



# Intervention Educational Program and Health- Related Quality of Life among Employee: A Semi Experimental Design Study

## ARTICLE INFO

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## ABSTRACT

**Aims:** Health-Related Quality of Life (HRQOL) is an important outcome of health in different aspects of physical, mental and social dimensions. This study aimed to assess the effects of an educational program on Health- Related Quality of Life among employees HRQOL of employees working in Shariati hospital affiliated to Tehran University of Medical Sciences (TUMS).

**Method and Instrument:** This was a semi-experimental study with a pre-post design study. Participants included employees of Tehran University of Medical Sciences. The sample size was 31 employees who were randomly selected from all working employees in the hospital. Selected employees were provided with two 60-minute session workshop as educational program. Data collected using demographic questionnaire and Short form of Quality of Life questionnaire (SF-36) at the beginning of the study and at 3- month follow up. The collected data were analyzed using descriptive and analytical tests (paired T-Test).

**Findings:** Totally 31 employees with mean age of  $40 \pm 9.04$  were participated in the study. Comparing HRQOL dimensions of the studied participants before and after intervention indicated the improvement of dimensions as Role physical ( $P=0.01$ ), Bodily pain ( $P= 0.04$ ), General health ( $P= 0.04$ ), Vitality ( $P= 0.008$ ), Role emotional ( $P= 0.03$ ), and Mental health ( $P= 0.003$ ). However, there were no significantly increase in physical function and social function ( $P>0.05$ ).

**Conclusion:** Finding of this study showed the educational program could be effective for improving the employees' HRQOL.

**Keywords:** Intervention Program, Health Related Quality of Life, Employees.

## Introduction

World Health Organization (WHO) defines Quality of Life (QOL) as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. It is a wide-ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient aspects of their environment<sup>(1)</sup>. Health-related quality of life (HRQoL) is a broad term that contains an individual's ability to function according to perceived well-being in social, mental, and physical areas of life. As well as, it is imaginable that all life areas also affect the ability to work,

and general well-being cannot be separated from well-being at work<sup>(2)</sup>.

HRQOL is a typical example of a biopsychosocial construct, by its biological (i.e. physical functioning), psychological (i.e. mental health) and social aspects (i.e. social functioning)<sup>(3)</sup>. HRQOL is generally divided into measures of physical functioning and emotional well-being<sup>(4)</sup>. Quality of Life is a critical concept with major importance in the life of an employee which shows an appropriate balance between work and personal life, organizational productivity and job satisfaction<sup>(5)</sup>. In fact, employees with the poorest mental health have a strong intention to retire early<sup>(6, 7)</sup>. Work-related stress is highly

prevalent among employees and is associated with adverse physical and mental health consequences and poses a major threat to public health<sup>(8)</sup>. Worker exposure to job stress may vary by employment arrangement. When physical and mental demands at work are higher than one's own capacity, it is difficult to stay at work<sup>(7, 9)</sup>. Excessive exposure to stressors at work is considered to be a potential health hazard, and may adversely affect health and Quality of Life<sup>(10)</sup>.

It seems, health promotion programs can change the lifestyle, work-related outcomes, health and well-being, mental health, nutrition, and physical activity in a positive direction and this can lead to improve quality of life<sup>(11-13)</sup>. Studies showed interventions targeting problem-solving and communication skills and psychosocial interventions may ease improving the quality of life<sup>(7, 14-17)</sup>.

Maybe many interventions in the workplace have traditionally focused on physical health, but the national trend continues to move toward a broader approach to overall health that seeks to maintain a balance of physical, mental, and social aspects<sup>(18)</sup>. Therefore, the aim of this study was to examine an educational intervention to improve the quality of life among hospital' employees.

### Method and Instruments

This was a semi-experimental study with a pre-post design. The researcher, after obtaining a license from the Rheumatology Research Center, Tehran University of Medical Sciences, with the code of ethics (13930601) performed the study. Participants included employees of Tehran University of Medical Sciences (TUMS). Inclusion criteria was as being employee of Tehran University of Medical Sciences and satisfaction for participation in the research. In this study all participated employee were

working in Shariati hospital affiliated to TUMS at the time of research.

The data collection instrument were a demographic questionnaire and Short form of Quality of Life questionnaire (SF-36). Demographic questionnaire included some individual and behavioral variables. SF-36 questionnaire has 36 items that measure eight dimensions of health status including physical functioning (10-item), role physical (4-item), bodily pain (2-item), general health (5-item), vitality (4-item), social functioning (2-item), role emotional (3-item) and mental health (5-item)<sup>(19)</sup>. Based on the existing guidelines, to calculate each subscale or total score for the eight areas of HRQOL, first, we added raw scores of related items and linearly transferred it to a score from 0 to 100 using the following formula<sup>(19, 20)</sup>. The psychometric properties of the Iranian version of the questionnaire were well documented<sup>(21)</sup>.

