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# Investigating the relationship between self-efficacy and quality of life in Iranian women

Fatemeh Goldani Moghaddam[1,2], Nasrin Talkhi[3] and Nooshin Peyman[1,4*]

## Abstract

**Background** Women's quality of life and self-efficacy play pivotal roles in task accomplishment and overall health improvement within families and society. This study determination the intricate relationship between quality of life and self-efficacy among women utilizing care services from Mashhad health centers.

**Methods** A cross-sectional study involving 366 women accessing Mashhad health centers in 2023 was conducted. Clustering sampling was employed, and data were gathered using the Schwartz self-efficacy questionnaire and the short form of quality of life. Statistical analysis utilized Spearman correlation coefficient, Kruskal-Wallis test, Mann-Whitney U-test, Wilcoxon test, and Chi-square test in SPSS25, with a significance level set at 0.05.

**Results** Participants' mean age was 36.42 ± 11.13 years. A statistically significant relationship was observed between self-efficacy and total quality of life score, as well as its dimensions **(**physical health, psychological health, social relationships, social environment and quality of life, and general health) ($P < 0.001$).

**Conclusion** The study underscores a significant association between self-efficacy and both the overall quality of life and its specific dimensions among women. These findings highlight the reciprocal influence of self-efficacy and quality of life. Consequently, tailored interventions aimed at enhancing self-efficacy and quality of life are recommended.

**Keywords** Women, Self-efficacy, Quality of life, Health centers

## Introduction

The World Health Organization (WHO) considers the quality of life as an individual's perception of his/her position in life in a particular culture and prestige in pursuing goals, expectations and standards of life [1]. This concept is affected by a set of physical and mental conditions that determine people's pleasing state of living [2]. The most important factor affecting families is the quality of life of members. The quality of life of all sections of the society is essential, but paying attention to the way of life of women will be more important because it can play an important role in improving the health of the family [3]. The results obtained from the survey of the quality of life of women in Mashhad showed that among the eight dimensions of the quality of life of women, the dimension

*Correspondence:
Nooshin Peyman
peymann@mums.ac.ir
[1]Health Education and Health Promotion, Department of Health Education and Health Promotion, School of Health, Mashhad University of Medical Sciences, Mashhad, Iran
[2]Student Research Committee, Mashhad University of Medical Sciences, Mashhad, Iran
[3]Department of Biostatistics, School of Allied Medical Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran
[4]Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

of mental problems has the lowest score with an average of 57.3 [4]. Research shows that people who have a low quality of life have poorer health state, symptoms of depression and anxiety, personality problems, inappropriate health behaviors and poor social conditions [5]. Due to the subjective nature of this concept, people's perception of their own condition, as well as other environmental, cultural, social and economic features, can determine the quality of people's lives [2]. In addition to the above-mentioned factors, other factors are also effective in quality of life. A relevant effective factor is self-efficacy [2] which is among the psychological factors affecting the quality of life [6].

Self-efficacy is a major constructs of Bandura's social-cognitive theory [7] and concerning health, represents the ability to show healthy behaviors to achieve the desired goal [2].

Those with strong self-efficacy will persist in performing a behavior even if a positive outcome is not achieved. Conversely, those with low self-efficacy beliefs may limit their self-confidence to behaviors that are easy to perform [8].

A body of research confirms self-efficacy beliefs predict behaviors related to physical and mental health, useful pain management and overall quality of life [9]. Different studies show the relationship between the quality of life and self-efficacy in those infected with different diseases such as cancer, diabetes, coronary artery transplant surgery [2], chronic kidney failure, hemodialysis, stroke, spinal injuries and asthma [10].

