



Efficacy of an Interventional Program on Health-Related Quality of Life of Nursing Students: a Pre-Post Design Study

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ABSTRACT

Aims: Health-Related Quality of Life (HRQOL) of university students is an important issue in order to tackle the physical, mental and social issues as early as possible to produce future leaders towards developed nations. Therefore, the purpose of this study was to improve HRQOL of university students.

Instrument & Methods: This was a semi-experimental study with a pre-post design study. Participants included nursing students of Tehran University of Medical Sciences (TUMS). The sample size was 27 randomly selected students. Students were invited to participate in a workshop which included two 60-minute sessions. Data were collected through a demographic questionnaire and Short form of Quality of Life questionnaire (SF-36) at two time points of initial of the study and 2- month follow up. The collected data were analyzed using descriptive and analytical tests (paired T-Test).

Findings: Comparing the dimensions of HRQOL in the participants before and after the intervention indicated significant improvement of all aspects of the quality of life, particularly in general health, vitality and mental health ($P < 0.05$).

Conclusion: This study showed educational the program could improve the students' mental health, general health, and vitality that in turn improved their quality of life

Keywords: Health Related Quality of Life , Interventional Program , Nursing Students

Introduction

Health-Related Quality of Life (HRQOL) of university students is an important issue in order to tackle the physical, psychological and social issues as early as possible to produce future leaders towards developed nations ^[1]. Quality of life (QOL) is defined by the World Health Organization (WHO) as individuals' perception of their position in life in the context of their own culture and value systems in which they live and its' relation to their aims, life expectancy, standards and issues ^[2]. Because of the nature of the various sociodemographic factors related to students' well-being, longer examination of HRQOL among university students is needed ^[3]. As a multidimensional concept, HRQOL considers the health of persons both physically

and mentally. The problems associated with a poor QOL of the young students include undesirable general health, poor interpersonal communication, depression, and low self-esteem. Furthermore, these mental problems have a powerful effect on students' achievement, behaviors, and enhanced productivity ^[3-5]. One of the most sensitive stages of active people's life is the entrance to the university, which is often associated with many changes in the social and human relationships of individuals. In addition, new expectations and roles are formed when entering the university. Staying in such a situation is often accompanied by stress, concerns and consequently affects the individuals' performance, efficiency and leading to impairing students' QOL ^[6, 7]. Students of medical

sciences especially nursing compared with other students are more exposed to many stressors such as the clinical/educational environment, exposure to patients and intensive courses in internships, mental and emotional stresses in the hospital and emergency environment, as well as treatment problems of the patients. Therefore, these students are at risk of developing psychological and emotional disturbances [8]. The health of students as a young generation is important because of their major role in managing future society [9]. Therefore, the purpose of this study was assess efficacy of an interventional program on HRQOL of nursing students of Tehran University of Medical Sciences (TUMS).

Instruments and Methods

This was a semi-experimental study with a pre-post design. The ethics committee of Rheumatology Research Center of Tehran University of Medical Sciences approved the study with the code of ethics (13930601). Participants included nursing students of Tehran University of Medical Sciences (TUMS). Inclusion criteria was as being student of Tehran University of Medical Sciences and satisfaction for participation in the research. In this study all 34 students who were passing their clinical course in Shariati hospital affiliated to TUMS were recruited of which 27 students completed the study.

The data collection instruments were demographic questionnaire and Short form of Quality of Life questionnaire (SF-36). The demographic questionnaire included variable such as age, gender, marital status, weight, and height, number of children, residency status, employment status, and income status. 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) [10]. 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 zero to 100 using the standard formula [11]. The psychometric properties of the Iranian version of the questionnaire was well documented [12].

Students 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 promoting 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 which were sent for the participants by email and social network (telegram, WhatsApp).

Data were collected through a demographic questionnaire and Short form of Quality of Life questionnaire (SF-36) at two time points of initial of the study and 2- month follow up. The collected data were analyzed using descriptive and analytical tests (paired T-Test).

Findings

In all, 27 nursing students aged 20–27 years participated in the study. The mean age of respondents was 22.4 (SD = 2.76) years, and 59.3% of the participants were male.

Participants were nursing students from different units in which they passing their clinical course. The characteristics of the participants are shown in Table 1.

Comparing the eight dimensions of HRQOL of the participants before and after the intervention are shown in Table 2.

Discussion

The study showed the educational program could have the most influence on the mental health, general health, and vitality of the students. Previous study indicated that the students who comprehend a better HRQOL take advantages of the multiple resources and available services and so integrate better in social and academic backgrounds ^[13].

