ORIGINAL ARTICLE

# The Effects of Superstitious Thoughts on the Older Adults' Lifestyle

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## Abstract

**Background:** A society's culture, beliefs, and values are important and effective factors in lifestyle and health status. Therefore, this study aimed to determine the correlation between older adults' tendency towards superstitions and their healthy lifestyles.

**Methods:** This study was descriptive-analytical and of a correlational type. The statistical population consisted of all the older adults covered by healthcare centers in the North of Iran. The sample size was determined to be 360 using the multistage random sampling method. Data were collected using the Elderly Healthy Lifestyle and Tendency to Superstitions Questionnaires. Spearman's test, regression analysis, chi-square, Kruskal-Wallis tests, and SPSS 28 software were utilized to analyze the data.

**Results:** Among a total of 360 elderly participants in the study, 173 were male, and 187 were female, in the age range of 60 to 91 years. The results indicated a significant correlation ($P<0.001$) with an effect size of 29% between superstitions and a healthy lifestyle. According to the findings, the regression model fitted with the predictive variable, superstitions, could explain 14% of the variance in the dependent variable, lifestyle.

**Conclusion:** The research results emphasized that the tendency towards superstitions could be a predictive and effective factor in older adults' healthy lifestyles.

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**Keywords:** Lifestyle, Superstitions, Older adults

## Introduction

With the increase in the elderly population and their special needs, it becomes necessary to examine the health status of older adults. This need is amplified by the results of studies indicating a decrease in health with age.[1, 2] Researchers have found that the culture, beliefs, and values of a society are important and effective factors in lifestyles and the health status of different ethnic groups and races.[3, 4]

Beliefs of any society are among the constituents of the culture and perspective of that society. Some beliefs are based on proven bases, reason, and logic, while others are based on delusions and unfounded factors. Superstition refers to a part of beliefs that have vague causes and are not based on reason and logic. Superstition relates one event to another without citing a natural or scientific reason for this relationship.[5]

Safai's report shows that in Iran, 80.1% of the citizens of Hamedan city have an average or above-average tendency towards superstition.[6] In this regard, the findings of the studies in Iran indicate that 74% and 93% of the participants had more than average superstitious tendencies.[7, 8]

Superstition is a cultural and social issue prevalent in every society. It instills a form of passivity within society and permeates all infrastructural aspects, from culture to health, economics, and even military affairs, thereby weakening their foundations.[9] Superstitious thinking is ubiquitous worldwide, and depending on the circumstances, these thoughts can be beneficial, ineffective, or detrimental to human life. Superstitious beliefs, particularly those contradicting medical

sciences, are important in health and treatment. This field deals with people's health, and any deviation or error in beliefs and practices may result in loss of lives. People's inclination towards superstitions can lead them to neglect proper treatment.[10] Moreover, certain colors, days, and events are considered lucky or unlucky in many societies. This type of superstition can influence the lifestyle of society's members by altering their behavior.[11]

A healthy lifestyle in old age is crucial due to its age-related nature.[12] Its ability to prevent diseases, maintain and enhance levels of physical and mental health, improve quality of life, and extend life expectancy is of great importance.[4, 13, 14] Furthermore, a healthy lifestyle serves as a valuable resource for reducing the prevalence of health problems and adapting to stressful life factors, which can vary according to the general culture, society, and living conditions.[15]

Discovered that older adults have relatively low knowledge, attitude, and performance about a healthy lifestyle.[16] Many problems of old age, including superstition, are potentially preventable. Given the crucial role of nurses in primary prevention, this group within the country's healthcare community can play a vital role in minimizing disability in this age group. This can assist us in achieving the goals of successful aging, which include maintaining efficiency, independence, social status, constructive participation, dignity, and self-esteem among older people.[17] All these factors together can lead to a reduction in the cost of medical care for older people, which currently accounts for nearly 60% of the total cost of medical care.[18] Therefore, it is necessary to carefully examine this matter and the effects of culture, beliefs, and values on lifestyle, in addition to its components.