So far, various researches have been conducted on the role of self-efficacy in the quality of life in people with various diseases, but given that women's self-efficacy may be influenced by various factors throughout their lives, including success in activities, vicarious experiences, verbal encouragement, and physiological and emotional stimulation [11], and since that women are facing bottlenecks in society that limit their available options due to gender inequality and do not allow them to choose [3] and on the other hand, the quality of life is made up of many aspects that it is necessary to pay attention to all these aspects; and during the research of the researchers, the most recent study conducted on the quality of life of Iranian women included only some dimensions of quality of life (physical and Psychological) [12] and considering that each of the dimensions affecting the quality of life, including physical health, psychological health, social relations, social environment and general health can independently affect women's lives; Therefore, understanding and examining all these aspects in order to improve the quality of life of Iranian women along with evaluating their self-efficacy is of particular importance and the improvement of their conditions will lead to the improvement of the society, so it is important to pay attention to this important group. So, by determining whether there is/isn't a significant relationship between the self-efficacy of women referring to Mashhad health centers with their all dimension of quality of life, targeted interventions can be planned to preserve Iranian women's health and spread the culture of health among family members.

## Materials and methods

This descriptive-analytic study was conducted cross-sectionally in 2023 among women visiting health centers in Mashhad. Utilizing a cluster sampling method, seven centers were randomly selected from all healthcare facilities in Mashhad. These centers were then visited to identify eligible participants among women receiving usual care services. Participants within each cluster were randomly selected.

Inclusion criteria encompassed married women lack of mental disease residing in Mashhad who visited health centers for usual care services and provided informed consent; these criteria were examined based on the patient's file in the Integrated Health System. The exclusion criteria included the incomplete completion of the questionnaire.

Based on the purpose and statistical analysis of the study, which was to investigate the correlation, the required sample size, akin to a previous study was estimated 46 using the following formula [13], with a type I error of 0.05, test power of 80% and minimum correlation of 0.18. As Mashhad's health centers, centers were treated as clusters, we selected seven health centers randomly as clusters. The minimum required sample size was projected at 322 (estimated sample size multiplied by seven centers) for seven centers. Accounting for a potential 20% dropout rate due to incomplete questionnaires, the total sample size was estimated at 386.

$$w = \frac{1}{2}Ln\frac{1+r}{1-r}n = \frac{\left(z_{1-\alpha/2} + z_{1-\beta}\right)^2}{w} + 3 \Rightarrow$$
$$n = \frac{2\left(z_{1-\alpha/2} + z_{1-\beta}\right)^2}{Ln\frac{1+r}{1-r}} + 3$$

### Data collection instruments included

1. Demographic Information Questionnaire (12 questions): age, marital status, number of children (sons and daughters), pregnancy status, education levels for both respondent and spouse, occupations, family income, socioeconomic status and family size.
2. Quality of life questionnaire: The short form, developed by the WHO in1989 with input from 15 international centers comprised 24 questions across

four subscales. Two questions evaluated overall quality of life and general health. The questionnaire's validity and reliability were established in Iran, with Cronbach's alpha coefficients of 0.77 for physical health, 0.77 for psychological health, 0.75 for social relations, 0.84 for social environment, and 0.78 for general health [14].

3. Schwartz General Self-Efficacy Questionnaire Developed by Schwartz and Jerusalem, this questionnaire assesses general and social self-efficacy. In 1981, Schwartz and Jerusalem revised the test and reduced the number of statements to 10 items. The questionnaire of current self-efficacy beliefs contains 10 questions, all evaluating the level of general self-efficacy. To standardize this test in Iran, Rajabi [15] submitted it to 587 students of Ahvaz University in 2006 and estimated Cronbach's alpha coefficient in male and female students to be 0.84 and 0.80, respectively. The reliability of this questionnaire was also measured by Rajabi and found to be 82%. The questionnaire contains 10 questions, to be rated on a 4-point Likert scale ranging from "not at true" to "completely true". Each item is graded between 1 and 4 and Therefore, the lowest self-efficacy score in this questionnaire is 10 and the highest score is 40. A score between 10 and 15 is low self-efficacy, a score between 15 and 25 is medium self-efficacy, and a score above 25 is high self-efficacy.

### Data analysis

Following data collection, the information was entered into SPSS25 and coded fo analysis. Descriptive statistics, including mean and standard deviation, were utilized to summarize quantitative variables, while frequency and percentage were employed for qualitative variables. For inferential statistics, the normality of data distribution was assessed using the Kolmogorov-Smirnov test (with Lee Force correction analysis method). Given that the assumptions of parametric tests were not met, the non-parametric equivalents were employed, .such as the Kruskal-Wallis test, Chi-square test, Mann-Whitney U-test, Wilcoxon test and Spearman's correlation coefficient.

