

Review

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Scoping review of outpatient health services utilization among women

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Abstract

Background: Health services utilization, as one of the mechanisms of the health system, guarantees a healthy life and improves well-being for everyone. **Aims:** The aim of this study was to identify factors affecting the use of outpatient health services among women. **Methods/designs:** This scoping review examined the studies related to outpatient health services utilization (OHSU) and its determinants among women. This review was conducted on English language studies published between 2010 and 2023 (All searches were conducted on 20 January 2023). Studies available in databases such as Web of Science, MEDLINE (PubMed), Scopus, Wiley library, Proquest, and Google Scholar were searched manually. Selected keywords and their equivalents were used to search for related articles in each database. **Results:** A total of 18 795 articles were identified, of which 37 met the inclusion criteria. Findings showed that age, marital status, level of education, employment status, income level, socioeconomic status, rape experience, health insurance, health status, ethnicity, living in rural areas, quality of services, area of residence, having a purpose in life and access to health services affect OHSU among women. **Conclusions:** The results of the present review showed that in order to achieve the universal goals of health services coverage and health service utilization, it is necessary for countries to provide insurance coverage to the maximum number of people. Also, policies should change in favor of the elderly, poor and low-income, low-educated, rural, ethnic minority, and chronically ill women and provide them with free preventive health services.

Introduction

Citizens' health services utilization is an indicator of human development and the wealth of countries, while access to and use of health care determine the state of health (Esmailnasab *et al.*, 2014). Access to quality services to promote and maintain health, prevention, and management of diseases, reduction of premature mortality, and health access equity are essential principles for all, yet access to health services is in most countries (Harouni *et al.*, 2017). More than one billion people worldwide do not have access to healthcare services (SoleimanvandiAzar *et al.*, 2020), and more than a third of the world's population cannot access health services for social, economic, and cultural reasons (Bazie and Adimassie, 2017).

As part of the Sustainable Development Goals, Member States of the United Nations have agreed to achieve Universal Health Coverage by 2030 because access to health services as a human right and one of the mechanisms of the health system (SoleimanvandiAzar *et al.*, 2021) ensures a healthy life and promotes well-being for all (Htun *et al.*, 2021; Minyihun and Zemenu Tadesse, 2020; Schmidt-Traub *et al.*, 2017). On the other hand, lack of access to health services can have adverse effects on people's health, especially vulnerable and deprived individuals. Unequal use of health services has been reported among the poor (Ghosh, 2014; Murphy, 2016), and this inequality is common among women in countries with weak healthcare systems (Minyihun and Zemenu Tadesse, 2020). Access to health care and health service utilization for many people, especially vulnerable groups, including women, the elderly, and children, is a serious challenge for the health systems of developing countries (Htun *et al.*, 2021).

Women are the mainstay of family and society, and women's health has always been one of the main concerns of the World Health Organization (Organization W.H., 2009). Women's health affects the health of all family members (Dominic *et al.*, 2019). Studies have shown that women need to receive more health services (Minyihun and Zemenu Tadesse, 2020; Qian *et al.*, 2017) than men due to fertility and childbirth (Brownson and Eyong, 2020).

Women often make household decisions about utilizing health services for themselves and their families, and this can affect their health. Inequality in access to health services among women is a major challenge in low-income countries (Ogundipe *et al.*, 2016). Inadequate health services utilization is associated with a high mortality rate in women of childbearing age (Dominic *et al.*, 2019; Essendi *et al.*, 2011; Zere *et al.*, 2010). In most societies, women, in general, have less wealth than men, while they guarantee reproduction and economic activity and have more productivity. Women in poor countries are less fed and educated, are employed in low-income jobs, have low job security, and confront more inequality in education, employment, and income (Logie, 2012; Shannon *et al.*, 2019). Also, social and gender discrimination has caused women to have unequal access to health services (Qian *et al.*, 2017).

Many efforts have been made to improve access to healthcare services in low-income societies, such as reducing out-of-pocket payments, increasing the number of clinics, and improving education and transportation systems. However, inadequate access to health care has been documented in various studies (Sipsma *et al.*, 2013). Utilizing health services is associated with a reduction in mortality and diseases rate (Esmailnasab *et al.*, 2014). Research has shown that several factors shape the health services utilization pattern (Gorman *et al.*, 2016). Inequality in health services utilization among women may be due to differences in access to health care services among women and also to differences in women's demographic characteristics and socioeconomic status (Hall *et al.*, 2014). Although studies have shown that women utilize more health services than men, our knowledge of the factors associated with health services utilization among women is insufficient (Gorman *et al.*, 2016; Qian *et al.*, 2017). As a result, the aim of this study was to identify the determinants of women's OHSU. It also sought to provide insight into the factors affecting the use of outpatient health care services among women, as well as to better plan and design interventions to improve access and use of health care services by women.

