



## Measurement of Socioeconomic Status in Iran: A Systematic Review

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### Authors' contributions

*This work was carried out in collaboration between both authors. Authors MM and HS designed the study. Author MM wrote the protocol and supervised the work. Author HS managed the analyses of the study. Author MM wrote the first draft of the manuscript. Author MM managed the literature searches and edited the manuscript. Both authors read and approved the final manuscript.*

### Article Information

DOI: 10.9734/AJAEES/2015/16756

#### Editor(s):

(1) Angel Paniagua Mazorra, Centre for Human and Social Sciences, Spanish Council for Scientific Research, Spain.

#### Reviewers:

(1) Ibtissam Sabbah, Faculty of Public Health V, Lebanese University, Lebanon.

(2) Rejani T.G, Institute of Behavioural Sciences, Gujarat Forensic Sciences University, India.

Complete Peer review History: <http://www.sciencedomain.org/review-history.php?id=1057&id=25&aid=8510>

Review Article

Received 12<sup>th</sup> February 2015  
Accepted 7<sup>th</sup> March 2015  
Published 18<sup>th</sup> March 2015

### ABSTRACT

**Aims:** The socioeconomic status is considered to be a multi-dimensional indicator, and there is no definite standard to measure it. The aim of the present study is to perform a systematic review to evaluate whether there are the same indicators for measuring socioeconomic status in the published articles in the medical sociology in Iran.

**Study Design:** Systematic Review.

**Methodology:** We searched the English language literature on socioeconomic status in health researches in Iran between 1990 and October 2014: MEDLINE using PubMed, Scopus, Web of Science, and Science Direct. In addition, we searched these Iranian electronic databases: Iranian Scientific Information Database (SID) and IranMedex.

**Results:** Our finding indicated the three factors – education, occupation, and income – were the dominant indicators for measuring socioeconomic status in both English and Persian articles. Only four studies (English articles) had composite measure and made a standard indicator in their

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studies. Eleven studies had no clear categories for measuring socioeconomic indicators.

**Conclusion:** We encountered various definitions and indicators, mostly because of poor quality of the studies with diversity in methods and populations.

*Keywords: Socioeconomic status; classification; indicator; health research; systematic review; health disparities.*

## 1. INTRODUCTION

The socioeconomic status is important and determines health risk factors in every society. It also has effect on the actual access and utilization of various available health facilities [1]. The socioeconomic status (SES) is considered to be a complicated and multi-dimensional indicator, and there is no definite standard to measure it. The first constituent of the socioeconomic status includes the social class of people, which indicates whether a person has an acceptable social position or not. Generally, education is considered as a representative of a social class of people. The educational level is measured with different scales, such as binary scale (literate / illiterate), numeric scale (years of education), and highest educational level (categorical). The other aspects of the social class of people are much more complex to be approach [2]. The second constituent of SES covers affluence and proceeds of people; however, this component has no clear definition. The indicators, such as income, property, and possessions of the individual or the household, might also be measured [3]. SES was identified by Mueller and Parcel in 1981 as an individual's or group's within a hierarchal social structure based on their access to wealth, prestige, and power [4].

The members of society vary in the way of their usual access to jobs, assets, income, and power. Despite the fact that the impacts of SES on health are well known, the measurement of SES in health studies has several methodological and analytical issues [2]. One of them is lack of accuracy and reliability of measures. In addition, gathering individual SES data (e.g., high proportion of non-response for income variables) and categorizing of children, women, the retired, and unemployed can be conducted with difficulties. Finally, Weak correlation between individual SES measure among some groups (i.e., income, education, and occupation) leads to the inaccurate results.

Regarding to the impact of factors on the health status and health disparities, socioeconomic

status implicates as a frequent contributor in some population [5]. To put it simply, differences in health status of individuals with different socioeconomic status influence on the health. For example, a low socioeconomic status raises cardiovascular risk of US population, in European countries cancer mainly associated with low level of socioeconomic status, however [6].

