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Research Article

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Quality of life of Iranian patients with stroke based on different provinces: A systematic review and meta-analysis

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Abstract

Objective: The aim of this systematic review and meta-analysis is to evaluate the Quality of life of Iranian patients with stroke based on different provinces

Methods: Methods used for systematic revision in accord with explained instruction in the PRISMA checklist were established. Cross-sectional studies, case-control, and cohort methods were applied in this study, however, case series, letter to editors, case reports, clinical trials, study protocols, systematic review, and narrative review were not applied to it.

Results: Studied was applied to 263 patients. Among 5 studies, 2 studies were from Tehran and other studies were from Isfahan ,Maraghe and shiraz respectively. In terms of tools used in this study, among 5 studies, 3 made by SF-36 and 2 made by SSQOL and SIS-16 .

Conclusion: Stroke patients' quality of life reduce to a significant level, since these patients are highly dependent on the others for doing their daily activities. The studies have indicated that there is a close relationship between disability and quality of life; the more disable the patient is, the lower his/her quality of life will be.

Keywords: Quality of life , stroke, Iran

Introduction

Injury to the brain cells as a stroke can bring about disorders in physical and mental activities (1). These physical and mental disorders have significant effects on the sufferer's life (2).The brain areas that are either directly or indirectly damaged by blood clots are commonly the areas in charge of controlling emotions, organized thinking, and physical activities in people's everyday life activities (3). Thus, damages to these areas are likely to result in an individual's reduced functional progress (4).

In recent years, in medical and nursing studies, the concept of "quality of life" has been recognized as a significant index for evaluating personal health, making decisions and judgments regarding the entire health of the society, and finding the main problems in different aspects of people's life especially patients suffering from chronic diseases (5-9).

Stroke is one of the neurological disorders changing the function of one organ or the physical understanding of body conditions (10). According to the statistics, stroke is the third leading cause of death in developed countries. Thus, it is of high significance (11).

Stroke disables humans and affects their professional status as well. Moreover,in terms of economy, stroke can put the society at risk. Nowadays, given the developments existing in early diagnosis and treatment, we are dealing with more patients than the past (12). Therefore, serious attempts are required to be made toward treating, caring, andreturningthese patients to their previous physical, mental, and social status.

Materials and Methods

Eligibility criteria

Methods used for systematic revision in accord with explained instruction in the PRISMA checklist were established. Cross-sectional studies, case-control, and cohort methods were applied in this study, however, case series, letter to editors, case reports, clinical trials, study protocols, systematic review, and narrative review were not applied to it. Output: the main aim of this study was heightening the quality of life. The output was collected as it has been reported. In the sampling and sample size methods, all observational studies with any design in sampling and survey, in the systematic review were brought. The minimum size required was bigger than or equal to 25 patients**.**

Search Strategy

The researches for founding related studies since the formation of the database till 2018 (without time limit) in English and Persian were done by two researchers in international databases (Web of Science, PubMed, Scopus, and Google Scholar) and national databases (Magiran, SID). For preventing the literature saturation, considered studies source list, and relevant reviews found in researches were studied. Particular strategies were made by Health Science Librarian with a specialty in the systematic review search using the MESH clauses and free expression clauses according to the PRESS standards. After the finalizing of the MEDLINE strategy, it was adjusted for searching in other databases. In the same way, in order to find recent systematic reviews or those that are on the PROSPERO was searched. Keywords used in search strategy were: Life Quality, Health-Related Quality of Life, Health-Related Quality of life, Quality of Life and Iran which commingled with boolean operators like AND, OR, and NOT**.**

Study Selection and Data Extraction

Two researchers with considering qualifying conditions studied the titles and abstracts independently. After removing recurrent studies, in accord with qualifying conditions, the full text of studies were examined and information was asked from authors as needed. General information (first author, province, publication year), and study specifications (sampling method, questionnaire design, information collection method, conditions, sample size, and risk of bias), and output scales (the quality of life) were collected, too.

Quality Assessment

Hoy et al tool was used for assessment of methodological quality and risk of bias in any observational study. This 10 items tool, for assessment of studies quality in two dimensions: external validation (assesses 1 to 4 items, target population, sampling frame, and the minimum participation bias), and internal validation (it assesses 5 to 9 items in information collection, define the problem, study tool, and data collection type and item 10 controls bias concerning data analysis). Risk of bias was assessed independently by two researchers. Differences were resolved with consensus**.**

Data Collection

After the systematic review, all eligible studies were collected. Data was mixed with Forest Plot chart. Random effects model with the overall quality of life were examined. Earlier studies disproportion was checked by I test. Meta-analysis was done by the STATA 14 software.