Additionally, the Phi coefficient was calculated to evaluate the strength of the relationship. A significance level of 0.05 was established for all analyses.

### Ethical considerations

This study received approval from the Research Vice-Chancellor of Mashhad University of Medical Sciences (Approval Number: #IR.MUMS.FHMPM.REC.1402.058) and strictly adhered to research ethics standards throughout all stages. Additionally, all women participants provided oral consent before participating in the study.

## Results

Out of the initial sample of 386, a total of 366 women visited the health centers of Mashhad from April to June 2023 for inclusion in the study. The participants had a mean age of 36.42 years with a standard deviation of 11.13 years. the majority of the women were married (94.5%), held a university degree (59%), were housewives (60.9%), and reported an average-level income (61.7%).

Regarding self-efficacy, the study found that 254 participants (69.4%) exhibited high self-efficacy, 106 (29%) had average self-efficacy, and 6 (1.6%) had low self-efficacy. The mean total quality of life score was 63.88 with a standard deviation of 12.63. Additionally, the mean quality of life scores was 59.29 for physical health, 73.34 for psychological health, 171.69for social relations, 48.76for social environment and 270.04for general health.

The analysis revealed several significant relationships. Firstly, women's self-efficacy showed a statistically significant association only with socioeconomic status ($P=0.002$). Secondly, a significant relationship was found between total quality of life and age ($P=0.006$) education level ($P=0.017$), and husband's education ($P<0.001$). Furthermore, occupation significantly influenced all aspects of quality of life ($P=0.029$), with notable differences observed between housewives and office workers ($P=0.026$). Additionally, variations were found in quality of life scores between participants engaged in manual work versus office work ($P=0.006$). Notably, total quality of life and its dimensions differed significantly across the three levels of socioeconomic status (high, average, and low) ($P<0.001$). Further details are provided in Tables 1 and 2.

The results of Kruskal-Wallis test showed a statistically significant relationship between self-efficacy and the total quality of life ($p<0.001$). There is a statistically significant difference in the total quality of life score in those with high and low self-efficacy ($P=0.01$) and those with high and average levels of self-efficacy ($p<0.001$). The results also showed a statistically significant difference between all dimensions of quality of life (physical health, psychological health, social relationships, social environment, and general quality of life and health) and self-efficacy ($p<0.001$). This difference in all dimensions was between participants with high and average levels of self-efficacy (Table 3).

## Discussion

Attention to women's quality of life and self-efficacy in successfully accomplishing tasks can be effective in improving family and society health. Thus, present study was conducted to Determining the relationship between

**Table 1** Demographic information of women visiting health centers in Mashhad in 2023 and its relationship with self-efficacy (*N* = 366)