Various studies have defined several indicators for measuring socioeconomic status. Selecting the best variables and approaches for assessing SES should be dependent on consideration of the relevance of the measurements for the target groups and the outcomes under study. There is no doubt that there are several factors for defining the socioeconomic status, which is variable from one study to another [7-9]. Even though the number of studies has explained about socioeconomic status indicators, no systematic review was available in the literature of medical sociology to signify how various it is and which indicators are applicable. The systematic Review studies are considered as the strongest and the most valid type of medical studies [10]. For the considerable amount of data we encounter, one of the best methods for policy makers is systematic review [11].

The aim of the present study is to perform a systematic review to evaluate whether there are the same indicators for measuring socioeconomic status in the published articles in the medical sociology in Iran.

## 2. METHODOLOGY

### 2.1 Data Sources / Search Strategy

In order to review the English language literature on socioeconomic status in health researches in Iran between 1990 and December 2014, we searched the following English electronic databases: MEDLINE using PubMed, Scopus, Web of Science, and Science Direct. In addition, we searched these Iranian electronic databases

with Persian language: Iranian Scientific Information Database (SID), and IranMedex. The searches of articles were undertaken between Dec30 and 31, 2014. The Authors also scrutinized reference lists of included articles (no articles were added). For additional articles, we conducted the supplementary search in Google and Google scholar(no articles were added).

## 2.2 Search Terms and Strategy

We searched these English terms (MESH terms) and their corresponding Persian equivalents: "Socioeconomic Status", "Status, Socioeconomic", "Socioeconomic Factor", "Factors, and Socioeconomic", and "Factor, Socioeconomic". Each of these words was combined with "OR" and then combined, using "AND", with Iran OR Iranian OR Farsi OR Persian.

## 2.3 Inclusion / Exclusion Criteria

The authors considered all types of original studies (on adults and children), i.e., clinical trials, longitudinal, cohort, case-control, ecology, systematic review, and cross-sectional studies. Letters, reports, conference papers, organizational reports, opinions, or editorial papers were excluded. All studies addressed socioeconomic status whether it was the main subject or not. The studies did not mention clear socioeconomic definitions and categories were excluded.

## 2.4 Selection, Reading, and Information Extraction

In the next step, all citations that reported the socioeconomic status were reviewed. One author independently was selected and reviewed the articles by following these stages; inclusion and exclusion criteria were assessed both in reading the titles and the abstracts of search results. The author read to determine the final articles, and the duplicated articles were eliminated. After that, the data extraction tables were completed for each article using these characteristics: sample size, unit of observations, study design / measurement tool, category of socioeconomic status, definitions of socioeconomic measures, first author, year, and also language. Then, we found all full-texts of the articles selected, and the exclusion criteria were also applied to the full-texts.

## 3. RESULTS AND DISCUSSION

### 3.1 Search Results

The database search identified 309 articles in English and Persian. Primarily, 257 studies were identified in English and Persian biomedical databases respectively after eliminating the duplicated articles (Fig. 1). In the next step, of the 249 studies, 180 were of no relevance to the current review according to their abstracts and titles. In the full text evaluation step, 25 studies did not have distinct socioeconomic definitions and categories; they were omitted. Finally, 46 articles that had the criteria of the study were selected.

### 3.2 Characteristics of Included Studies

The time restricted was from 1990 to 2014. Four studies (8.7%) were written in Persian and 42 (91.30%) were in English. Forty three study designs (93.48%) were cross-sectional, and 6.52% of them were of other types, such as case-control and cohort studies. Most studies (39 out of 46) measured socioeconomic status by questionnaire, whereas 15.21% used interview. Adults and patients were the most frequent populations under observation (29 studies; 63.04%). Detailed characteristics of studies on types of socioeconomic status, their definitions, sample size, units of observation, study designs, first author, year and language are presented in Table 1.

