



## The relationship between participating in public sports and life expectancy in the staff of Kurdistan University of Medical Sciences, Sanandaj, Iran

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### Original Article

#### Abstract

**BACKGROUND:** One of the most important causes of psychological problems is the loss of life expectancy. Life expectancy plays a very important role in mental health, quality of life and self-esteem. This research was conducted to investigate the relationship between public sports and life expectancy in the staff of Kurdistan University of Medical Sciences, Sanandaj, Iran.

**METHODS:** Using Krejcie-Morgan table, 369 individuals were selected via random sampling. Data were collected using standardized physical activity questionnaire of Bahram and Shafizadeh, and life expectancy questionnaire of Snyder and Forsyth. Data analysis was performed using Kolmogorov-Smirnov, binomial, Mann Whitney U, and Spearman correlation coefficient tests.

**RESULTS:** Men's participation rate in general and recreational activities was higher than that of women employees. However, the rate of life expectancy for staff of Kurdistan University of Medical Sciences was not favorable.

**CONCLUSION:** Based on the results of the present study, it is suggested to the officials and managers of Kurdistan University of Medical Sciences to promote sports and recreational programs in order to increase the level of life expectancy in the staff.

**KEYWORDS:** Staff Participation, Sports, Life Expectancy

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### Introduction

Sport is one of the leisure activities that play a decisive role in maintaining the physical and mental health of humans. Having a healthy life requires exercise and physical activity.<sup>1</sup> This phenomenon is one of the ways in which people can relieve their physical and emotional stresses. Researchers have shown that people who exercise regularly are less likely to suffer

from cardiovascular disease, bear less stress, and have more self-esteem.<sup>2</sup>

General sport provides many benefits at any age. There are various types of physical activities including irregular games and regular physical exercises such as morning exercises, activity in parks and open spaces, hiking or fitness classes; these activities are commonly referred to as non-competitive and cost-effective sports.<sup>3</sup> General sport is a form of physical activity that improves physical and mental health and creates social relationships.<sup>4</sup>

Public and recreational sports were

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organized in the form of five activities and separate programs including exercise, informal sports, in-field sports, out-of-school sports, and club sports.<sup>5</sup> The study by Sanaei *et al.* showed that physical activity affects the life quality of the elderly both physically and mentally.<sup>6</sup>

In this research, the relationship between participation in public, recreational sports and life expectancy in the staff of Kurdistan University of Medical Sciences, Sanandaj, Iran, was studied.

### Materials and Methods

This descriptive-correlational study was conducted by field experiment. The information needed for this study was obtained through library studies and questionnaires. The statistical population consisted of all staff (medical and administrative) and professors of Kurdistan University of Medical Sciences.

Considering the size of the population and the use of Krejcie-Morgan table, 365 people were selected. Sampling method was stratified random method. The researcher collected the data by obtaining the necessary permissions and distributing the questionnaires among the staff. The data collection tools were standardized questionnaire of Bahram and Shafizadeh<sup>7</sup> and the adult hope scale (AHS) by Snyder and Forsyth.<sup>8</sup>

The standardized Bahram and Shafizadeh's physical fitness questionnaire consisted of five questions including duration, severity, number of sessions, sport history, and activity type.<sup>7</sup> The total score of physical activity was calculated according to how the questions were answered based on the five-point Likert scale, and each of the qualitative values were assigned an integer value from 1 to 5.

Snyder and Forsyth's AHS questionnaire was used to collect information about life expectancy.<sup>8</sup> AHS is a self-report questionnaire including 12 questions.

The reliability of the questionnaires was obtained 0.89 and 0.88 using Cronbach's alpha in 30 research samples, respectively.

Research variables included participation in public and leisure sports (independent variable) and life expectancy (dependent variable).

To analyze the data, descriptive statistical tests including frequency, frequency percentage, average, and standard deviation of the demographic features, such as Kolmogorov-Smirnov test for evaluation of the normal distribution of samples, binomial test, Mann Whitney U test, and Spearman correlation coefficient were used. All statistical operations were performed using SPSS Software (version 21, IBM Corporation, Armonk, NY, USA).

### Results

Out of the total number of 369 subjects, 270 individuals (73.2%) performed individual activities, 57 individuals (15.4%) performed teamwork, and 42 subjects (11.4%) did both individual activities and teamwork.

Moreover, about 10% of the employees had physical activity each day, while 36.9% did physical activity 3 to 5 times a week, and the rest did physical activity less than 3 to 5 times a week. In addition, 200 employees (54.2%) had been physically active for more than a year, 36 employees (9.8%) for 9-12 months, 18 (4.9%) for 6-9 months, 49 (13.3%) for 3-6 months, and 66 (17.9%) for less than 3 months.

Spearman correlation coefficient for the public sports and life expectancy variables was 0.135 (Error ratio: 0.010,  $P = 0.009$ ). Therefore, there was a significant relationship between these two variables at the 95% confidence level.