In Dehghan et.al study (2011), significant differences were noticed between anxiety and HRQOL of students after the intervention. The previous study showed that overall HRQOL score was significantly higher in the experimental group after the two months of relaxation exercises ^[14] which is consistent with the present study.

In a study performed by Walcott et.al (2018), it was reported that the intervention group realized significant improvements in the physical component summary score of the SF-12 and the physical function domain of the SF-12. However, this study revealed that there were no statistically significant different for any other components of the SF-12 or in the measure of perceived social support ^[15]. In this regard, the present study indicated the improvement of role physical and physical functioning even though these enhancements were not significant.

It is well-known that the interaction of biological and socio-psychological factors that happen during follow up period may make students particularly vulnerable to high-risk physical or psychological behaviors that may have a negative impact on their long-term health and livability ^[16]. In a study

conducted by Raj et al and other study. ^[17,18], participants of this studies felt more tired and were having more difficulties with work or daily activities as a result of physical health. In this line, the current study demonstrated the educational intervention can cause better vitality of the students.

However, it should be considered that there are many risk factors that may affect student HRQOL, such as physical/social and political environment, financial resources, getting scholarships from the government, feeling safety and security, arrangement of leisure activities which should be provided by the community services program and interpersonal relationships. It seems all of these factors needs to be investigated and explored In future studies.

Limitations: Certain limitations should be considered when examining the results of this study. First, the study participants just were one group and we did not have control group. Sample size was so small and also data were collected through self-reporting. Therefore it is suggested that further studies should be carried out with a randomized control trial and with larger sample size. Furthermore researching on students from other fields of medical sciences to generalize the results is guaranteed.

Conclusions

This study showed that educational program could improve the students' mental health, general health, and vitality that in turn could improve their HRQOL especially during the follow up period.

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Ethical Permissions: The Ethics Committee of Rheumatology Research Center of Tehran University of Medical Sciences approved the study. All participants completed a written

Table 1 Demographic characteristics of the studied nursing students

| Demographic Characteristics | N= 27 N (%) | N=27 Mean ± SD |
|-----------------------------|----------------|-------------------|
| Age (year) | | 22.44 ± 2.76 |
| Weight (kg) | | 65.44 ± 15.44 |
| Height (cm) | | 169.25 ± 8.01 |
| Work experience (year) | | 3.18 ± 5.85 |
| Work hours (hours/week) | | 47.42 ± 9.33 |
| Gender | | |
| Female | 11(40.7) | |
| Male | 16 (59.3) | |
| Marital status | | |
| Single | 24 (88.9) | |
| Married | 3 (11.1) | |
| The number of children | | |
| 0 | 25 (92.8) | |
| 1 | 2 (7.4) | |
| Residency status | | |
| Dormitory | 14 (51.9) | |
| Non-dormitory | 13 (48.1) | |
| Employment status | | |
| Employed | 9 (33.3) | |
| Non-employed | 18 (66.7) | |
| Income status | | |
| Moderate | 16 (59.3) | |
| Bad | 11 (40.7) | |
| Doing exercise | | |
| Yes | 8(29.6) | |
| No | 19 (70.4) | |
| Using proper shoes | | |
| Yes | 12 (44.4) | |
| No | 15 (55.6) | |
| Using proper bed | | |
| Yes | 16 (59.3) | |
| No | 11 (40.7) | |

Table 2 Comparison of the mean score of quality of life in the nursing student in two periods of time.

| | Initial of the study Mean ± SD | 2- months follow up Mean ± SD | PV |
|----------------------|-----------------------------------|----------------------------------|-------|
| Physical functioning | 85.70 ± 11.99 | 96.66 ± 3.31 | 0.28 |
| Role physical | 64.81± 25.43 | 86.11 ± 13.68 | 0.50 |
| Bodily pain | 74.77 ± 14.17 | 81.55 ± 10.86 | 2.09 |
| General health | 73.40 ± 18.96 | 78.14 ± 18.99 | 0.000 |
| Vitality | 61.85 ± 17.65 | 77.03 ± 13.95 | 0.000 |
| Social functioning | 77.77 ± 15.63 | 85.64 ± 13.73 | 0.49 |
| Role emotional | 64.19 ± 33.28 | 66.66 ± 35.01 | 0.11 |
| Mental health | 68.59 ± 20.08 | 78.66 ± 14.03 | 0.000 |

* Derived from Paired Sample T-Test

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consent form.

Conflicts of interests: The authors declare that they have no conflicts of interests.

Author's contributions: S.S. (First author) was original and responsible for data collection and analysis as well as preparing the first draft of the manuscript. researcher (80%). P. R. (Second author), confirmed the study, wrote the discussion and edited all the manuscript (20%)

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