### 3.3 Socioeconomic Status Definitions and Indicators

All studies provided their definitions for socioeconomic status, but they used different definitions and categories. The most common indicators of socioeconomic status were education (63.04%), Occupation (45.65%), and Income (28.26%) (Fig. 2).

#### 3.3.1 Composite measurements and scales

In order to construct socioeconomic status, four articles used composite measures (Table 2). One article used principal component analysis with three variables: women's occupation, her husband's occupation, and family's income. Then, persons were categorized into low, intermediate, and high socioeconomic statuses [12]. One other study used multiple correspondence analyses and created wealth

score based on the appliance ownership variables [13]. The third study used social class with the scores obtained from parents' occupational status, parents' educational level, and family's income [14] Another study, for

measuring socioeconomic status, computed parents' education and their occupational status using the four-factor Hollingshead index based on the Hollingshead criteria [15].

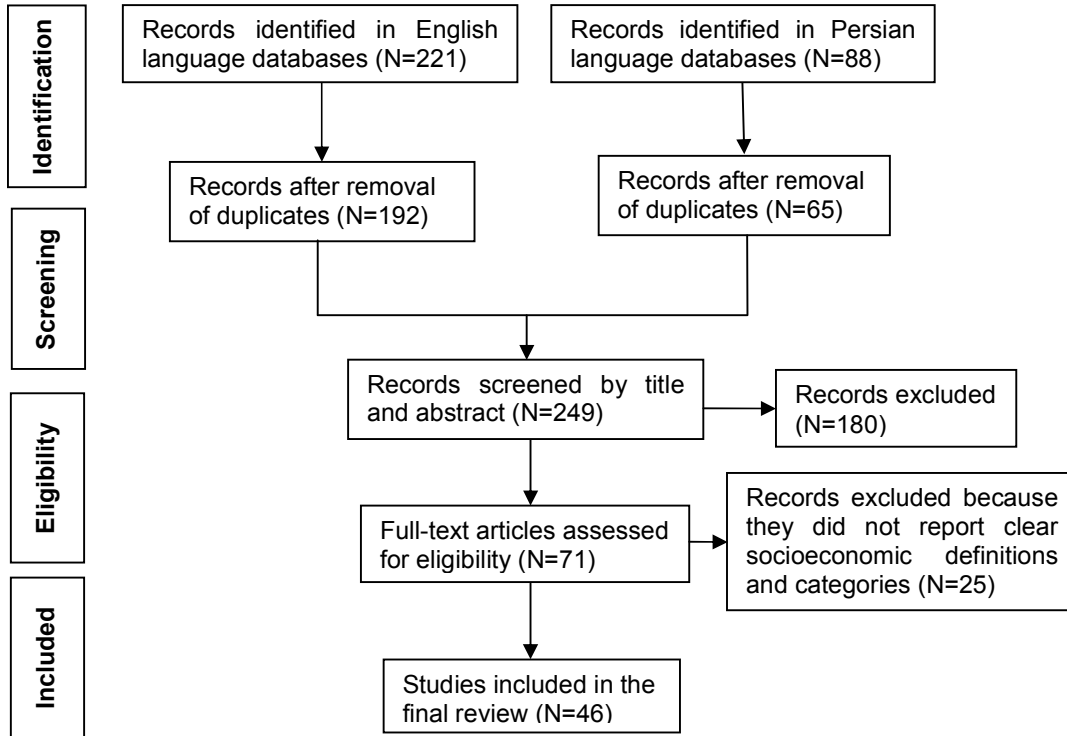


Fig. 1. Search process and number of eligible studies

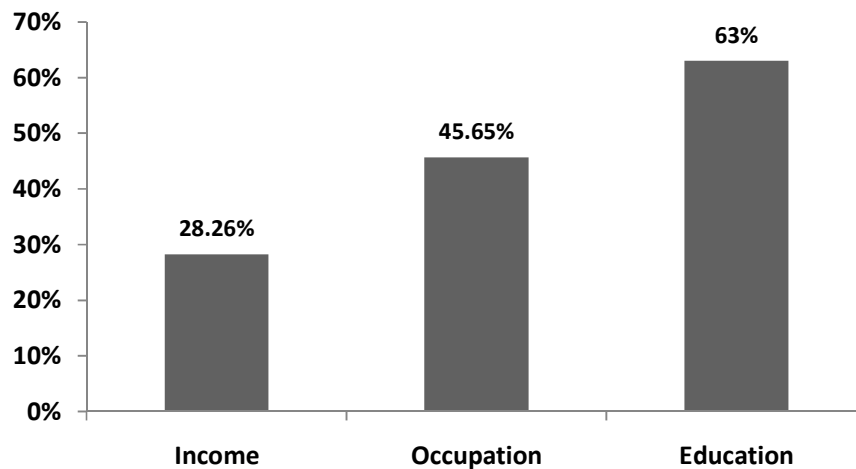


Fig. 2. Percentage of most common SES indicators

**Table 1. Detailed characteristics of studies on socioeconomic status, their definitions, sample sizes, units of observation, and study designs**

First author	Year	Units of observation	Sample size	Design/detecting method	Socioeconomic status definition	Language	Category of socioeconomic status