| Variable | Level | Total | Self-efficacy | | | *P*-value (Phi) |
|---|---|---|---|---|---|---|
| | | | Low | average | High | |
| **Age (years)** | - | 36.42 ± 11.13 | 33.17 ± 7.96 | 38.06 ± 11.10 | 35.81 ± 11.16 | 0.122 |
| **Family size** | - | 3.61 ± 1.27 | 4 ± 1.41 | 3.45 ± 1.29 | 3.67 ± 1.27 | 0.371 |
| **Number of daughters** | - | 0.97 ± 0.95 | 0.83 ± 0.98 | 1.08 ± 1.06 | 0.93 ± 0.90 | 0.607 |
| **Number of sons** | - | 0.85 ± 0.95 | 0.50 ± 0.83 | 0.91 ± 0.98 | 0.87 ± 0.94 | 0.576 |
| **Marital status** | Married | 346(94.5) | 5(1.4) | 97(26.5) | 244(66.7) | 0.19 |
| | Divorced | 7(1.9) | 1(0.3) | 3(0.8) | 3(0.8) | |
| | Widowed | 13(3.6) | 0(0) | 6(1.6) | 7(1.9) | |
| **Current pregnancy** | Yes | 35(9.6) | 1(0.3) | 10(2.7) | 24(6.6) | 0.83 |
| | No | 331(90.4) | 5(1.4) | 96(26.2) | 230(62.8) | |
| **Education** | Diploma or lower degree | 150(41) | 3(0.8) | 45(13.9) | 102(27.9) | 0.83 |
| | University degree | 216(59) | 3(0.8) | 61(16.7) | 152(41.5) | |
| **Husband's education** | Diploma or lower degree | 172(47) | 4(1.1) | 51(13.9) | 117(32) | 0.58 |
| | University degree | 194(53) | 2(0.5) | 55(15) | 137(37.4) | |
| **Occupation** | housewife | 223(60.9) | 5(1.4) | 70(19.1) | 148(40.4) | 0.14 |
| | Office work | 95(26) | 1(0.3) | 20(5.5) | 74(20.2) | |
| | freelance | 28(7.7) | 0(0) | 6(1.6) | 22(6) | |
| | Manual work | 4(1.1) | 0(0) | 1(0.3) | 3(0.8) | |
| | retired | 16(4.4) | 0(0) | 9(2.5) | 7(1.9) | |
| **Husband's occupation** | Unemployed | 3(0.8) | 0(0) | 0(0) | 3(0.8) | 0.27 |
| | Office work | 106(29) | 2(0.5) | 23(6.3) | 81(22.1( | |
| | freelance | 168(45.9) | 3(0.8) | 52(14.5) | 113(30.9) | |
| | Manual work | 49(13.4) | 1(0.3) | 14(3.8) | 34(9.3) | |
| | Retired | 40(10.9) | 0(0) | 17(4.6) | 23(6.3) | |
| **Income** | ≤ 3 million | 21(5.7) | 0(0) | 5(1.4) | 16(4.4) | 0.054 |
| | 3–5 million | 30(8.2) | 0(0) | 11(3) | 19(5.2) | |
| | 5–7 million | 74(20.2) | 1(0.3) | 31(0.5) | 42(11.5) | |
| | 7–10 million | 123(33.6) | 4(1.1) | 35(9.6) | 84(23) | |
| | > 10 million | 118(32.2) | 1(0.3) | 24(6.6) | 93(25.4) | |
| **Socioeconomic status** | High | 80(21.9) | 2(0.5) | 14(3.8) | 64(17.5) | 0.002 |
| | Average | 26(61.7) | 2(0.5) | 64(17.5) | 160(43.8) | |
| | Low | 59(16.1) | 2(0.5) | 28(7.7) | 29(7.9) | |

The data are reported as mean ± standard deviation (SD) and N (10%). Chi-square and Kruskal-Wallis tests were used, here

quality of life and self-efficacy in covered women referring to Mashhad health centers was done.

The present study showed that most participants had high self-efficacy. Another study conducted on 400 women visiting cultural centers in Mashhad showed that most women had high self-efficacy [16]. In another study in Hamedan, the level of self-efficacy of elementary school teachers was higher than average [17]. These results confirm the findings of the present study. While the results of other studies conducted on people with various diseases, women with premature children and the elderly indicate a low average level of self-efficacy of the studied subjects [2, 10, 18]. Among the reasons for the difference in the findings, we can mention the characteristics of the research samples, living conditions, as well as the target community and different measurement tools. It should be noted that having high self-esteem and confidence in one's ability to successfully perform behavior plays an important role in improving people's health and can help them achieve their goals.

The quality of life is the result of each person's feeling and understanding of living well and can be effective in adopting health-promoting behaviors. Therefore, paying attention to this component and its dimensions seems necessary to have a healthy society. In this study, the total score of the quality of life and its dimensions were reported to be higher than the average, while in the studies conducted on people with various diseases, patients and the elderly, it was seen that this variable showed a significant decrease, which shows that Conditions such as illness and old age can affect the quality of life, which can be investigated and noted [2, 19–22]. Considering that individual differences affect people's perception of their quality of life, the reason for the difference in the results of various studies may be due to the existence of social, economic and cultural differences in each region.

