Can Social Support Predict Health-Promoting Behaviors among Community-Dwelling Older Adults?

Abstract

Introduction: Because health-promoting behavior is one of the major determinants of health, this study was conducted to determine whether social support predicts health-promoting behaviors in elderly people living in Tabriz, Iran. Methods: In this descriptive and cross-sectional study, 180 elderly people referring to the health complexes in Tabriz, Iran, were selected using a random cluster sampling method. Data were collected using demographic questionnaires, the Health-Promoting Lifestyle Profile II, and the Multidimensional Perceived Social Support Scale. Data were analyzed using stepwise multiple linear regression models. Results: The mean age of 180 elderly people who participated in the study was 66.9 ± 5.74 years. The results of multiple regression indicated that education (B = 8.98, P < 0.001) and perceived social support (B = 0.45, P = 0.014) explained 29% changes in health-promoting behaviors among the elderly. Conclusion: Given the predictive role of perceived social support in health-promoting behaviors, establishing or strengthening supportive social networks seems to be one of the effective factors in promoting the elderly’s health.

Keywords: Aging, health behavior, social support

Introduction

The population of the world is rapidly aging as the number of seniors aging 60 years and over has doubled in the past three decades. The growth rate of the elderly population in developing countries has been higher than in developed countries. Currently, more than half of the world’s elderly population lives in developing countries. In Iran, there have been major and significant changes in the age structure of the population because of the decline in fertility rate and an increase in life expectancy. According to the latest census conducted in 2016, seniors make up 9.3% of the total population. Obviously, the aging process is usually associated with age-related health conditions. Most of these conditions are chronic and imposing significant costs on the individual and the health systems. Among the determinant factors affecting health, health-promoting behaviors have been identified as a basic way of preventing chronic diseases and reducing health-care costs. Various studies have reported the association between health-promoting behaviors and increased life expectancy, improved quality of life, reduced incidence and severity of illnesses, disabilities, and health-care costs. Davies’s study that explains the importance of lifestyles in promoting healthy aging points to the direct relationship between health-promoting behaviors and quality of life, health of the elderly, and the reduction in morbidity and mortality rates. Therefore, improvement of health-promoting behaviors can be considered as the main strategy for maintaining and promoting the health of the elderly.

Various factors contribute to the health-promoting behaviors of the elderly. The results of the previous studies showed that sociodemographic factors such as age, gender, marital status, financial status, sleep quality, leisure time, educational level, physical activity, physical and sociomental health, and social support were associated with health-promoting behaviors of the elderly. Social support is considered as one of the important factors affecting successful aging that directly is related to the behavior of the elderly. In fact, social support gives a sense of belonging that reflects acceptance, and this ultimately allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

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influences the dimensions of an individual’s behavior. Social support means receiving help in the difficult conditions and emotional needs.\cite{19} Social support is important in the health of individuals in the society, and its absence leads to social isolation and physical or mental diseases.\cite{19} Helgeson believed that perceived social support can lead to increase health behaviors and then improved quality of life in older people.\cite{20}

Given the population pyramid changes and the increasing health burden of older people, the importance of how health-promoting behaviors affect the health of the elderly has become more evident. It is expected that by identifying the predictive factors of these behaviors, we can take steps to provide appropriate strategies to improve the health of the elderly. Therefore, research in this area is a national priority.\cite{16,21-23} According to our best knowledge, there is limited studies on social support as a predictive factor of health-promoting behaviors among Iranian elderly. Therefore, this study aimed to determine the predictive role of demographic characteristics and social support on health-promoting behaviors of the elderly residing in Tabriz, Iran.

**Methods**

**Study design and participants**

This descriptive cross-sectional study was carried out on 180 elderly people aged 60 years and over referring to the health complexes in Tabriz, Iran. Two-stage cluster sampling method was performed from ten health complexes of the ten districts in Tabriz, and then randomly from each cluster, 18 elderly people (180 elderly people in total) were included in the study. Taking into account 95% confidence level, 90% test power, and the correlation coefficient between perceived social support and health-promoting behaviors in the elderly ($r = 0.25$), the sufficient sample size was determined by 180 elderly people.\cite{24}

Inclusion criteria included aging of 60 years and over, the ability to communicate verbally, the absence of mental disorders, and the willingness to participate in the study. The informed and written consent form was obtained from the elderly in order to adhere to ethical principles.

**Measures**

Data were collected using a demographic checklist, the Health-Promoting Lifestyle Profile II (HPLP-II), and the Multidimensional Perceived Social Support Scale through a face-to-face interview with the elderly by the researcher.

The demographic checklist included age, gender, marital status, educational level, occupation, source of income, location, history of physical diseases, participation in health education programs, use of media health education programs, and insurance coverage.

The HPLP-II consisted of six subscales of nutrition, physical activity, health responsibility, stress management, interpersonal relationships, and spiritual growth. It has 52 four-point Likert items rated from never (1), sometimes (2), usually (3), and always (4). Scores range from 52 to 208 which are then classified into three levels: undesirable (52–104), moderate (155–156), and desirable (157–208). The psychometric properties of the Persian version of the questionnaire were confirmed by Mohammadi Zeidi et al. through construct validity using the exploratory factor analysis and through reliability using internal consistency (Cronbach’s $\alpha = 0.82$).\cite{25}

The Multidimensional Perceived Social Support Scale was developed by Zimet et al., and it was formulated with 12 questions on 3 subscales of family, friends, and significant individuals.\cite{26} Each item was rated using a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7), with a total score ranging between 12 and 84. Higher scores indicate better social support status of the elderly. The validity and reliability of this scale were supported by factor analysis and Cronbach’s alpha test.\cite{27} Psychometric evaluation of the Persian version of the questionnaire was recently confirmed by Bagherian-Sararoudi et al., who applied exploratory factor analysis to confirm its construct validity, and used Cronbach’s alpha to support its reliability ($\alpha = 0.92$ for the whole questionnaire).\cite{28}

**Statistical analysis**

Data analyses were performed using parametric tests by the SPSS version 16 (SPSS, Inc., Chicago, IL). Parametric tests were used because normal distributions of the data were supported by the Kolmogorov–Smirnov test. Multiple linear regression analysis using a stepwise method was carried out to determine the predictive role of demographic variables and perceived social support in health-promoting behaviors.