Yavari [52]	2007	Adults	606	Case control questionnaire	Education level, Employment status, Husband's job, Family size, Average monthly income	English (E)	Education level(Primary or lower, Middleschool, High school, College or University),Employment status(Housewife ,Employed),Husband's job(Labor, Clerk, Self-employed, Retired ,Unemployed)Family size(<= 3,6-4,>=7),Average monthly income(Low, Intermediate, High)
Samim [27]	2007	Adults	360	Cross sectional questionnaire	Education, Job	Persian (P)	Education(illiterate to PhD) Job(workers to professional)
Riahi [29]	2007	Adults	10944	Cross sectional questionnaire	Education, Income, Job	P	Low, Middle, high
Serajzadeh [31]	2007	Adults	5231	Cross sectional questionnaire	Education, Income, Father's job	P	Low, Middle, High
Kalaki [30]	2008	Adults	376	Cross sectional questionnaire	Job, Education, Income	E	Education(illiterate, Primary, Highschool, Diploma, Post diploma, Bachelor, Master) Job (Unemployment, Very low job position, Low job position, Middle job position, High job position, Very high job position,) Income(below 450,453-755,758-1059,1062-1364,1655 and moreUSD Dollar)* <sup>1</sup>
Montazeri [33]	2008	Adults	4163	Cross sectional questionnaires	Educational level	E	Educational level(No education, First level (1–5),Second level (6–9),Third level (10–12),Fourth level (>12))
Fazel [44]	2008	Children	1016	Cross sectional questionnaire	Income	P	Monthly income
Shahraki [35]	2008	Adults	888	Cross sectional interview	Educational level	E	Educational level (years)
Roohafza [16]	2009	Adults	17593	Cross sectional questionnaire	Occupation status, Educational level	E	Man's job (Manual, Non-manual worker, Unemployed, Retired) Woman's job(Manual workers, Housewives, Non manual Education level(Years of education)

<sup>1</sup>Income amount was converted to US dollars according to the currency of Central Bank of the Islamic Republic of Iran (March 2015)