There have been few studies in this field worldwide, and according to research, no study has been conducted on the relationship between belief in superstitions and the lifestyle of the older people.[16] This study aimed to determine the relationship between the tendency towards superstitions and the health of older people covered by healthcare centers in Sari City.

Considering the high percentage of elderly people in Mazandaran province, we hope that this research's findings can provide a suitable objective criterion for the country's educational, cultural, and health planners and officials. This would enable them to use the existing findings to make appropriate plans to dispel superstitions.

## Methods

The present research was a descriptive-analytical study. Sampling was done using a multi-stage random method. After going through the legal procedures and obtaining the necessary permission from the research ethics committee of Mazandaran University of Medical Sciences under the code of ethics IR.MAZUMS.REC.1400.529, and the introduction letter from the city health center, all the healthcare centers of Sari were geographically divided into five regions (South, North, East, West, Center) in the first stage (stratified sampling). In the second stage, one center was selected from each geographical region. In the third stage, samples were randomly selected among the eligible people who had electronic records from five urban centers according to the population of each center.

The sample size was calculated using PASS software version 15. With an average score of 33.154 lifestyle index in older people and a standard deviation of 58.7, a power of 95, and a probability of error of 0.05,[19] 327 older adults were selected. Considering a drop of more than 10%, 360 older adults under the coverage of healthcare centers in Sari City were included.

The list of older people's names was obtained, and individuals were randomly selected using the output numbers of the Randbetween Excel software. After receiving the contact list, older people were contacted to coordinate the interview time and place and check the necessary criteria to participate in the study. After receiving written informed consent, the questionnaires were completed orally, face-to-face, and individually. If the selected person did not want to participate in the research, another person was randomly selected and replaced. To control intervening variables and increase the reliability and generalizability of the results, older people who had unfavorable cognitive status, low levels of daily activities, and high depression were identified at the beginning of the study using a questionnaire and excluded from the study.

The inclusion criteria were as follows: Age of 60 years and older, willingness to participate in the study, ability to communicate and interview, absence of psychotic diseases (types of schizophrenia and delusional disorders), cognitive status score greater than 7 (AMT Questionnaire),[20] depression test score less than 9 (GDS Questionnaire),[21] daily activities level test score greater than 7 (ADL Questionnaire),[22] absence of mental retardation, and absence of organ and brain damage (based on available documents from previous doctor's diagnosis). A medical demographic questionnaire was used to collect demographic information on older people.

The Healthy Lifestyle Questionnaire for Iranian Elderly was used in this study. This questionnaire, designed by Eshaghi et al. in Isfahan City in 2008, comprises 46 questions. Among these, 15 questions are in prevention, 5 in physical activity, sports, recreation, and entertainment, 5 in stress management, 7 in

social and interpersonal relations, and 14 in healthy nutrition. A score of 46 to 98 indicates an unfavorable lifestyle, 99 to 155 a moderate lifestyle, and 156 to 209 a favorable lifestyle.[23] The intraclass correlation coefficient (ICC) and McDonald's Omega reliability coefficient for this questionnaire were calculated as 0.89 and 0.84, respectively.

The Superstitious Beliefs Instrument (SBI) by Afshani was used to examine the level of superstitions. The validity of the questionnaire was checked, modified, and confirmed by several professors and social science experts. In total, 16 common superstitions in society were used to construct this questionnaire. The method of answering the questionnaire was based on a 3-point Likert scale: definitely true, maybe true, and definitely not true. The scoring method assigned zero points to the 'definitely not correct' option, two points to the 'probably correct' option, and four points to the 'definitely correct' option. The total score of the respondents determined their superstition tendency. A score of 0 to