**Ethical consideration**

This study was approved by the Ethics Committee of Qazvin University of Medical Sciences (IR.QUMS.REC.1396.111). Before obtaining informed consent form, elderly participants were informed of the study purposes and procedure. All the participants were assured that their participation is voluntary and their information will be kept confidentially.

**Results**

The mean age of 180 elderly people who participated in the study was $66.9 \pm 5.74$ years. Most of them were female (60.6%) and married (78.9%) with insurance coverage (92.2%) and lived with their spouse (52.8%). The majority of them had a personal home (91.1%) and about one-third of them were illiterate and only 16% had an academic education. Over 60% of the elderly had at least one underlying disease, which in most cases it was heart disease (40%). Over half of the elderly reported experience of participating in health education programs (52.8%) and using media health promotion programs (61.7%) [Table 1].
This study aimed to determine the sociodemographic predictors of health-promoting behaviors in elderly people living in Tabriz, Iran. The results of the present study showed a moderate level of health-promoting behaviors among a sample of Iranian elderly which is in line with the results of some previous studies. However, empirical evidence has reported the low level of health-promoting behaviors in the elderly. This discrepancy may be related to the difference of instrument used and the source of the sample.

As one-unit increase in the social support score, the mean score of health-promoting behaviors increased 0.45 unit (B = 0.45, P < 0.014). There was also a significant relationship between educational level and health-promoting behaviors (B = 8.98, P < 0.001). Overall, the independent variables in the model predict nearly 29% of the changes in health-promoting behaviors among elderly people [Table 2].

### Discussion

A fast increase in the number of the elderly in the coming years emphasizes the need for planning to manage the issues of this population group. Health behaviors are essential for formulating and designing health and disease prevention and health promotion. This study aimed to determine the sociodemographic predictors of health-promoting behaviors in elderly people living in Tabriz, Iran.

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According to the results of the present study, among the subscales of health-promoting behaviors, responsibility for health had the highest level and stress management had the lowest level. However, Salahshoori et al. reported the subscale of “physical activity and nutrition” at the lowest level and “prevention” at the highest level. Rashidi and Bahrami also showed that the subscales of “physical activity, nutrition, stress management, and health responsibility” were undesirable. The reason for these contradictory results may be related to the source of the sample that was hospitalized elderly in the aforementioned studies.

In the present study, the education level was a predictor of health-promoting behaviors in the elderly. This is consistent with national and international studies which have reported similar findings. For instance, Mahmoudi et al. showed that elderly people with higher levels of education reported a better lifestyle. Elderly people who have achieved higher education may have greater access to health-related information resulting in good health literacy and then higher health-promoting behaviors. However, Mokadem failed to show a significant relationship between educational attainment and promoting behaviors. This inconsistent result may be related to the being illiterate of the majority of the participants in the study by Mokadem.

In the present study, elderly people with higher social support had higher health-promoting behaviors. This result is consistent with previous studies that have reported similar findings. Social support is one of the factors in reduction of psychological stress and enhancing the quality of life and well-being of the elderly. Similarly, Ahmed Mohammed found the relationship between perceived social support and the ability of the elderly to cope with stress. Giena also reported that family or relatives’ support had a prominent influence on elderly sense of well-being and then facilitating health-promoting behavior. Furthermore,
Soltani et al. observed the direct and significant relationship between perceived social support, daily activities, and health promotion of the elderly. In this regard, Rashedi et al. introduced social support as a determinant of health and believed that it has an important role in reducing anxiety among elderly people.

While this study offers preliminary insights into the importance of social support for health promotion behavior among elderly people, it is not without limitations. One limitation of the present study was the adoption of a convenience sampling procedure, which may limit the generalizability of the research findings. Moreover, the cross-sectional nature of the study limits the ability to determine any causal relationships among the constructs. Furthermore, it should be noted that the cross-sectional study and the exclusion of the elderly who were not able to leave home are the limitations of this study. Further studies need to be designed and implemented, in particular by involving the elderly present in different parts of the society (disabled people leaving the home and residents of the nursing homes).

**Conclusion**

In general, findings showed that social support and education level were predictive factors of health-promoting behaviors in elderly people. Therefore, increasing social support from family, friends, and/or the community is essential for improving health-promoting behavior of the elderly. Given the moderate level of social support of studied elderly people, it is necessary for health policymaking and planning to set up or strengthen social support networks for this group of people.

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**Conflicts of interest**

There are no conflicts of interest.

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**Table 2: Predictors for health-promoting behaviors among elderly people**

| Variable                  | B     | SD    | Minimum | Maximum | T      | P    |
|---------------------------|-------|-------|---------|---------|--------|------|
| Educational status        | 8/981 | 2/192 | 4/605   | 13/356  | 4/098  | 0/001|
| Perceived social support  | 0/451 | 0/178 | 0/096   | 0/806   | 2/538  | 0/014|

$R^2=0.545$, $R^2=0.297$. SD: Standard deviation.
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