First author	Year	Units of observation	Sample size	Design/detecting method	Socioeconomic status definition	Language	Category of socioeconomic status
Nourai [49]	Adults	2561	Cross sectional questionnaire		Parents education, Number of household	E	Parents' education(Illiterate, Primary school, Higher education) Number of household(2-4,5-7, more than 7)
Mirhosseini [14]	2009	High school students	622	Cross sectional questionnaire	Social class	E	Parents' occupational status, Parents' educational level, Family's income
Poorasel [26]	2009	Adults	1785	Cross sectional questionnaire	Parents' education, Father's occupation	E	High, Middle, Low
Esmaily [20]	2009	Adults	4977	Cross sectional questionnaire	Educational attainment, Occupational status	E	Administrative workers, Manual workers, House wife student, Retired, Unemployment) parent's education( Illiterate<12 years,= 12 years,>12 years)
Azimi-Nezhad [22]	2009	Adults	405	Cross sectional questionnaire	Educational attainment, Occupational category	E	Educational attainment(Illiterate, Under diploma, Diploma, University) Occupational category(Worker, Staff, Student, Housewife, Retired or disabled, Unemployed)
Shiva [56]	2009	Children	647	Cross sectional Structured questionnaire	Father's occupation	E	Father's occupation(Professionals, Manager, Government employee, Skilled workers, Labors, Farmhands, Unemployed)
Abbasi-moghadam [34]	2009	Adults	5600	Cross sectional questionnaire	Education	E	Education(Illiterate, Schooling, Highschool, Diploma, University)
Mohammadzadeh [48]	2010	Children	240	Cross sectional questionnaire	Economic status, Education level of parents, Living place	E	Economic status(Good, Medium, Low) Education level(Illiberal or primary, Middleschool, Diploma, Graduated, Post graduated and doctor) Living place(Rural, Urban)
Rezazadeh [54]	2010	Women	460	Cross sectional questionnaire	University degree, Employment status, Own house, Total family income	E	University degree(yes, no),Employment status(Employed, Unemployed),own house(yes, no)
Sohrabi [57]	2010	Adults	1436	Cross sectional questionnaire	Parent's highest education, Father's job, Having a personal room	E	Parent's highest education(No education, High school, Above high school diploma, Bachelor's degree or higher),Father's job(No job, Having a job,)Having a personal room (yes, no)

First author	Year	Units of observation	Sample size	Design/detecting method	Socioeconomic status definition	Language	Category of socioeconomic status
Ahmadian [45]	2010	Adults	400	Cross sectional questionnaire	Education level, Occupation, Monthly income, Insurance status	E	Education (No formal education ,Primary and secondary, Graduate) ,Occupation(Full time & Part Time Employee, Unemployed &Housewives)Income(High, Middle, Low) Insurance(Insured, Non-insured)
Shayeghi [37]	2010	Pupils	500	Cross sectional questionnaire	Parents' education	E	Parent's education(Uneducated, Primary, Guidance school, High school and upper)
Bahonar [28]	2011	Adults	12,514	Cross sectional questionnaire	Education, Occupation, Income	E	Education(Illiterate, Elementary, High school and university) Occupation(Government, Private sector and Unemployed) Income level (Iranian central bank for Iranian family)
Golozar [13]	2011	Adults	50044	Cohort study questionnaire	Wealth score	E	appliance ownership variables including :Personal car, vacuum cleaner, color TV
Donyavi [18]	2011	Patients	664	Cross sectional Interview	Education, Employment	E	Education(years =0,1-5,6-9,10-12 more 12) Employment(Housewife, Unemployed, Employed, Retired)
Razmi [32]	2011	adolescent	363	Cross sectional questionnaire	Parents' education	E	Father education(Graduate and above, Secondary school, Primary and middle school, Illiterate) Mother education(Secondary school, Primary and middle school, Illiterate)
Amanlou [21]	2011	Children	205	Cross sectional questionnaire	Education, Occupation	E	Father's occupation(Unskilled worker, Staff member, Self-employed, Employers/professional) Mother's occupation
Khalaj [51]	2011	Women	1378	Cross sectional questionnaire	Father's monthly income, Family residence, parents education	E	Father's monthly income low (99 Dollar or less), medium (100 - 165) or high (1655 or more more), Family residence(living in Tehran or not),Parent's education(Illiterate to university degree)
Gharipour [40]	2011	Adults	12600	Cross sectional questionnaire	Place of residence, Occupation, Education, Income	E	Place of Residence(Urban, Rural),Occupation(Public, Private, Housewife, Students, Retired),Education(0-5 year,6-12 year,>12 year)
Roohafza [53]	2011	Adults	9572	Cross sectional questionnaire	Place of residence, Educational level	E	Place of residence(urban, rural),Educational level(6-12 years,≥ 12 years)
Ahmadi [38]	2012	Patients	112	Cross sectional questionnaire	Place of living, Education, Economic status, Occupation	E	Place of living(Urban, Rural), Education(Illiterate, Primary school, University or higher), Economic status(Good, Fair, Weak),Occupation(Unemployed, Member of staff, Housewife, Workman, Business, Farmer)