**Table 2** Relationship between quality of life (and dimensions) and demographic variables

| variable | | total QOL | *P*-value | QOL dimension | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Physical health | *P*-value | Psychological health | *P*-value | Social relations | *P*-value | Social environment | *P*-value | Quality of life and general health | *P*-value |
| Marital status | married | 64.35 ± 12.19 | 0.018 | 59.59 ± 12.49 | 0.081 | 73.69 ± 14.57 | 0.081 | 172.39 ± 39.15 | 0.081 | 49.02 ± 10.90 | 0.081 | 271.09 ± 43.73 | 0.081 |
| | divorced | 53.02 ± 21.25 | | 56.12 ± 26.12 | | 69.64 ± 31.15 | | 164.28 ± 62.30 | | 45.95 ± 23.36 | | 258.92 ± 93.46 | |
| | widowed | 57.17 ± 15.26 | | 53.02 ± 18.43 | | 66.02 ± 21.50 | | 157.05 ± 43.01 | | 43.26 ± 16.12 | | 248.07 ± 64.51 | |
| Current pregnancy | yes | 67.39 ± 12.52 | 0.097 | 60.91 ± 13.66 | 0.314 | 75.23 ± 15.94 | 0.314 | 157.47 ± 31.88 | 0.314 | 50.17 ± 11.95 | 0.314 | 275.71 ± 47.83 | 0.314 |
| | no | 63.51 ± 12.61 | | 59.12 ± 13.07 | | 73.14 ± 15.25 | | 171.29 ± 30.50 | | 48.61 ± 11.43 | | 269.44 ± 45.75 | |
| Education | Diploma or lower degree | 61.76 ± 13.37 | 0.017 | 57.11 ± 13.19 | 0.011 | 70.80 ± 15.39 | 0.011 | 166.61 ± 30.79 | 0.011 | 46.85 ± 11.54 | 0.011 | 262.41 ± 46.19 | 0.011 |
| | University degree | 65.34 ± 11.91 | | 60.81 ± 12.88 | | 75.11 ± 15.03 | | 157.23 ± 30.06 | | 50.08 ± 11.27 | | 275.34 ± 45.09 | |
| Husband's education | Diploma or lower degree | 61.08 ± 13.38 | < 0.001 | 56.70 ± 13.46 | < 0.001 | 70.32 ± 15.71 | < 0.001 | 165.64 ± 31.42 | < 0.001 | 46.49 ± 11.78 | < 0.001 | 260.97 ± 47.14 | < 0.001 |
| | University degree | 66.36 ± 11.41 | | 61.59 ± 12.39 | | 76.03 ± 14.45 | | 177.06 ± 28.91 | | 50.77 ± 10.84 | | 278.09 ± 43.37 | |
| Occupation | Housewife | 62.55 ± 13.36 | 0.173 | 57.43 ± 13.25 | 0.029 | 71.16 ± 15.46 | 0.029 | 167.33 ± 30.92 | 0.029 | 47.12 ± 11.59 | 0.029 | 263.50 ± 46.38 | 0.029 |
| | Office work | 66.35 ± 10.90 | | 62.18 ± 12.17 | | 76.71 ± 14.20 | | 178.42 ± 28.41 | | 51.28 ± 10.65 | | 280.13 ± 42.62 | |
| | Freelance | 66.07 ± 10.94 | | 62.75 ± 14.10 | | 77.38 ± 16.45 | | 179.76 ± 32.90 | | 51.78 ± 12.33 | | 282.14 ± 49.35 | |
| | Manual work | 69.71 ± 60.79 | | 61.60 ± 6.76 | | 76.04 ± 7.88 | | 177.08 ± 15.77 | | 50.78 ± 5.91 | | 278.12 ± 23.66 | |
| | Retired | 62.43 ± 13.49 | | 61.60 ± 12.67 | | 76.04 ± 14.79 | | 177.08 ± 29.58 | | 50.78 ± 11.09 | | 278.12 ± 44.37 | |
| Husband's occupation | Unemployed | 71.47 ± 7.77 | 0.002 | 55.95 ± 2.06 | < 0.001 | 69.44 ± 2.40 | < 0.001 | 163.88 ± 4.81 | < 0.001 | 45.83 ± 1.80 | < 0.001 | 258.33 ± 7.21 | < 0.001 |
| | Office work | 67.30 ± 11.61 | | 62.90 ± 12.02 | | 77.55 ± 14.03 | | 180.11 ± 28.06 | | 51.91 ± 10.52 | | 282.66 ± 42.10 | |
| | freelance | 63.38 ± 13.17 | | 59.01 ± 14.03 | | 73.01 ± 16.37 | | 171.03 ± 32.74 | | 48.51 ± 12.27 | | 269.04 ± 49.11 | |
| | Manual work | 59.43 ± 13.15 | | 54 ± 11.65 | | 67.17 ± 13.59 | | 159.35 ± 27.19 | | 44.13 ± 10.19 | | 251.53 ± 40.79 | |
| | Retired | 61.75 ± 10.27 | | 57.67 ± 11.70 | | 71.45 ± 13.65 | | 167.91 ± 27.31 | | 47.34 ± 10.24 | | 264.37 ± 40.97 | |
| Income | ≤ 3 million | 58.37 ± 15.20 | < 0.001 | 56.29 ± 12.46 | 0.032 | 69.84 ± 14.54 | 0.032 | 164.68 ± 29.09 | 0.032 | 46.13 ± 10.91 | 0.032 | 259.52 ± 43.64 | 0.032 |
| | 3–5 million | 63.14 ± 13.60 | | 58.33 ± 13.79 | | 72.22 ± 16.09 | | 169.44 ± 32.18 | | 47.91 ± 12.07 | | 266.66 ± 48.28 | |
| | 5–7 million | 60.65 ± 12.82 | | 57.09 ± 13.98 | | 70.77 ± 16.31 | | 166.55 ± 32.62 | | 46.83 ± 12.23 | | 262.33 ± 48.93 | |
| | 7–10 million | 63.06 ± 12.41 | | 58.39 ± 13.74 | | 72.29 ± 16.03 | | 169.57 ± 32.97 | | 47.96 ± 12.02 | | 266.86 ± 48.11 | |
| | > 10 million | 67.92 ± 10.97 | | 62.40 ± 11.34 | | 76.97 ± 13.24 | | 178.95 ± 26.48 | | 51.48 ± 9.93 | | 280.93 ± 39.72 | |
| Socioeconomic status | high | 71.97 ± 10.76 | < 0.001 | 65.89 ± 12.39 | < 0.001 | 81.04 ± 14.46 | < 0.001 | 178.08 ± 28.92 | < 0.001 | 54.53 ± 10.84 | < 0.001 | 293.12 ± 43.38 | < 0.001 |
| | average | 63.67 ± 11.26 | | 59.45 ± 11.98 | | 74.52 ± 13.98 | | 172.05 ± 27.96 | | 48.89 ± 10.48 | | 270.57 ± 41.94 | |
| | low | 53.56 ± 12.47 | | 49.63 ± 12.68 | | 62.07 ± 14.79 | | 149.15 ± 29.59 | | 40.30 ± 11.09 | | 236.2 ± 44.38 | |

