

Review Paper

Systematic Review and Meta-analysis of Health Literacy in Iranian Older Adults



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ABSTRACT

Objectives Health Literacy is the capacity of individuals to obtain, interpret, and understand health information for appropriate decision making. Elderly self-care is a supportive strategy in many diseases that requires a high level of health literacy. The aim of this study was to determine the level of health literacy of Iranian elderly people based on scientific evidence.

Methods & Materials The search was carried out in international and regional scientific databases as well as Google Scholar, using the keywords "health literacy," "aging", and "Iran" in Persian and English, until 2018 October. Totally 321 titles were retrieved. After screening, the full text of 13 articles on the health literacy of Iranian older adults was examined. Finally, the information of 6 articles which was qualitatively appropriate and relevant to the criteria for entering the study, were included in the meta-analysis. Meta-analysis was performed by using STATA software.

Results The mean score of health literacy in the elderly is 45.8 and the estimated 95% confidence interval is 36.05 to 55.55. Based on the results of repeated meta-analysis in subgroups (based on gender-disaggregated data), the average health literacy score in male population is higher than that of women (57.24 vs 44.28).

Conclusion The results of this study showed that the Iranian older adults have a relatively low level of health literacy. Considering the importance of health literacy and its impact on the quality of life of this population, Planning and effective interventions to improve the health literacy of the Iranian elderly are needed.

Extended Abstract

1. Introduction

Self-care and accountability of the elderly against various diseases require an acceptable level of health literacy [1]. Health literacy is defined as the degree to which individuals have the capacity to acquire, interpret, and understand health information and services that are necessary for appropriate decision making [2]. In a report, the World

Health Organization introduced health literacy as one of the biggest determinants of health and advised countries around the world to monitor and coordinate strategic activities to promote health literacy in their community [3].

The population of the elderly in Iran is increasing [4]. Elderly people with poor health literacy are more likely to develop chronic illnesses, to see a doctor, and to need more emergency care [5]. They are at a lower level of health, have a misunderstanding of health information, and seek medical help when their problem has reached a critical state

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[6]. Inadequate health literacy is associated with inappropriate use of medications, failure to follow a doctor's instructions, and prolonged illness [7].

In Iranian society, several studies have been conducted to assess the level of health literacy of the elderly and its determinants. Considering that these studies were each conducted in a geographical area and on a limited population of Iran's elderly people, a systematic search and preparation of a more accurate report using meta-analysis of available data seemed necessary. It is obvious that by summarizing the obtained information, a better basis is provided for the knowledge of experts and decision makers in the field of aging so that they can decide on determining the health level and promoting it in such a way that the elderly can enjoy a better quality of life. This study aimed to retrieve and summarize the previous studies and was conducted in order to more accurately assess the level of health literacy of Iranian elderly in the form of a systematic review and meta-analysis.

2. Methods & Materials

According to the registered protocol of this study with the number CRD42018098934 on the PROSPERO website, in the first stage, the search and retrieval of articles and studies related to the health literacy of the elderly in Iran was performed. PubMed (Medline), Science Direct, Web of Science, ProQuest and Scopus databases, as well as three Persian language databases named SID.ir, Irandoc.ir, and Magiran.ir were searched by the scientific search engines scholar.google.com and Elmnet.ir (until October 2018).

The keywords "health literacy, HL", "Iran", "older adults", "elderly", "aged", and "senior, aging" were searched in both Persian and English to retrieve articles. Search strategy, screening and data selection were performed according to PRISMA criteria. Theses and abstracts of conference papers that could not be accessed in full were excluded.

In the next step, after checking duplicate contents, the titles and abstracts of the retrieved studies were independently reviewed by two researchers so that only studies that met the inclusion criteria were identified and entered into the study. In case of any disagreement, a final agreement was reached with the participation and opinion of a third party. Then, the full text of all studies that met the inclusion criteria was retrieved. If in one study the level of health literacy of the elderly was not expressed in numbers, that article was excluded from the study. Regarding the age range of participants, if the title, abstract, implementation method or study objectives explicitly referred to the elderly group as the target group, the article was included in the study.