**Table 1:** Characteristics of the participants by level of tendency to superstitions

| Elderly Characteristics | Tendency to superstitions | | | | |
|---|---|---|---|---|---|
| | Low | Medium | High | P value | Total |
| | N=125 | N=138 | N=97 | | |
| Socio-demographic Characteristics | | | | | |
| Age, n (%) | | | | 0.785 | |
| Young elderly (74-60) | 89 (34.5) | 101 (39.1) | 68 (26.4) | | 258 |
| Middle-aged elderly (75-89) | 34 (34.7) | 36 (36.7) | 28 (28.6) | | 98 |
| Older elderly (>90) | 2 (50) | 1 (25) | 1 (25) | | 4 |
| Gender, n (%) | | | | 0.681 | |
| Female | 64 (34.2) | 64 (34.2) | 59 (31.6) | | 187 |
| Male | 61 (35.3) | 74 (42.8) | 38 (22) | | 173 |
| Education, n (%) | | | | | |
| Illiterate | 44 (37.9) | 38 32.8) | 34 (29.3) | 0.96 | 116 |
| Primary | 37 (35.2) | 37 (35.2) | 31 (29.5) | | 105 |
| Diploma | 28 (37.8) | 29 (39.2) | 17 (23) | | 74 |
| Associate degree | 9 (25) | 17 (47.2) | 10 (27.8) | | 36 |
| Bachelor | 4 (23.5) | 11 (64.7) | 2 (11.8) | | 17 |
| Master | 3 (30) | 5 (50) | 2 (20) | | 10 |
| Ph.D. | 0 | 1 (50) | 1 (50) | | 2 |
| Marriage status, n (%) | | | | 0.455 | |
| Single | 12 (29.3) | 15 (36.6) | 14 (34.1) | | 41 |
| Married | 74 (35.4) | 81 (38.8) | 54 (25.8) | | 209 |
| Divorced | 13 (26.5) | 21 (42.9) | 15 (30.6) | | 49 |
| Widow | 26 (42.6) | 21 (34.4) | 14 (23) | | 61 |
| Coexistence status, n (%) | | | | 0.792 | |
| Alone | 21 (31.3) | 24 (35.8) | 22 (32.8) | | 67 |
| Others | 40 (33.3) | 46 (38.3) | 34 (28.3) | | 120 |
| Child | 20 (38.5) | 19 (36.5) | 13 (25) | | 52 |
| Spouse | 26 (36.1) | 28 (38.9) | 18 (25) | | 72 |
| Wife and Child | 18 (36.7) | 21 (42.9) | 10 (24) | | 49 |
| Employment status, n (%) | | | | 0.98 | |
| Employed | 65 (35.9) | 72 (39.8) | 44 (24.3) | | 181 |
| Unemployed | 60 (33.5) | 66 (36.9) | 53 (29.6) | | 179 |
| Residence area, n (%) | | | | 0.98 | |
| Urban | 114 (35.2) | 121 (37.3) | 89 (27.5) | | 324 |
| Rural | 11 (30.6) | 17 (47.2) | 8 (22.2) | | 36 |
| Income status, n (%) | | | | 0.49 | |
| Less than expense | 22 (28.6) | 32 (41.6) | 23 (29.9) | | 77 |
| Equal to expense | 51 (33.6) | 61 (40.1) | 40 (26.3) | | 152 |
| More than expense | 52 (39.7) | 45 (34.4) | 34 (26) | | 131 |
| Underlying disease, n (%) | | | | 0.722 | |
| Have | 108 (36.6) | 107 (36.3) | 80 (27.1) | | 295 |
| Have not | 17 (26.2) | 31 (47.7) | 17 (26.2) | | 65 |
| Duration of presence on social networks, n (%) | | | | <0.001 | |
| not present | | | | | |
| < 1 hour | 43 (22.2) | 89 (45.9) | 62 (32) | | 194 |
| 1-3 hours | 7 (16.7) | 15 (35.7) | 20 (47.6) | | 42 |
| > 3 hours | 31 (42.5) | 28 (38.4) | 14 (19.2) | | 73 |
| | 44 (86.3) | 6 (11.8) | 1 (2) | | 51 |
| Lifestyle, n (%) | | | | <0.001 | |
| Undesirable | 1 (1.9) | 3 (5.6) | 50 (92.6) | | 54 |
| Medium | 108 (38) | 131 (46.1) | 45 (15.8) | | 284 |
| Desirable | 16 (72.7) | 4 (18.2) | 2 (9.1) | | 22 |

Chi-Square and Kruskal-Wallis tests, P<0.05.