First author	Year	Units of observation	Sample size	Design/detecting method	Socioeconomic status definition	Language	Category of socioeconomic status
Vahabi [17]	2012	Students	810	Cross sectional questionnaire	Parents' job, Parents' education	E	Father job(government, private, labor),Mothers' job(Employed, Housewife),Mother's education(Uneducated, Initial education, University),Father's education(Illiterate, Initial education, University)
Mahjoubi [19]	2012	Patients	96	Cross sectional questionnaire	Occupational status, Educational level	E	Occupational status (Full-time Job, Part-time Job, Retired, Unemployed),Educational level(Not a high school graduate, High school graduate, College graduate)
Esmaeil-zadeh [15]	2012	Children	766	Cross sectional questionnaire	Parental occupation, Education level	E	Four-factor Hollingshead index based on the Hollingshead criteria
Behzadnia [23]	2012	Adults	653	Cross sectional questionnaire	Parents educational level, Occupation,	E	Parents' educational level(Illiterate, Elementary level, Diploma or advanced diploma, Bachelor of Science or Academic Degree)
Taghavi [43]	2012	Children	600	Case control interview	Monthly salary	E	Monthly salary(Dollar) <250,250-400,401-550,>550
Shekarchi-zadeh [24]	2012	Patients	810	Cross sectional interview	Education status, Job status (in the last 3 months)	E	Education status(Illiterate, Elementary school, Highschool, University), Job status (Full time job, Unemployed, Student, Retired, Part time job, Homemaker)
Sehat [25]	2012	Adults	64200	Cross sectional questionnaire	Education, Job	E	Education(Illiterate,<Diploma, Diploma,>Diploma) Job(Employed, Unemployed, Retired, Student, Housewife)
Shahraki [36]	2012	Adults	811	Cross sectional interview	Education	E	Education(years=>12,≤12)
Davoudi-Monfared [46]	2012	Patients	520	Cross sectional questionnaire	Education, Occupation, Income, Health insurance status	E	Education(illiterate, Diploma and less, academic), Occupation(Employed, Unemployed, Retired, Housewife) Income(132 or less,165-331 more than 331 Dollar), Health insurance status (Yes, No)
Memar [41]	2012	Children	113	Cross sectional interview	education, Household income	E	Education (very low, low, medium, high), Household income (Poverty level <100%,100–200%,200–300%,300%>)
Bakhtiyari [47]	2013	Young adults	1782	Cross sectional questionnaire	Parental level of education, House space, House price, Having personal car,	E	Low ,Middle, Good, Excellent