**Table 2** (continued)

| variable | total QOL | *P*-value | QOL dimension | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Physical health | *P*-value | Psychological health | *P*-value | Social relations | *P*-value | Social environment | *P*-value | Quality of life and general health | *P*-value |
| **Age (year)** | *r*=-0.143<br>*P*=0.006 | | *r*=-0.074<br>*P*=0.159 | | *r*=-0.074<br>*P*=0.159 | | *r*=-0.074<br>*P*=0.159 | | *r*=-0.074<br>*P*=0.159 | | *r*=-0.074<br>*p*=0.159 | |
| **Family size** | *r*=-0.079<br>*P*=0.129 | | *r*=-0.052<br>*P*=0.318 | | *r*=-0.052<br>*P*=0.318 | | *r*=-0.052<br>- | | *r*=-0.052<br>*P*=0.318 | | *r*=-0.052<br>*P*=0.318 | |
| | | | | | | | *P*=0.318 | | | | | |
| **Number of daughters** | *r*=-0.057<br>*P*=0.279 | | *r*=-0.003<br>*P*=0.948 | | *r*=-0.003<br>*P*=0.948 | | *r*=-0.003<br>*P*=0.948 | | *r*=-0.003<br>*P*=0.948 | | *r*=-0.003<br>*P*=0.948 | |
| **Number of sons** | *r*=-0.103<br>*P*=0.050 | | *r*=-0.117<br>*P*=0.025 | | *r*=-0.117<br>*P*=0.025 | | *r*=-0.117<br>*P*=0.025 | | *r*=-0.117<br>*P*=0.025 | | *r*=-0.117<br>*P*=0.025 | |