Results

Study Selection

Generally, 176 articles were achieved from different databases with the early search. Among 176 non-repetitive studies in the process of examining the title and abstract, 162 studies excluded with irrelevant titles. Among 14 studied, 5 were qualified. From 9 excluded studied 3 were review and 1 were Letter to editor and 5 didn't contain the minimum necessary for being included in the study**.**

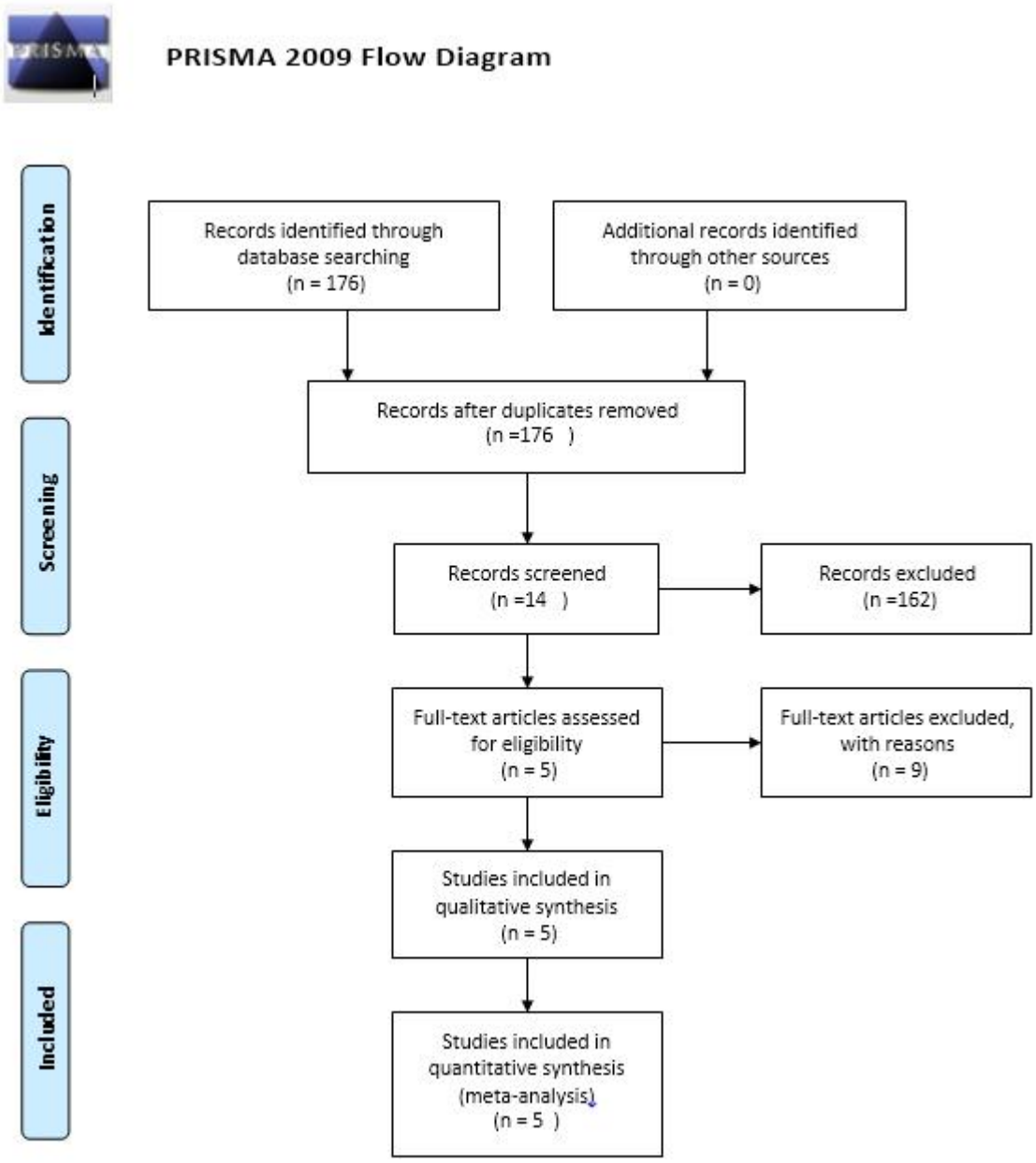

Fig 1. PRISMA flow diagram

Significance of the study

Studied was applied to 263 patients. Among 5 studies, 2 studies were from Tehran and other studies were from Isfahan,Maraghe and shirazrespectively. In terms of tools used in this study, among 5 studies, 3 made by SF-36 and 2 made by SSQOL and SIS-16 .