First author	Year	Units of observation	Sample size	Design/detecting method	Socioeconomic status definition	Language	Category of socioeconomic status
					computer		
Ramim [39]	2013	Married women	35	Cross sectional questionnaire	Living place, Education, Occupation, Income	E	Education(Elementary, Lower than high school, Highschool, More than high school occupation(Housekeeper, employee),Income (30 or less,33-66 ,67-99, more than 100)
Ebrahimi [50]	2013	Pregnant women	308	Cross sectional questionnaire	Education, Income, Occupation, Household size	E	Husband's occupation(Government employee, Small business, Farmer, Unskilled worker, Unemployed),Employment status of women(Working, Housewife),Income(less than 99, 100- 198,202-298,301-397)
Abdolahi [12]	2013	Menopausal women	804	Cross sectional questionnaire	Women's occupation, Husband's occupation, Family's income	E	Low, Moderate, High
Eslami [42]	2013	Patients	347	Cross sectional questionnaire	Education, Annual income	E	Education(Illiterate/some informal education, Primary school/similar, Secondary/high school/similar, University/similar), Annual income(<48,48-72,72.1-96,>96 million Rials)
Shishegar [55]	2014	Pregnant women	210	Cross sectional questionnaire	Current marital status, Woman's occupation, Husband occupation, Family income, Place of residence, Number of people per household, Cost per square meter of house, Leisure and facilities	E	Occupation(Low class job, Medium class job, High class job) Income (120 or less,130-264,270 or more) Education(under a diploma, academic education), Facilities and leisure (having a private car and computer), Place of residence (Rural, Urban)

**3.3.2 Occupation, education**

Twelve out of 46(26.08%) studies used occupation status and educational level for measuring socioeconomic status [16-27] (Table 3). For measuring job, eight studies divided job into several number categories (three, four, five, six) [16,17,19,21-24,27]. Moreover, two studies used parent’s job [20-21]. Only one study divided the range job form workers into professionals [27]. In addition, one study mentioned no clear measurement for job category [17]. For education, eight studies measured educational level based on various categories, such as illiterate to university education, illiterate to PhD, illiterate to diploma, and parents’ education [17,19,21-24,27]. Whereas four studies used years of education [16,18,20-21].

definitions [28-31] (Table 3). Two of which classified education into different number categories (four and seven) [28,30]. In the reviewed articles, two of them mentioned no specific criteria for measuring education [29,31]. Similarly about occupation, one of the articles divided it into six categories [30]. Furthermore, three studies had no clear definition for measuring occupation [29,31]. For measuring income, one study chose the Iranian central bank indicator [28]; another study classified it into six categories based on the Iranian currency (Rial) [30]. Two studies did not use clear definition for this index [29,31].

**3.3.3 Education, occupation, and income**

Four studies (8.7%) used education, occupation, and income for the socioeconomic status

**3.3.4 Education**

Six studies used only educational level for measuring socioeconomic status [32-37] (Table 3). Two of them used parental educational level [32,37]. The two other studies used level of education as a socioeconomic indicator [33,34]. Two studies divided years of education [35,36].

**Table 2. Composite measurements with their variables**

Socioeconomic status definition	Category of socioeconomic status	# Refences
Women’s occupation, husband’s occupation, family’s income	Low, intermediate, and high	Abdolahi [12]
Parents’ occupational status, parents’ educational level, and family’s income	Social class	Mirhosseini[14]
Appliance ownership including : Personal car, vacuum cleaner, color TV	Wealth score	Golozar[13]
Parents’ education and their occupational status	Four-factor Hollingshead index based on the Hollingshead criteria	Esmaelzadeh[15]

**Table 3. Most frequent\* parameters of socioeconomic status with the classification, number of studies, and publication year**

Most frequent parameters of SES (# of studies)	Classification of each parameters(indicators)	# of studies	Publication years	# Refences
Occupation ,Education	Occupation : from labor to unemployment(such as) Educational level from Illiterate to PhD	12	2007-2012	[16-27]
Education	Educational years	6	2008-2012	[32-37]
Education, Income, Occupation	Education: from illiterate to master such as) Income: Monthly income Occupation: from unemployment to very high job position such as)	4	2007-2011	[28-31]

\*studies with four or more than frequent of parameters of socioeconomic status were considered as a frequent

### **3.3.5 Living place, education, occupation, and income**

Three studies measured socioeconomic status based on living place, education, occupation, and income [38-40] (Table 1). Living place in one article was not available [39]. Two studies used living place based on the rural and urban residence [38,40]. For education, two studies divided education into four and three categories [38,39]. One study measured the years of education [40]. Occupation indicator had different number categories (six, five, and two) [38-40]. For measuring income, only one study divided it into four categories based on Rial [39]. One study measured the income as economic status based on the three categories: good, fair, weak [38]. In one study, the income as economic status was not available [40].