Using Mann-Whitney U test for comparing life expectancy among women and men employees, despite the difference in the life expectancy variable between the average rate among men (187.34) and women (182.23), this difference was not significant ( $P = 0.645$ ).

The frequency distribution of the life expectancy variable among the employees was as 3, 29, and 327 for low, moderate, high rates, respectively.

**Table 1. Binomial test results for evaluating the extent of participation in sport and recreational activities among studied population**

| Group              | Number | Observed ratio | Cut point | Test percentage | P     |
|--------------------|--------|----------------|-----------|-----------------|-------|
| High participation | 277    | 0.75           | 3         | 0.50            | 0.001 |
| Low participation  | 92     | 0.25           |           |                 |       |

Using Mann-Whitney U test, there was a significant difference between the two groups of men and women employees regarding the variable of participation in public and recreational activities with the average rates of 207.56 and 158.30, respectively ( $P = 0.001$ ).

There was a significant difference between the two groups of high and low participation with regard to the extent of participation in public and recreational sports using binomial test (Table 1).

## Discussion

One of the most important causes of psychological problems is the loss of life expectancy. In Snyder life expectancy questionnaire,<sup>8</sup> frustration is a shocking state that manifests itself by feeling of impossibility of affairs, feeling of disability and lack of interest in life. The person becomes severely disabled due to frustration and cannot measure his or her own position and decision.

Despite the difference in male and female employees in the variable of participation rate, there is a significant relationship between life expectancy and public and recreational activities. In other words, increasing or decreasing the staff's rate of participation in public and recreational sports will increase or decrease their life expectancy. The results are consistent with those of Mavrovouniotis et al.<sup>9</sup> and Sprangers et al.<sup>10</sup>

One of the most important issues related to the development of health and life expectancy is sport activity. Amini's study shows that participation in sport activities has a positive effect on the quality, the expectancy and desire of the lives of female employees.<sup>11</sup> The results of this study showed that sport and leisure activities have an impact on life expectancy. In

a study by Ishizaki et al., it was revealed that people who perform physical activity through tools and equipment have less hope in comparison with those who are physically involved in physical activity.<sup>12</sup> Muangpaisan et al. showed that living without disabilities and defects physical health, healthy nutrition, and desirable physical activity are among the factors affecting life expectancy.<sup>13</sup>

In another study, Keeler et al. reported that desirable situations such as lack of disability, physical health, active leisure, exercise and physical activity contribute to life expectancy in the elderly.<sup>14</sup> Other researches also have indicated a significant relationship between physical activity and life expectancy. These activities, called public and recreational activities, contribute to the physical and psychological well-being of the individuals, and, are low-cost and joyful; therefore, it is possible for everyone to participate in them. These activities, either individually or in a group, promote health and physical fitness in the community.

In another part of the findings, the results showed that despite the difference in the mean score of male and female employees in the life expectancy variable, this difference was not statistically significant. The results are consistent with that of Muangpaisan et al.,<sup>13</sup> which may be due to differences in the type of statistical population. Muangpaisan et al.<sup>13</sup> showed that physical activity is one of the factors affecting life expectancy.

Having a life expectancy is necessary for men and women, and it seems to be impossible to live without hope. Generally, men are more affected by their jobs and economic satisfaction, while women are more affected by their children and family health. In this study, the

results showed that there is no difference in the life expectancy of female and male employees of Kurdistan University of Medical Sciences.

Moreover, the findings showed that there is a significant difference in the rate of participation in public and recreational activities between male and female employees of Kurdistan University of Medical Sciences. In a study by Baradaran-Rezaei et al., on 808 boys and girls, the results showed that boys were less active compared to the girls.<sup>15</sup> The results of the present study contradicts that of Baradaran-Rezaei et al.<sup>15</sup> study, perhaps because of the difference in the nature of the research or the difference in the type of statistical population. According to the results of the present study, the rate of participation in the public and recreational activities of male employees is greater than that of female employees, which may be due to the constraints and lack of facilities for women to participate in recreational activities.

As organizational life is accompanied by stress and mental pressure, behavioral science specialists, introduce sport activities as an effective means to provide freshness and increase work ability, to grow and develop moral and psychological aspects as well as hope and life satisfaction. Since most employees spend much of their time working and allocate less time to physical activity in their leisure time, long-term physical and mental health problems may occur; thus, encouraging physical activity is very important in preventing from diseases. Moreover, it is necessary to provide sport facilities for the participation of women in public and recreational activities.

### Conclusion

According to the findings of this research, it is suggested to the officials and directors of Kurdistan University of Medical Sciences to develop recreational and sport programs for the employees and their families; and provide

the facilities and infrastructure of public and recreational sports in this university to increase the staff's participation rate in order to reach the desired level of life expectancy in the employees.

### Conflict of Interests

Authors have no conflict of interests.

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