The data are reported as N (10%) and mean ± standard deviation (SD). Mann-Whitney U-test, Wilcoxon test, Kruskal-Wallis test and Spearman correlation coefficient were used

The present findings showed that the women participants' self-efficacy was significantly correlated with only the socioeconomic status of family. This finding is in line with the results of the study of Roshan Ghias et al. which stated that there is a significant relationship between self-efficacy and the economic status of the family. This means that the highest level of self-efficacy was among patients with good economic status [2]. Zarei Nezhad et al. showed that self-efficacy was directly and positively correlated with family income [10]. While, the results of Khazaee et al. study showed that there is no significant relationship between self-efficacy and income in women referring to cultural centers in Mashhad [16]. This difference can be due to the difference in methodology such as the time of data collection. Considering that people's self-efficacy is affected by their personality and socioeconomic characteristics, having a favorable income to adapt to life conditions will be effective in guiding people towards health-oriented behaviors, conveying peace of mind and controlling unexpected events. Nevertheless, as the present findings showed, we need to pay close attention to the socioeconomic dimension of family and how it can affect people's daily life.

The results showed a statistically significant relationship between the quality of life and demographic variables such as age, education level and one's own and the husband's occupation and socioeconomic status. A study in Tehran showed a statistically significant relationship between participants' quality of life and the employment status [2]. In another study on diabetic adults, Bowen et al. showed that low education was related to lower quality of life [23]. Also, the findings of the study showed that there is a significant relationship between the economic status of the family and the physical and mental health of students with disabilities in Kerman province (Iran) [24]. Shabani et al.'s study showed a statistically significant relationship between the age and education level of the elderly residents of nursing homes with their quality of life in Tehran [18]. These findings confirm the results of the present study. A review by Majdabadi et al. showed that the education level can improve the quality of life. Gaining scientific knowledge about different domains helps prevent inappropriate behaviors and also affects one's position in society [21]. Meanwhile, in Poorabdolah et al.'s study, no relationship was found between the quality of life dimensions of cancer patients with demographic variables such as occupation, family income, education level, and marital status [25]. Among the reasons for the difference in the findings, we can mention the difference in the target population and the specific measurement tool of quality of life in cancer patients. These findings prove the importance of demographic variables in health-promoting behaviors and encouraging the adoption of a healthy lifestyle. In other words, in

**Table 3** Relationship between self-efficacy and dimensions of quality of life

| Variable | | Self-efficacy | | | P-value |
|---|---|---|---|---|---|
| | | low | average | High | |
| QOL | Physical health | 21.74 ± 44.07 | 53.80 ± 11.78 | 61.95 ± 12.50 | < 0.001 |
| | Psychological health | 25.36 ± 55.55 | 66.93 ± 13.74 | 76.44 ± 14.58 | < 0.001 |
| | Social relations | 50.73 ± 136.11 | 158.88 ± 27.48 | 177.88 ± 29.16 | < 0.001 |
| | Social environment | 19.02 ± 45.31 | 43.5 ± 10.30 | 51.08 ± 10.93 | < 0.001 |
| | Overall/general quality of life and health | 216.66 ± 76.10 | 250.82 ± 41.23 | 279.33 ± 43.75 | < 0.001 |

Kruskal-Wallis test was used

explaining these findings, it can be said that the better the people are in their socio-economic status, the better their life will be in terms of quality and they will try to maintain their own and family members' health without unpleasant mental concerns.