Table 1:Characteristics of final included studies

First author	Publication year	participants	Questioner	Mean and SD of quality of life	City or province
Haghgoo[19]	2010	40	SF-36	38.75±25.50	Tehran
Heydarzade[20]	2009	106	Sf-36	155.8±33.6	Maraghe
Amini[21]	2012	15	SF-36	43.68±11.12	Tehran
Azimi[22]	2013	30	SSQOL	136.1±34.8	Isfahan
Salarimehr[23]	2018	72	SIS-16	73.66±29.18	Shiraz

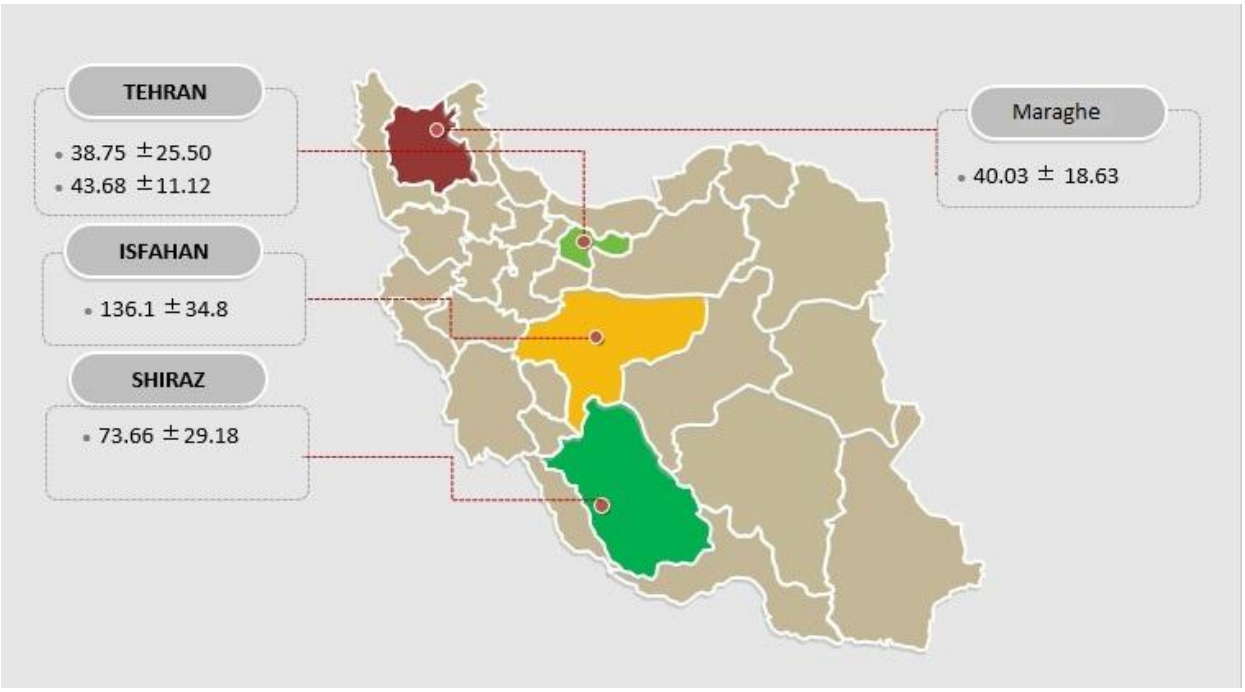

Fig 2. Quality of life of Iranian patients with stroke based on different provinces

Most common sampling methods are easy sampling (n=5) and More than 80 % of the risk of bias studies have a shortcoming. Because of low quality, a study was excluded. In 5 studies, the most common data collection method was interview and self-evaluation. The most common place for studies was a hospital (n=5), (table 1)

Discussion

This systematic review was made with the aim of determining the Quality of life of Iranian patients with stroke based on different provinces, and by using of data set that has belonged to studies until October 2018. 5 studied out of 263 patients including those were in the last stage, too. Quality of life is a complicated widespread concept that is identified with the person's satisfaction and happiness (13). An individual who is satisfied with his/her own life spends more energy on taking care of himself/herself; this makes him/her healthier, and he/she will have a better quality of life, and this cycle will keep moving (14). Quality of life is a multidimensional concept including different physical, mental, and social aspects as well as his/her personal beliefs. The World Health Organization has defined the quality of life as the person's understanding of life, values, goals, and interests. In recent years, the measurement of quality of life and its improvement have been introduced as the main goals of health systems (15). By measuring the quality of life, the patients' reactions against different diseases can be evaluated. Moreover, through investigating the patients' health status and measuring their quality of life, one can determine the negative effects of disease and the effects of treatment on the quality of life (16).Identifying the factors affecting the reduced quality of life will help the early diagnosis of more vulnerable patients;the patients' quality of life is improved and promoted by modifying these factors (17). The studies conducted on stroke patients indicate that these patientsdo not have a good quality of life; even in patients with minor strokes, the quality of life is very low. Numerous factors affect the patients' quality of life (18). These factors include the patient's age, severity of lesion, degree of disability arising from the disease, lack of social support, cognitive disorders, and other health problems.Stroke patients' quality of life reduce to a significant level,since these patients are highly dependent on the others for doing their daily activities. The studies have indicated that there is a close relationship between disability and quality of life; the more disable the patient is, the lower his/her quality of life will be.

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