21 was considered low superstition, 22 to 42 average superstition, and 43 to 64 high superstition. A higher score indicated a greater superstition tendency.[24] The ICC and McDonald's Omega reliability coefficient for this questionnaire were calculated as 0.85 and 0.83, respectively.

All the instruments were adapted to the Iranian population, and their psychometric properties in the Iranian adaptation were calculated according to the guidelines of the WHODAS 2.0 translation package.[25] After collecting the questionnaires, the data and the subjects' demographic characteristics were entered into the SPSS software version 28. The data were evaluated at two levels: descriptive and inferential statistics. The mean and standard deviation were used at the descriptive statistics level. At the level of inferential statistics, Spearman's test was used to determine correlation, regression analysis was used to determine the predictive power of the independent variable compared to the dependent variable, and chi-square and Kruskal-Wallis tests were used to determine the relationship between variables. The normality of the data was checked using a normal distribution chart and the Kolmogorov-Smirnov test. The significance level of the tests was considered less than 0.05.

## Results

In this study, 360 elderly individuals covered by healthcare centers in Sari City participated. Of these, 173 (48.1%) were men and 187 (51.9%) were women. The average age of the participants was 70.8±7.4 years, ranging from 60 to 91 years. Most participants (67.8%) were literate and married (58.1%). The study found that the mean score for superstitions was 30.93±14.53, and the mean score for a healthy lifestyle was 123.84±21.22, indicating moderate scores for both superstitions and healthy lifestyles. In this study, the lifestyle of 22 elderly individuals (6.1%) was favorable, moderate in 284 (78.9%), and unfavorable in 54 (15%). Furthermore, 125 elderly individuals (34.7%) had a low superstition tendency, 138 (38.3%) had a moderate tendency, and 97 (26.9%) had a high tendency.

The Kolmogorov-Smirnov test was used to assess the data's normality. Since the data were not normally distributed, non-parametric tests were used. The lifestyle components, namely sports, nutrition, prevention, interpersonal and social relations, and stress management, were ranked from highest to lowest average. There was no significant difference between gender, age, marital status, income level, and education level with the tendency to superstition and lifestyle.

Spearman's correlation test indicated a correlation between superstitions and all subgroups of a healthy lifestyle. The direction of the relationship between superstitions and a healthy lifestyle was negative, suggesting that older people who were less prone to superstitions had a healthier lifestyle (Table 1).

The effect size of superstitions on a healthy lifestyle indicated that superstitions impacted a healthy lifestyle by 29%. The results demonstrated a significant negative correlation between all dimensions of a healthy lifestyle and the tendency towards superstitions (P>0.001) (Table 2). Among the different dimensions of a healthy lifestyle, prevention had the strongest relationship with the tendency towards superstition, while the weakest relationship was related to physical activity factors. Logistic regression analysis using the backward stepwise method was employed to eliminate potential confounding factors such as age, gender, and region of residence from the relationship between the tendency towards superstition and a healthy lifestyle. The linear regression model indicated that the tendency towards superstitions remained in the model output as predictive variables of a healthy lifestyle. The results showed that the proposed regression model could explain 14% of the data (Table 3). The regression analysis results indicated that superstitions significantly affected a healthy lifestyle, and as superstition scores increased, a healthy lifestyle decreased.

**Table 2:** The correlation between the tendency to superstitious and lifestyle subgroups

| Variable | Total Lifestyle | Physical Activity | Prevention | Stress Management | Nutrition | Personal and Social Inter-Relationship |
|---|---|---|---|---|---|---|
| Mean±SD | 123.84±21.22 | 13.53±2.88 | 41.48±8.45 | 13.75±4.27 | 34.87±7.8 | 20.22±4.84 |
| P value | <0.001 | <0.012 | <0.001 | <0.001 | <0.001 | <0.001 |
| (r) | (-0.36) | (-0.13) | (-0.39) | (-0.27) | (-0.26) | (-0.26) |

Spearman's Correlation Coefficient test, P<0.05.

