compared to the pre-test in the post-test (0.025) is less than the significant level (0.05) and it is clear that the internal motivation affects rational action (1.69, 1.70)) does not have a significant effect, as a result, the second hypothesis is rejected. So it can be said that aerobic exercise can improve self-esteem and body image. Being aware of the strength and ability to have while training and improving physical capabilities can increase self-confidence in people. This improvement in physical capabilities and body image makes people have more confidence in themselves and have a positive attitude towards themselves. The third hypothesis is about the external regulator, and as it is clear from the table, the average difference of the pre-test was 1.82, which is higher than the significant level (0.494) in the post-test phase, and indicates the existence of a significant effect of the external regulator on the rational action of women in Tehran. As a result, the third hypothesis is also confirmed. Therefore, it can be said that the external regulator of aerobic exercise can have very positive effects on people's behavioral intentions, including improving mood, reducing stress, increasing concentration and commitment, and strengthening general morale. This relationship between aerobic exercise and people's behavioral intentions can have a suitable platform to achieve individual goals. The fourth hypothesis regarding the existence of a significant effect of mixed regulation on the rational action of Tehran women is that the average difference of the pre-test is 0.623, which is less than the significant level (1.100) in the post-test stage, and indicates the existence of a significant effect of the mixed regulation on the rational action of Tehran women. The fifth hypothesis is about self-acceptance regulation and the results of the pre-test mean difference is 1.211, which is higher than the significance level (0.005) in the post-test stage and indicates the existence of a significant effect between self-acceptance regulation and rational action of Tehran women. The sixth hypothesis of the internalized adjustment is the pre-test mean difference of 0.785, which is higher than the significance level (1.121) in the post-test stage and indicates the existence of a significant effect between the internalized adjustment and the rational action of Tehran women.

4. Discussion

Studies have shown that aerobic exercise can improve the ability to concentrate, memory and cognitive exercises. Also, these activities can improve cognitive performance in times of stress and anxiety. For this purpose, this variable can be the dependent variable of rational action (beliefs, attitude, behavior intention) in the two experimental and control groups in the pre-test and post-test stages and compared. The results of the hypothesis test showed that among the two experimental and control groups, among the components of sports motivation, apart from intrinsic motivation, lack of motivation, external regulation, mixed regulation, self-accepting regulation, internalized regulation, there is a significant effect on the rational action of women in Tehran. has it. In other words, after five weeks of participating in the aerobic training session, the experimental group found a significant improvement in rational action compared to the control group. This is despite the fact that the control group did not make any progress in the post-test compared to the pre-test. Therefore, it can be said that aerobic exercise, by creating mental concentration in women of Tehran city, causes the development of the components of rational action. Because women are forced to perform aerobic movements with a specific rhythm that the mind categorizes, either out of compulsion or interest. Regarding the lack of motivation component, the results of this hypothesis are in line with the research of Rahimi Shahrekht and Alipour Moghadam (1400), whose findings showed that teaching aerobics was effective in increasing students' creativity and self-acceptance. Regarding the effect between internal motivation and women's attitude, the results of this hypothesis are inconsistent with the research of Iskanderanjad and Fathi Rezaei (1400) that sports activity increases the capacity of visual memory. When performing aerobic exercises, the brain naturally releases endorphins (hormone of happiness). This hormone can make you feel good and affect your mood and attitude. Regarding the hypothesis of a significant effect between the internal regulator and the rational action of women, it can be said that the internal regulator can help increase concentration, clear the mind and improve cognitive performance through improving concentration and mental exercise. Research has shown that aerobic exercise can significantly improve cognitive performance and rational action in women. The hypothesis of mixed regulation and women's rational action is in line with Chekovskaya's research (2023). Simple encouragement and rewards can have a great effect on increasing people's behavioral intentions. For example, every time a person completes an exercise program or meets a goal, they can be encouraged or offered as a small reward, allowing the person to watch a movie or read their favorite book. The hypothesis of self-accepting regulation and rational action of women is in line with the research of Mirjamalova (2023). Getting motivation from stories, articles and videos related to aerobics can also facilitate the improvement of one's attitude in this area. The hypothesis of internalized regulation and women's rational action is in line with the research of Ravichandran and Janakariman (2022). So it can be said that the internalized adjustment creates an automatic mechanism that prevents the person from accepting negative and wrong beliefs. Encouraging the formation and creation of women's sports groups in different neighborhoods and regions of Tehran can strengthen women's sports and intellectual motivation. These groups can compete with each other, share their experiences and improve their intelligence along with exercise. Encouraging various sports activities such as yoga, walking, swimming, cycling can help increase women's sports motivation and strengthen their rationality. Providing the facilities and facilities necessary to carry out these activities, such as creating footpaths, public swimming pools and green cycling, can be effective. In addition, it is suggested to investigate the effect of bodybuilding on rational action in future researches. Considering that the focus of this article was on the female gender, it is suggested that the male gender should also be investigated in future researches. Despite all the advantages of this research, there were some limitations, such as limiting the research to the city of Tehran, which makes it difficult to generalize the results to other cities. The cultural context of the location of the clubs was also among other limitations.