The findings also showed a statistically significant relationship between self-efficacy and the total score of quality of life and its dimensions. This finding is consistent with Carter et al.'s study, showing that self-efficacy was a strong and positive predictor of quality of life among adults with stuttering disorders [8]. In a study conducted on the elderly, it was observed that self-efficacy has a positive effect on health-related quality of life [26]. The data from a study on patients suffering from pain disorder showed that self-efficacy can significantly predict the quality of life and the four subscales (physical, psychological, social and environmental domains) [27]. Cramm et al. showed that adolescents' perceived self-efficacy predicted all dimensions of quality of life [22]. Norouzinia et al. also found a significant correlation between self-efficacy and three dimensions of quality of professional life in pre-hospital emergency workers of Alborz province [28]. All these findings are confirmed by the present study. Meanwhile, the results of Nohouji et al.'s study showed that self-care cannot directly improve the quality of life in people with diabetes, and it affects the quality of life indirectly by using the mediating role of self-care behaviors [29]. The mentioned study stated that some other factors such as self-care behaviors in diabetic patients cause the connection between these two components [29]. Among the reasons for the difference in the results, we can mention the difference in the target population and measurement tools, as well as the difference in methodology. In sum, in explaining these findings, it can be stated that the more self-efficacy people have, the more prepared they will be to deal with stressful life conditions and the more successful they will be in maintaining their health and thus improving their quality of life [6]. Generally, these findings prove the importance of self-efficacy in people's quality of life and vice versa. In other words, improving people's self-efficacy and quality of life will lead to the improvement of their health. Therefore, it is possible to take measures to achieve the desired quality of life by planning and implementing appropriate interventions with an emphasis on ways to improve self-efficacy.

### Strengths and limitations

The results of the present study showed that there is a positive relationship between self-efficacy and the quality of life of women. Therefore, this finding can be used to improve the quality of life by using self-efficacy strategies. This can be one of the strengths of this research. One of the limitations of the present study was that the participants were only women covered by Mashhad city health centers, which may not be possible to generalize to the entire women community. Another limitation of the present study was that the participants were only covered women the urban health centers of Mashhad. More illuminating results could have been obtained, if it had been possible to contact their husbands or important people in life, who played an important role in solving life issues. However, this was beyond the researcher's responsibility. Another limitation we the self-reporting nature of data collection, which has certain limitations. The respondents may be tempted to give socially desirable answers and confound the results. However, we tried to get more real answers by justifying the research examples regarding the importance of the subject.

## Conclusion

In conclusion, the findings of this study underscore the critical relationship between self-efficacy and the quality of life among women in Mashhad. By illuminating the pivotal role of self-efficacy in shaping various dimensions of well-being, from physical and psychological health to social relations and overall quality of life, our research highlights actionable pathways for enhancing women's welfare and societal health. These insights serve as a clarion call for policymakers, healthcare professionals, and community leaders to prioritize interventions that empower women, nurture their self-efficacy, and foster environments conducive to flourishing. By investing in targeted initiatives that bolster women's confidence and agency, we have the opportunity not only to elevate individual lives but also to catalyze positive ripple effects across the entire fabric of society in Mashhad and beyond. Let our collective commitment to promoting

women's well-being stand as a testament to the transformative potential of research-driven action.

## Supplementary Information

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Supplementary Material 1

Supplementary Material 2

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**Author contributions**
Author Contributions N.P, F.GM and N.T designed the study. N.T analyzed and interpreted the data. F.GM participated in data collection and data management. N.P, F.GM and N.T were major contributors to the writing of the manuscript. All authors read and approved the final manuscript.

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**Data availability**
The datasets generated and/or analyzed during the current study are not publicly available due to privacy or ethical restrictions but are available from the corresponding author on reasonable request.

## Declarations

**Consent for publication**
Not applicable.

**Competing interests**
The authors declare no competing interests.

**Author contributions**
Author Contributions N.P, F.GM and N.T designed the study. N.T analyzed and interpreted the data. F.GM participated in data collection and data management. N.P, F.GM and N.T were major contributors to the writing of the manuscript. All authors read and approved the final manuscript.

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