**Table 3:** Linear regression analysis of the relationship between the tendency to superstitions and healthy lifestyle

| Model | B | Std. Error | Standard Beta | t | Adjusted R Square | P | 95% C.I. for B | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Lower | Upper |
| (Constant) | 140.919 | 2.441 | | 57.732 | | 0.00 | 136.119 | 145.719 |
| Tendency to superstitions | -0.552 | 0.071 | -0.378 | -7.730 | 0.0141 | 0.00 | -0.693 | -0.412 |

Dependent Variable: Healthy Lifestyles, P<0.05.

## Discussion

The present study aimed to determine the correlation between superstitions and a healthy lifestyle in individuals over 60 covered by healthcare centers in Sari City. The results showed a significant negative correlation between the tendency towards superstition and a healthy lifestyle in older people, aligning with the findings of Tahir et al. (2018), who stated in a study in Pakistan that superstitious beliefs could influence people's decisions and lifestyles.[11]

Among the areas of a healthy lifestyle, physical activity scored the highest. Many elderly individuals living in northern Iran spend part of their daily time in gardens and agricultural fields, necessitating physical activity, making the results of this research seem reasonable. These results are inconsistent with the studies of Delshad et al. (2022)[26] and Zarei et al. (2017)[27] considering the relationship between lifestyle, culture, and ethnicity.[3, 4]. The statistical population of Delshad's study consisted of elderly individuals between 60 and 75 years of age in Gonabad. The difference in results could be attributed to the difference in the statistical population under study and ethnic and cultural differences. The findings showed that the elderly scored the lowest for stress management, aligning with the studies of Ershadi et al. (2020)[28] and Taohan et al. (2004) in Korea.[29] Research has shown that increased tension, hormonal changes, and changes in sleep patterns can negatively affect the management of stressors.[30] Considering the stressful conditions of the COVID-19 pandemic, which has reduced older adults' contact with family members, the results of the present study seem reasonable.

In the current study, the lifestyle of 22 elderly individuals (6.1%) was reported as favorable, 284 elderly individuals (78.9%) as average, and 54 elderly individuals (15%) as unfavorable. Compared to the results of Safavi et al. (2011),[6] Rezaiyan et al. (2018),[31] and Asadi et al. (2019),[32] which were conducted in Rasht, Tehran, and Babol respectively, it seems that older people living in Sari have an unfavorable lifestyle compared to other cities of Iran, despite their acculturation, traditional customs, and diversity in food culture. In this study, the average lifestyle score of 78.9% of older people was at the average level, which is consistent with the results of the study by Alizadeh et al. (2019)[32] and Zarei et al. (2018).[27] Their study stated that the lifestyle score of 86% and 95% of older people studied was average. This contrasts with the findings of Jabari Turan et al.[33] and Lori et al. (2015),[34] who found in their studies that 52% and 58% of older people under their study had a favorable lifestyle, showing a discrepancy with the results of the present study. These differences can be attributed to differences in the elderly groups, ethnic culture differences, and living conditions. In the present study, there was no significant difference in the lifestyle scores of men and women, aligning with the results of the studies of Delshad et al. (2022),[26] Fathi et al. (2020),[35] and Zarei et al. (2018).[27] However, it is inconsistent with the results of the studies of Alizadeh et al. (2019)[32] and Asadi et al. (2019).[36] who stated in their study that the overall score of a healthy lifestyle in men was significantly higher than that of women. This heterogeneity in the results may be due to the cultural context of Sari, the strong presence of women in different social fields, and the difference in educational levels.