5. References

1. Birjandi Chahartaghi, F.; Parsamehr, M. 2019. Experimental test of the theory of rational action in explaining neighborhood interactions (case study: urban society of Yazd), Journal: Sociology of Social Institutions, third volume, No. 13, pp. 101-76. *(in Persian)*

2. Chekhovskaya, A. 2023. The impact of aerobics on the physical condition of students. Digital Repository Dragomanov. Ukrainian State University.
3. Deci, EL.; vallerand, R.J.; Pelletier, L.G.; Ryan, R.M. 1991. Motivation and education: The self-determination perspective. Educational Psychologist; 26, 325-346.
4. Ebadinejad, Z.; Rasouli, M.; Payandeh, A.; Zahid, Gh.; Mahali, F. 2016) The effect of aerobic exercise on the anxiety of children with cancer. Journal of Torbat Heydarieh University of Medical Sciences, Vol. 4, No. 41, pp. 16-22. (in Persian)
5. Esmaili, M. R. 2019. History of Physical Education and Sports, Publisher: Semat Organization, second edition. (in Persian)
6. Iskanderjad, M.; Fathi Rezaei, Z.; Melai Zangi, F. 2021. The effect of aerobic exercise on visual memory capacity of sedentary students according to the role of cognitive style, sports psychology studies, vol 10, No. 35, pp. 101-131. (in Persian)
7. Jzen, I. & Fishbein, M..1980. Understanding Attitudes and Predicting Social Behavior. Prentice-Hall, Englewood Cliffs.
8. McKemey, K. and Saky-Dawson, O.A.2000. Rice Crop Protection Technology Uptake Blockages amongst Rice Farmers in Ghana: With Particular Reference to Variety Adoption and the Reduction of Pesticide Use. University of Legon, Legon.
9. Mirjamolova, N. 2023. The effect of health aerobics on the development of endurance in elderly women 25-30, Vol. 6. No. 2. pp: 12-33.
10. Mahtab, N., Ghafouri, F., Sahabi, J., & Yektayar, M. 2020. The Role of Sport and Art Activities in Subjective Well-Being with Affording Conceptual Model. Sport Psychology Studies, Vol 8, No 30, pp.1-22. (In Persian)
11. Miri, H.; Heydari Moghadam, R.; Nikbakht, H.; Ebrahim, Kh. 2011. Comparison of aerobic and anaerobic capacity of national grass and beach soccer players. Journal of Isfahan Medical School, Vol. 9, No. 15, pp. 67-101. (in Persian)
12. Mirshah Jafari, S. I.; Kaviani, H. 2016. Modeling the tendency of Isfahan University of Medical Sciences students towards religious education, based on the theory of Eisen and Fishbein. Research in religion and health, vol. 2, No. 4, pp. 27-34. (in Persian)
13. Pintrich, P.R.; Schunk, D.H. 2006. Motivation in Education: Theory, Research, and Applications. Translate. Shahraray M. Tehran: Elm Pub.
14. Rahimi Shahrekht, M.; Alipour Moghadam, Kh. 2021. The effectiveness of aerobic training on self-acceptance and creativity of master's thesis, Payam Noor University of South Khorasan Province, Payam Noor Center in Birjand. (in Persian)
15. Ravichandran, H. & Janakiraman, B. 2022. Effect of Aerobic Exercises in Improving Premenstrual Symptoms among Healthy Women: A Systematic Review of Randomized Controlled Trials, International Journal of Women's Health, Vol. 14, No. 21. pp: 1105-1114.
16. Reeve, J. M..2022. The book of motivation and excitement. Translated by Yahya Seyed Mohammadi. Virayesh Pub. (In Persian)
17. Yusaku, A.; Abe, T.; Kanbara, K.; Shizuma, H.; Akiyama, Y. & Fukunaga, M..2021. The effect of aerobic exercise on interoception and cognitive function in healthy university students: a non-randomized controlled trial. BMC Sports Science, Medicine and Rehabilitation.Vol. 13. No. 4. pp. 2-22.
18. Vallerand, R.; Pelletier, L.; Briere, N.; Senecal, C.; Vallieres, E.1992. The Academic Motivation Scale: A measure of intrinsic, extrinsic, and motivation in education. Psychol Test Assess Model; 52: 1003-17.
19. Vezarat Varzesh va Javanan.2020. Annual report of Athletes.