The participants were invited to participate in a workshop which included two 60-minute sessions. In all the sessions, efforts were made to use the principles and techniques of communicating effectively with the audience, with respect and intimacy, for strengthening of their self-esteem and creating conditions for their more participation in group discussions. The first session included: introducing the program regarding to enhance their physical functioning, general health, and vitality. The second session included to promote the participants' social functioning, mental health and stress management. At the end of completing the intervention, the package includes the educational PowerPoint, and the educational film was sent for the participant by email and social network (telegram, WhatsApp).

Data collected through a demographic questionnaire and Short form of Quality of Life questionnaire (SF-36) at initial of the study

and at 3- months follow up. The collected data were analyzed using descriptive and analytical tests (paired T-Test).

### Findings

In all, 31 employees with mean age of 40

± 9.04 years participated in the study. Participants were employees from different units of the hospital. The characteristics of participants are shown in Table 1. Table 2 displays the score of HRQOL dimensions at baseline and 3- months follow up.

**Table 1** The demographic characteristics of the participants at baseline

Variables	Mean (SD)
Age (years)	40(9.04)
Weight. (Kg)	69(11.09)
Height (CM)	165.9(8.27)
Work experience (month)	187.87(100.08)
<b>Gender. N(%)</b>	
Female	4(12.9)
Male	27 (87.1)
<b>Marital status. N(%)</b>	
Single	9 (29)
Married	22 (71)
<b>The number of children. N(%)</b>	
0	15 (48.4)
1	7 (22.6)
2	8(25.8)
3	1(3.2)
<b>Employment status. N(%)</b>	
Employed	9 (33.3)
Non-employed	18 (66.7)
<b>Income status. N(%)</b>	
Good	7(22.6)
Moderate	21(67.7)
Bad	3(9.7)
<b>Doing exercise. N(%)</b>	
Always	1(3.2)
Sometimes	23 (74.2)
Never	7(22.6)
<b>Using proper shoe. N(%)</b>	
Yes	12 (44.4)
No	15 (55.6)
<b>Using a proper bed. N(%)</b>	
Yes	25(80.6)
No	6(19.4)

**Table 2** Health Related Quality of Life of the participants at baseline and 3- months follow up.

HRQOL Domains	Baseline Mean (SD)	3 - Months follow up Mean (SD)	P-value*
Physical functioning	77.24 (16.17)	80.51 (13.65)	0.13
Role physical	66.37 (38.54)	81.89 (28.26)	0.01*
Bodily pain	60.03 (21.41)	66.24 (17.98)	0.04*
General health	60.24 (19.14)	62.24 (18.79)	0.04*
Vitality	58.10 (18.14)	62.41 (16.07)	0.008*
Social functioning	71.98 (17.24)	74.56 (21.51)	0.18
Role emotional	65.51 (43.17)	82.57 (36.31)	0.03*
Mental health	65.10 (16.27)	85.37 (16.29)	0.003*

## Discussion

The aim of this study was to evaluate the efficacy of an intervention program to improve employees' HRQOL. For this purpose, a semi-experimental study with a pre-post test was conducted. The results indicate that the intervention program was successful to improve HRQOL. Literature showed positive effects of the educational intervention on employees' HRQOL (7, 12, 22, 23). All dimensions increased over 3 months, especially dimensions of role physical, bodily pain, general health, vitality, role emotional, mental health increased statistically significantly after intervention but there were no statistically significant changes in physical and social functioning. Ojala' study et al. (2017) support our findings (7). In this study, we found mental health improved over 3-months more than other dimensions. Some studies support our findings (8, 17). When participants were able to develop their personalities, apply coping strategies, manage stress, and establish constructive communication, they can improve their health status, quality of life, and function (11). We tried to apply some of these ideas in our intervention. Primary prevention interventions can help the employees to

move in a healthier direction, even small changes in the behavior may have an impact on general health and improve employee productivity (7, 24).

In addition, the health promotion programs in the organization contributed to better HRQO: among employees. The organization should consider to continuously introduce, improve and enforce the health promotion programs within the organization. The move will help organizations in enhancing their performance, productivity, employee commitment, and satisfaction. For future programs, the approach theory-based may be more profitable on health promotion and HRQOL

## Limitations

Certain limitations should be paid attention when considering the findings of this study. First, the study was a semi experimental design as participants just were allocated to one group and we did not have control groups. Sample size was so small and also data were collected through self-reporting. Therefore, carrying out further studies with a randomized control trial design and with larger sample size is strongly recommended. Additionally, studying on employees from other universities is suggested in order to

generalize the results.

### Conclusions

Finding of this study showed the educational program could be effective for improving the employees' mental health, general health, and vitality that consequently could improve their HRQOL.

### Conflicts of Interest

The authors declare that they have no competing interests

### Acknowledgments

The authors thank the employees to conduct this study.

### Ethical Permission

This study approved with the code of ethics (13930601) in Rheumatology Research Center of TUMS.

### Author's contributions

RM: Read and approved the final version.

SSK: Collection, analysis, interpretation of data, writing the manuscript, read and approved the final version.