The results of the present study revealed that 97 elderly individuals (26.9%) had a high tendency towards superstitions, 138 elderly individuals (38.3%) had an average tendency, and 125 elderly individuals (34.7%) had a low tendency. In total, 235 individuals (65.27 percent) of the studied elderly population exhibited an average to high belief in superstitions. In research by Dehghani et al. (2020)[37] and Rastegar et al. (2021),[7] 74% and 93% of the samples, respectively, had more than average superstition tendencies, which is consistent with the present study. The results of Afshani et al.'s (2021)[38] research indicate that most samples had moderate superstitious tendencies, which contradicts the current research results. The statistical population of Afshani's study included older women in Yazd City, and the difference in the results of the two studies was attributed to the difference in the statistical population or cultural differences as significant factors in the increase or decrease of superstitions. The results of the present study showed no significant difference between men and women in terms of the tendency toward superstition, which aligns with the results of Ramadani's research (2019).[39]

The present study's limitations were its coincidence with the COVID-19 pandemic and the difficulty in accessing the elderly during the quarantine period, which may have affected the quality of the data.

The results of the present study can serve as a basis for designing suitable interventions to improve the lifestyles of older people and, subsequently, their quality of life. Considering the applicability of the results of studies based on education and health promotion models, it is suggested that similar studies be conducted on the older population based on the same model in other cities of Iran. It is also recommended that such studies be conducted longitudinally and regularly to track changes in the quantity and quality of health of all age groups, especially the elderly age group, and provide access to up-to-date data on the health status of this population.

## Conclusion

Given that the majority of older people had a moderate to

high superstition tendency, and according to the results of the present study, indicating a statistically significant correlation between belief in superstitions and a healthy lifestyle in older people, suggestions are offered to perform educational interventions proportional to the older adults' low literacy level. These interventions aim to increase their knowledge to reduce superstitions and increase their lifestyle scores, focusing on domains of interpersonal and social relationships and stress management, thereby improving their health and quality of life.

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## Authors' Contribution

FM & EE have assisted in the conceptualization and design of the study, oversaw data collection; LFS has collected the data, and did data file preparation and screening. FM & SNH also wrote all sections and prepared the first version of the manuscript. AAs have interpreted data, analyzed it, and extracted the results. All authors read and approved the final manuscript.

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## Reference

1 Abdollahi E, Shokrgozar S, Sheerojan M, Golshahi M, Zare R. Relationship Between Sexual Satisfaction and Mental Health in Married Older Women. Journal of Guilan University of Medical Sciences. 2021;30(1):14 -27. [In Persian]. doi: 10.32598/JGUMS.30.1.1401.2.

2 Zareipour M, Mahmoodabad SS. The Effect of Educational Intervention on Promoting Knowledge and Self-efficacy of Elderly in Preventing Falling. Journal of Safety Promotion and Injury Prevention. 2020;7(4):226-33. [In Persian].

3 Abbott KR, Sherratt TN. The evolution of superstition through optimal use of incomplete information. Animal Behaviour.2011;82(1):85-92. doi: 10.1016/j. anbehav.2011.04.002.

4 Aksoy N. Weight Gain After Kidney Transplant. Exp Clin Transplant. 2016;14(Suppl 3):138-40. doi: 10.6002/ ect.tondtdtd2016.P66. PMID: 27805534.

5 Ramezani K. A Comparative Study of Superstition Implications In the attitude towards the public and academic education of Kohgiluyeh and Boyerahmad province. Sociological Cultural Studies. 2019;9(4):25-39.

6 Safai S, Erfani S, Tayebi nia M. Investigating the sociological factors associated with superstition. Social security studies. 2011(21):182-5. [persian].

7 Rastegar Y, Valipour z. Women, Superstition and Its Relation to Some Social Parameters (Case study: Bandar Abbas). Gender and Family Studies. 2021;9(1):143.70. doi: 20.1001.1.25381938.1400.9.1.6.8.

