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## THE RELATIONSHIP BETWEEN QUALITY OF LIFE AND LEVEL OF PHYSICAL ACTIVITY IN RESIDENTS OF TURKESTAN REGION (SOUTH OF KAZAKHSTAN)

**Abstract:** Investigated the differences between male and female population by the quality of life in Turkestan region (South of Kazakhstan), depending on the level of physical activity.

**Key words:** quality of life, SF-36, level of physical activity, Turkestan, Kazakhstan.

**Language:** English

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**Background.** In nowadays, the determine quality of life within the framework of behavioral risk factors is becoming an urgent problem of global health. At the same time, in recent years, foreign literature has more research on the impact of health-related quality of life (HRQL) on public health and medicine [1, p.18; 2. p.8; 3 p.55]. This situation stems from the fact that the concept of “health” should not be taken unilaterally. Since together with this concept, we must take into account many factors such as favorable or adverse environmental effects and the ability to maintain health at a certain level [4, p.48; 5, p.6]. Modern doctors are paying particular attention to the study of the impact of quality of life in health, because for the human in time of illness, can affect various aspects of life [6, p.7; 7, p.25; 8, p.17; 9, p.41; 10, p.81; 11, p.102, 12, p.84; 13, p.97]. At the same time, one of the main problems of

modern society is to study the quality of life and the connection with the physical activity level depending from gender differences [11, p.95; 14, p.105; 15, p.168].

**The aim of the study** is to determine the differences in the quality of life of the male and female population of the Turkestan region, South of Kazakhstan, depending on physical activity level.

**Materials and methods.** Design of the study – cross-sectional. The sample type – pre-planned non-probability sampling.

The study involved 972 residents (mean age – 51,9±13,7) Turkestan region, South of Kazakhstan (Turkestan, Karashyk, Kumtyuin etc.). Including 398 men (mean age – 50,1±13,7) and 574 women (mean age – 52,1±13,7). Each study participant signed the papers of agreement to participate in the study.

**Table 1**

**General information about the physical activity in residents of Turkestan region depending from gender differences**

№	Indicators	Men (n=398) M (SD)	Women (n=574) M (SD)
1	Average age	50,1±13,7	52,1±13,7
2	High physical activity	348	497
3	Low physical activity	50	77

In this study to determine the quality of life we used – SF-36 (*The Short Form-36*). The SF-36 is a multi-purpose, short-form health survey with only 36 questions. It yields an 8-scale profile of functional health and well-being scores as well as psychometrically-based physical and mental health summary measures and a preference-based health utility index. The eight sections are: physical functioning (PF), role-physical functioning (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role-emotional (RE) and mental health (MH). All eight sections are combined into 2 groups: Physical Health (PH) – PF, RP, BP, GH and Mental Health (MH) –MH, RE, SF, VT [16, p.2].

In our study we used the International Physical Activity Questionnaire (IPAQ) to determine the level of physical activity in respondents.

Statistical analysis was performed by Student’s T-test using software package SPSS Statistics 17.0 (Trial Version). The Confidence Interval (CI) – 95% (p=0,05).

**Results and discussion.** The study revealed significant differences between quality of life (SF-36) and the level of physical activity in inhabitants of Turkestan region (n=972) depending from gender differences.

**Table 2**

**The relationship of quality of life (SF-36) between the level of physical activity in male population of the Turkestan region (n=398)**

Scales of SF-36	High physical activity n=348 M (SD)	Low physical activity n=50 M (SD)	p
Physical Functioning	80,7 (25,1)	64,1 (36,3)	0,003*
Role-Physical Functioning	75,8 (38,1)	55 (46)	0,003*
Bodily pain	83,7 (22)	74 (26,4)	0,016*

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General Health	63 (18)	55,6 (20,7)	0,019*
Vitality	66,2 (15,4)	58,1 (20,3)	0,009*
Social Functioning	79,2 (18,6)	72,5 (22,9)	0,052
Role-Emotional	77,3 (37,4)	54 (45,6)	0,001*

Note. \* - Significant in relation to the control 95% CI

The statistical significance of the relationship of quality of life (SF=36) between the level of physical activity in male population of the Turkestan region (n=398) on scales of Physical Functioning (PF) - p=0,003; Role-Physical Functioning (RP) - p=0,003; Bodily pain (BP) - p=0,016; General Health (GH) -

p=0,019; Vitality (VT) - p=0,009 and Role-Emotional (RE) - p=0,001 are corresponded with 95% CI. In the other scales of SF-36 did not reveal 95% CI: Social Functioning (SF) - p=0,052 and Mental Health (MH) - p=0,095.

**Table 3**

**The relationship of quality of life (SF-36) between the level of physical activity in female population of the Turkestan region (n=574)**

Scales of SF-36	High physical activity n=497 M (SD)	Low physical activity n=77 M (SD)	p
Physical Functioning	72 (26,2)	56,1 (37,2)	0,001*
Role-Physical Functioning	67,1 (40,7)	60,1 (45,8)	0,213
Bodily pain	77,7 (23,6)	68,6 (30,1)	0,014*
General Health	58,9 (16)	51,8 (21,2)	0,006*
Vitality	61,5 (13,8)	56,3 (18,8)	0,020*
Social Functioning	75,5 (19,3)	67 (26,3)	0,008*
Role-Emotional	68,8 (39,6)	59,8 (44,7)	0,100
Mental Health	63,6 (13,1)	60,5 (14,7)	0,087

Note. \* - Significant in relation to the control 95% CI

The statistical significance of the relationship of quality of life (SF-36) between the level of physical activity in female population of the Turkestan region (n=574) on a scale Physical Functioning (PF) - p=0,001; Bodily pain (BP) - p=0,014; General Health (GH) - p=0,006; Vitality (VT) - p=0,020 and Social Functioning (SF) - p=0,008 are corresponded with 95% CI. Thus, the study defined that the Physical Health component was higher in males than in females (The 4 scales of components in men: PF, RF, BP and GH; The 3 scales in women: PF, BP and GH), and the Mental Health component scales for men (VT and RE) and for women (VT and SF) took difference. Similar results were also observed in other studies [17, p.12; 18, p.36; 19, p.58]. However, in some studies, the Physical Health component of women was higher than the Mental Health [20, p.37; 21, p.46]. For example, in cross-sectional studies of Morimoto T. and coauthors (Japan) adopted 3529 respondents, which were divided by gender into 2 groups. As a result in this research, the Physical Health component was higher in women, and the quality of life showed a maximum intensity (dependence for men – 2.0-2.4; dependence for

women 0.3-0.5) [21, p.46]. With respect to other parameters, there is no statistical significance was found in these scales: Role-Physical Functioning (RP) - p=0,213; Role-Emotional (RE) - p=0,100 and Mental Health (MH) - p=0,087.

1. In the 95% CI the statistical significance of the relationship of quality of life (SF-36) between the level of physical activity in men on scales of Physical Functioning (PF) - p=0,003; Role-Physical Functioning (RP) - p=0,003; Bodily pain (BP) - p=0,016; General Health (GH) - p=0,019; Vitality (VT) - p=0,009 and Role-Emotional (RE) - p=0,001 are corresponded; and, in women such changes are detected on a scales Physical Functioning (PF) - p=0,001; Bodily pain (BP) - p=0,014; General Health (GH) - p=0,006; Vitality (VT) - p=0,020 and Social Functioning (SF) - p=0,008.

2. The Physical Health component was higher in males than in females (The 4 scales of components in men: PF, RF, BP and GH; The 3 scales in women: PF, BP and GH), and the Mental Health component scales for men (VT and RE) and for women (VT and SF) took difference.

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