### **3.3.6 Education and income**

Two studies measured income and education as socioeconomic indicators [41,42] (Table 3). One article divided education and income into four categories [42]. Another study used four categories for educational level and income based on the poverty level [41].

### **3.3.7 Income**

Two articles used only income for socioeconomic status [43,44] (Table 1). Among them, one study used monthly income [44]. Another study calculated this indicator base on dollar [43].

### **3.3.8 Education, occupation, income, and insurance status**

Two studies measured four indicators, such as education, occupation, income, and insurance status [45,46] (Table 1). Two articles classified education and occupation into different categories (four and three groups) [45,46]. For income, monthly income was used for one study [45], and one study divided it into four categories [46]. Insurance status was similar in the articles. It measured nominal scale as yes or no [45,46]. In the other studies, outspread indicators, which cannot be categorized as above, were used [47-57] (Table 1).

## **3.4 Discussion**

All of the studies mentioned that socioeconomic status is contingent on various indicators, which means that there is lack of a gold standard in health literature in Iran. We found that results indicated the three factors – education,

occupation and income—were the dominant and frequent indicators for measuring socioeconomic status in both English and Persian articles [28-31]. Only four studies (English articles) had composite measure and made a standard indicator in their studies [12-15].

It is similar to the Duncan American SES Scale which is classified occupation according to education and income [58]. Nam and Power [59] also defined the SES indicator based on their occupation status score education and family income for person in a family. In addition, Green (1970) composite a measure based on income, education and occupation [60]. Hodge employed the household prestige which was meant the participations in a survey rated the social position of households described in terms of spouses' occupations, income, and ethnicities [61]. Although ethnicity is important as a SES parameter in other countries [62], there is no evidence in our study about ethnicity variable as a socioeconomic status indicator in Iran. This is mainly because of the ethnicity in health literature in Iran doesn't consider as part of SES measure.

Socioeconomic status, regardless of evaluated by education, occupation, or income, is mostly associated with the various ranges of health disparities. As some studies have revealed that low or middle socioeconomic status linked to the cancer, cardiovascular diseases, and higher mortality rate [6, 63], however we did not find any evidence in our literature.

Also, British researchers used the data from survey respondents who are asked to identify the occupations of four friends. The occupational rankings of the respondent and friends were analyzed with multidimensional scaling techniques which yield an ordinal Cambridge Scale score for each participation [64]. Similarly, the National Statistics Socioeconomic Classification applied occupational relationship and relied on employment theory and grouped persons into, typically, eight nominal strata [65]. Furthermore, we encountered that our findings provided no information about these two scales. Finally, our findings indicated that some articles (eleven studies) had no clear categories for measuring socioeconomic indicators [47-57].

## **4. CONCLUSION**

This study was done with the aim of assessing the definition and the categories of socioeconomic status in health literature in Iran

based on published studies. We encountered various definitions and indicators, mainly because of poor quality of articles with diversity in socioeconomic parameter. As it was mentioned before, the measurement of SES is difficult since it is a multi-dimensional indicator. Measuring this indicator in the most researches assessed without standard indicators, we have to measure socioeconomic status, nevertheless. Finally, for solving discrepancies between the SES definitions, we are proposing to design standard indicators that are suitable for health literature in Iran.

### ACKNOWLEDGEMENTS

We wish to acknowledge Dr. Nouzar Nakhaee for his valuable comments for improving our study.

### COMPETING INTERESTS

Authors have declared that no competing interest exists.

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