Evaluation and confirmation of the quality of the studies were performed using the STORB checklist. Then, the data including the studied city, survey tool, study type, number of samples, average health literacy in general and also by gender (if there was a report) were extracted from selected articles and recorded in Excel software. STATA-11 software was used for meta-analysis. To examine the publication bias, a funnel diagram was drawn based on the data, taking into account the sex variable.

To check the heterogeneity, I-square index was used (values above 50 heterogeneities were considered). Data from each of the male and female population groups, if available, were entered separately in the main meta-analysis and subgroup analysis process. The meta-analysis was performed using the fixed effects model and a separate forest plot was drawn for each analysis.

3. Results

After reviewing the retrieved articles and evaluating the quality of the articles, 6 articles were meta-analyzed. These articles were published between 2012 and 2018, and the research method was cross-sectional. The sample size in these studies was 1655 people whose data were analyzed.

The "Test of Functional Health Literacy in Adults" (TOFHLA) was used to measure health literacy in all studies. Only one study used the Short TOFHLA (S-TOFHLA) tool. The mean scores of health literacy in each of the studies and also the pooled mean scores with the CI of 95% in the elderly population of Iran can be seen in the forest plots (Figure 1).

Total mean score of health literacy was 45.8, and the 95% confidence interval was estimated between 36.05 and 55.55. Based on the results of repeated meta-analysis in the subgroups, it was observed that the average score of health literacy in the population of elderly men was higher than women (57.24 vs. 44.28).

4. Conclusion

The results of this study showed that Iranian elderly have relatively low health literacy and due to the importance of health literacy and its impact on various indicators of the elderly lives, there is a need for effective planning and interventions to promote health literacy in the elderly. Limited health literacy is one of the health-related challenges and a major health concern for older people, as they often need adequate health information to maintain and improve their health.

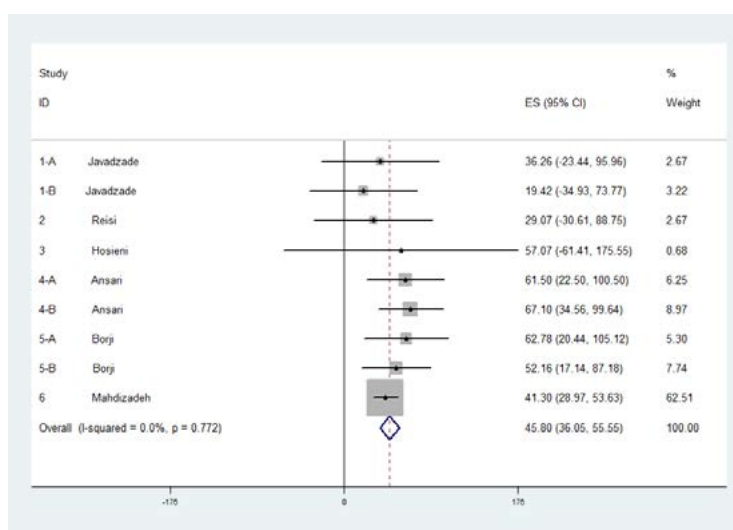


Figure 1. Forest plot of the means of health literacy scores

According to the results of the present study, the health literacy of elderly women is lower than that of men, and therefore it seems that interventions to increase the health literacy of elderly women is a priority.

Our country is going to face an increase in the elderly population in the coming years, and therefore health literacy can be effective in improving the quality of life of the elderly, controlling and self-management of the disease in them, reducing referrals to health centers and reducing health system costs. Therefore, it is inevitable to pay attention to issues that affect the health literacy of the elderly. Our suggestion to specialists and researchers in the field of aging is that in their future research on the effectiveness of methods and programs related to promoting health literacy in the elderly community, they pay attention to issues such as culture building and production of comprehensible educational materials.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Ethics Committee of Semnan University of Medical Sciences (IR.SE-MUMS.REC.1397.045).

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Authors' contributions

All authors were equally contributed in preparing this article.

Conflicts of interest

The authors declared no conflict of interest.

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