8 Dehghani H, Ebrahimi H. Studying the Feeling of Social and Psychological Security with a Tendency toward Superstition (Case Study: Isfahan University Students). Strategic Research on Social Problems in Iran. 2019;8(4):99-122. doi: 10.22108/ SRSPI.2020.118235.1435.

9 Ternosky C. How Do Medical Personnel Reflect on the Role and Importance of Superstitions in Nursing: An Analysis of the Potential Benefits and Concerns. Global Human Resource Management English MBA Program. 2019(2):122.

10 Movahedi M, Khamseh F, Ebadi A, Haji Amin Z, Navidian A. Assessment of the lifestyle of the elderly in Tehran. Journal of Health Promotion Management. 2016;5(3):51-9.

11 Tahir TB, Qureshi S, Safi FT. Superstitions as Behavioral Control in Pakistan. Pakistan Journal of social science. 2018;38(2):771-82.

12 Ghanbari Moghadam A, Mohammadi Shahbolaghi F, Dalvandi A, Hoseinzade S. Relationship Between Lifestyle and General Health Among Elderly People in Tehran. Salmand: Iranian Journal of Ageing. 2015;10(3):90-9.

13 Dhana K, Franco OH, Ritz EM, Ford CN, Desai P, Krueger KR, et al. Healthy lifestyle and life expectancy with and without Alzheimer's dementia: population based cohort study. BMJ. 2022;377:1-9. doi: 10.1136/ bmj-2021-068390. PMID: 35418416. PMCID: PMC9006322.

14 Papi S, Zanjari N, Karimi Z, Motamedi SV, Fadayevatan R. The Role of Health-promoting Lifestyle in Predicting Cognitive Status of Older Clergymen. Salmand: Iranian Journal of Ageing. 2021;15(4):472-83. doi: 10.32598/ sija.15.4.1393.3.

15 Rahimi A, Anosheh M, Ahmadi F, Foroughan M. Exploring the Nature of the Elderly People Life Style: A Grounded Theory. Salmand: Iranian Journal of Ageing.2016;10(4):112-31.

16 Salimi Naveh A, Poorrezagholi M, Shojaadini M, Negarestani H. Relativism between men and women in Kerman in referring to prayer writers, fortune tellers and fortune tellers. Islamic Studies in Health. 2020;4(2):25-36.

17 Sao Jose JMS, Amado CAF, Ilinca S, Buttigieg SC, Taghizadeh Larsson A. Ageism in Health Care: A Systematic Review of Operational Definitions

and Inductive Conceptualizations. Gerontologist. 2019;59(2):98-108. doi: 10.1093/geront/gnx020.

18 Shahnazi H, Sobhani A, Cherkzi A. Relation of different aspects of lifestyle and elderly quality of life. Journal of Sabzevar University of Medical Sciences. 2018;25(3):370-63.

19 Machin, D., Campbell, M., Fayers, P., and Pinol, A. 1997. Sample Size Tables for Clinical Studies, 2nd Edition. Blackwell Science. Malden, MA.

20 Foroughan M, Jafari Z, Shirin Bayan P, Ghaem Magham Farahani Z, Rahgozar M. Validation of Mini-Mental State Examination (MMSE) in The Elderly Population of Tehran. Advances in Cognitive Sciences. 2008;10(2):29-37.

21 Musavi M, Hemmati Maslakpak M, Sheikhi S, Sheikhi N. the effect of reminiscence group therapy on the depression of the elderlies in nursing homes of Urmia. Nursing and Midwifery Journal.2013;11(7):507-15.

22 Taheri Tanjani P, Azadbakht M. PsychoMetric Properties of the Persian version of the activities of daily living scale and instrumental activiities of daily living scale in elderly. journal of mazandaran university of medical sciences. 2016;25(132).

23 Seyed Reza Eshaghi, Ziba Farajzadegan, Anahita Babak. Healty lifestyle assessment questionnaire in elderly: translation, reliability and validity. Payesh (Health Monitor) Journal. 2010;9(1):91-9.

24 Alireza A, Asghar A. The rate of modernity and the tendency to superstitions in the city of Yazd. Journal of Sociology of Superstitions. 2009;41:59-100.