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### References

- Bonomi P, Kim K, Fairclough D, Cella D, Kugler J, Rowinsky E, et al. Comparison of survival and quality of life in advanced non-small-cell lung cancer patients treated with two dose levels of paclitaxel combined with cisplatin versus etoposide with cisplatin: Results of an Eastern Cooperative Oncology Group trial. *J Clin Oncol*. 2000;18(3):623.
- Hays RD, Morales LS. The RAND-36 measure of health-related quality of life. *Ann Med*. 2001;33(5):350-7.
- Nicassio PM, Kay MA, Custodio MK, Irwin MR, Olmstead R, Weisman MH. An evaluation of a biopsychosocial framework for health-related quality of life and disability in rheumatoid arthritis. *J Psychosom Res*. 2011;71(2):79-85.
- Ware Jr JE, Sherbourne CD. The MOS 36-item short-form health survey (SF-36): I. Conceptual framework and item selection. *Med Care*. 1992;30(6):473-83.
- Karbasian S, Talebian Sharif J, MS. A. The Effect of Group Training Assertiveness on Quality of Work Life of Khatam-ol-Anbia Hospital Staff (Mashhad). *JSUMS*. 2018;27(4):617-1.
- Harkonmäki K, Lahelma E, Martikainen P, Rahkonen O, Silventoinen K. Mental health functioning (SF-36) and intentions to retire early among ageing municipal employees: the Helsinki Health Study. *Scand J Public Health*. 2006;34(2):190-8.
- Ojala B, Nygård C-H, Huhtala H, Nikkari ST. Effects of a nine-month occupational intervention on health-related quality of life. *Scand J Public Health*. 2017;45(4):452-8.
- Heber E, Lehr D, Ebert DD, Berking M, Riper H. Web-based and mobile stress management intervention for employees: a randomized controlled trial. *J Med Internet Res*. 2016;18(1):e21; 1-15.
- Vingård E, Lindberg P, Josephson M, Voss M, Heijbel B, Alfredsson L, et al. Long-term sick-listing among women in the public sector and its associations with age, social situation, lifestyle, and work factors: a three-year follow-up study. *Scand J Public Health*. 2005;33(5):370-5.
- Ray TK, Kenigsberg TYA, Pana-Cryan R. Employment arrangement, job stress, and health-related quality of life. *Safety Science*. 2017;100:46-56.
- Solovieva TI, Dowler DL, Walls RT. Employer benefits from making workplace accommodations. *Disabil Health J*. 2011;4(1):39-45.
- Edries N, Jelsma J, Maart S. The impact of an employee wellness programme in clothing/textile manufacturing companies: a randomised controlled trial. *BMC public health*. 2013;13(1):1-9.
- Rongen A, Robroek SJ, van Lenthe FJ, Burdorf A. Workplace health promotion: a meta-analysis of effectiveness. *Am J Prev Med*. 2013;44(4):406-15.
- Lindsay DB, Devine S, Sealey RM, Leicht AS. Time kinetics of physical activity, sitting, and quality of life measures within a regional workplace: a cross-sectional analysis. *BMC public health*. 2016;16(1):786.
- Waldron EA, Janke EA, Bechtel CF, Ramirez M, Cohen A. A systematic review of psychosocial interventions to improve cancer caregiver quality of life. *Psycho-Oncology*. 2013;22(6):1200-7.
- Mishra SI, Scherer RW, Snyder C, Geigle P, Gotay C, editors. Are exercise programs effective for improving health-related quality of life among cancer survivors? A systematic review and meta-analysis. *Oncol Nurs Forum*. 2014; 1: 41(6): E326-42. doi: 10.1188/14.

17. Fortney L, Luchterhand C, Zakletskaia L, Zgierska A, Rakel D. Abbreviated mindfulness intervention for job satisfaction, quality of life, and compassion in primary care clinicians: a pilot study. *Ann Fam Med*. 2013;11(5):412-20.
18. Sutcliffe JT, Carnot MJ, Fuhrman JH, Sutcliffe CA, Scheid JC. A worksite nutrition intervention is effective at improving employee well-being: a pilot study. *J Nutr Metab*. 2018;2018:1-5.
19. Ware J, Sherbourne C. Conceptual framework and item selection: The MOS 36-item Short-Form Health Survey (SF-36). *Med Care*. 1992;3:473.
20. Ware Jr JE. SF-36 health survey update. *Spine*. 2000;25(24):3130-9.
21. Montazeri A, Goshtasbi A, Vahdaninia M. The short form health survey (SF-36): Translation and validation study of the Iranian version. *Payesh*. 2006;5(1):49-56.
22. Soemantri A, Misdah M. The Influence of Internal Environment, Strategic Management of Human Resources and Quality of Work Life To Job Satisfaction and Employee Performance Outsourcing Company in East Java Province. *Arch Phys Med Rehabil*. 2019;7(3):244-54.
23. Hassan N, Maamor H, Razak A, Lapok F. The effect of quality of work life (QWL) programs on quality of life (QOL) among employees at multinational companies in Malaysia. *Procedia-Social and Behavioral Sciences*. 2014;112:24-34.
24. Pekkonen M. Health-related quality of life evaluation of the effectiveness of the institutional rehabilitation. The suitability of the RAND 36-meter to determine the working-age inpatient rehabilitation problem profile and evaluate the effects of rehabilitation. Helsinki: Yliopistopaino2010.