25 Castro, S. S. Leite, C. F. Translation and cross-cultural adaptation of the world health organization disability assessment schedule WHODAS 2.0. Fisioterapia e Pesquisa, 24(4):385-391. doi: 10.1590/18092950/17118724042017.

26 Delshad Noughabi A, Noor Mohammadi Z, Hamidi M, Khalili F. The relationship between loneliness and healthy lifestyle in elderly in Gonabad city in 2017. Daneshvar Medicine. 2022;30(1):36-45. doi: 10.22070/DANESHMED.2022.12790.0.

27 Zarei F, Ghanbari Moghaddam A, Aboozade K, Mohammadi M. Lifestyle in the elderly People of Sabzevar and its related factors in 2017. Journal of Geriatric Nursing. 2018;4(3):33-42.

28 Ershadi Sarabi R, ghassabichorsi m, moslemizadeh b. Assessment of Educational Needs of Elderly People in Sirjan about Healthy Lifestyle, 2018-2019. Journal of Gerontology. 2020;5(1):68-78.

29 Seo HM, Hah YS. A study of factors influencing on health promoting lifestyle in the elderly application of Pender's health promotion model. Taehan Kanho Hakhoe Chi. 2004;34(7):1288-97. doi: 10.4040/jkan.2004.34.7.1288.

30 BehPajooh A, Soleymani S. The Relationship Between Sleep Quality and Depression in Older People Living in 3 Districts of Tehran, Iran. Salmand: Iranian Journal of Ageing. 2016;11(1):72-9. doi: 10.21859/sija-110172.

31 Rezaiyan A, Edrisi A. Impact of Virtual Social Networks on the Lifestyle of the Fourth Generation (the Eighties) - Emphasizing Telegram, Instagram and Twitter. Intercultural studies quarterly. 2018;13(34):9-35. doi: 10.22082/CR2021.528508.2160.

32 Alizadeh siuki h, nezam a, roostaie m, abdolahi m. assess the lifestyle of the elderly health center in Torbat –e- Heydaryieh City. Journal of Student Research Committee of Torbat Heydariyeh University of Medical Sciences. 2019;1(2):58-69.

33 Jabbari Touran T, Amirahmadi R, Khoshfar G. Social and Cultural Capital's Effect on Lifestyle of Elderly Women Covered by the State Welfare Organization (Case Study: Golestan Province). Journal of Iranian Social Development Studies. 2021;13(3):317-31.

34 Shamsadini Lori A, Pourmohamadi K, Keshtkaran V, Ahmadi Kashkoli S, Pourahmadi Mr. A Survey on the Level of the Elderly Lifestyle in Shiraz. Health_Based Research. 2015;1(1):75-84.

35 Fathi E. The Phenomenon of Population Aging in Iran. Iranian Journal of Official Statistics Studies. 2020;30(2):387. doi: 20.1001.1.25385798.1398.30.2.7.6.

36 Asadi Brojeni S, Ilali ES, Taraghi Z, Mousavinasab N. Lifestyle and its related factors in elderly. Journal of nursing and midwifery sciences. 2019;6(1):32-7. doi: 10.4103/JNMS.JNMS_39_18.

37 Dehghani H, Ebrahimi H. Studying the Feeling of Social and Psychological Security with a Tendency toward Superstition (Case Study: Isfahan University Students). strategic research on social problems in Iran. 2020;8(4). doi: 10.22108/SRSPI.2020.118235.1435.

38 Afshani S, Sheikhalishahi Z. Socio-cultural factors related to the tendency toward superstition among women living in the suburbs of Yazd. Women's Studies Sociological and Psychological. 2021;19(2):51-92. doi: 10.22051/JWSPS.2021.34719.237.

39 Ramezani K. A Comparative Study of Superstition Implications In the attitude towards the public and academic education of Kohgiluyeh and Boyerahmad province. jame pazhuhiy farhangi. 2019;9(4).