Material and methods

This scoping review was conducted on studies related to OHSU among women, based on the scoping review framework described by Arksey and O'Malley (Arksey and O'Malley, 2005). This study has been approved by Tabriz University of Medical Sciences with the code (IR.TBZMED.REC.1399.546). In this study, authors tried to methodological reports based on the checklist developed by Tricco *et al.*, (PRISMA extension reporting for scoping reviews) (Tricco *et al.*, 2018).

Eligibility criteria

Research question

What is known from the existing literature about the factors correlated with OHSU among women?

Identifying Relevant Studies

This review was conducted on studies published between 2010 and 2023 (all search was done on 20 January 2023).

Information sources

Electronic databases

The databases such as Web of Science, MEDLINE (PubMed), Scopus, Wiley library, Proquest, and Google scholar were searched.

Selected keywords and their equivalents were used to search for articles in each database (Table 1).

Study selection

Inclusion criteria

All English language studies, including quantitative, observational, cross-sectional, secondary, and longitudinal studies without geographical restrictions that examined the OHSU among women were entered into the review. The aim of this study was to investigate OHSU among women, which included any referral and utilization of public and private health services by women over 15 years of age to meet their health needs. The study specifically focused on OHSU as a binary outcome (i.e. utilized vs. non-utilized). To be eligible for inclusion, the selected studies must have assessed the association between OHSU and any other factors (determinants).

Exclusion criteria

Studies that reported the use of informal health services, complementary medicine, or services provided for specific groups other than women (children, veterans, military personnel, prisoners, immigrants, nursing home residents, students, women with specific diseases such as cancer, MS, etc.), as well as the articles on inpatient health services utilization, were excluded from the study. Also, review articles, letters to the editors, and non-English language, interventional, theoretical, and irrelevant studies with low-quality methodology were excluded from the study. For studies that had used the same data sources, those that had used more data, and had better quality were selected.

Selection of studies

After searching scientific databases, 18 795 articles were obtained. After removing duplicates (9501) and screening by titles and abstracts (9294), 340 articles were obtained. Based on the inclusion/exclusion criteria, the full text of 340 articles was screened by two authors (NSA, SEK) independently (190 were eliminated), and the quality assessment of 150 remained articles was evaluated by two authors (NSA, SEK) independently, based on the STROBE checklist. Controversial studies were solved by the third person (BZ). Finally, 37 articles were included in this review. See Figure 1 for the PRISMA chart (Tricco *et al.*, 2018). STROBE guideline was used to aid the authors in ensuring a high-quality presentation of the observational studies such as cohort, a case-control, or a cross-sectional study (Cuschieri, 2019). In the quality assessment, the articles that scored below 11 were eliminated. Those scored between 11 and 16 (appropriate), and articles that scored more than 16 were evaluated as good quality and included in the final review synthesis (Vandenbroucke *et al.*, 2009; Von Elm *et al.*, 2007). By using an Excel sheet, data such as author's name, year of publication, place of study, design, and type of study, the sample size of the study and factors related to the utilization of outpatient health services among women were extracted from the articles (Table 2).

Data analysis

Considering the method of scoping review for examining the factors associated with outpatient HSU among women, a narrative synthesis was considered to be the most appropriate method of data analysis (Arksey and O'Malley, 2005). The authors

Table 1. Search strategy based on PubMed

("Health Care Utilization"[tiab] OR (Utilization[tiab] AND "Health Care"[tiab]) OR "Patient Acceptance of Healthcare"[tiab] OR "Healthcare Patient Acceptance"[tiab] OR "Healthcare Patient Acceptances"[tiab] OR "Health Care Seeking Behavior"[tiab] OR "Acceptors of Health Care"[tiab] OR ("Care Acceptor"[tiab] AND Health[tiab]) OR ("Care Acceptors"[tiab] OR Health[tiab]) OR "Health Care Acceptor"[tiab] OR "Health Care Acceptors"[tiab] OR "Acceptability of Health Care"[tiab] OR "Health Care Acceptability"[tiab] OR "Acceptability of Healthcare"[tiab] OR "Healthcare Acceptabilities"[tiab] OR "Healthcare Acceptability"[tiab] OR "Patient Acceptance of Health Care"[tiab] OR "health service utilization"[tiab] OR "health service use"[tiab] OR "health care use"[tiab] OR "service utilization"[tiab] OR "service use"[tiab] OR "health service utilisation"[tiab] OR "health care utilization"[tiab] OR "health resource utilization"[tiab] OR "health service utilization pattern"[tiab] OR "health services use"[tiab] OR "health services utilisation"[tiab] OR "health services utilization"[tiab] OR "healthcare use"[tiab] OR "healthcare utilization"[tiab] OR "healthcare utilization"[tiab])

systematically combined the results based on the use of words, text, and findings of the articles to explain the correlated factors of OHSU.

Findings

We found 18 795 publications in the initial search. After removing duplicates and excluding noneligible articles, 340 were read in full text, of which 37 fulfilled the inclusion criteria. The total number of participants ranged from 96 to 351 625. In general, the participants comprised women aged 15 and over (15–95). The most common design of articles was cross-sectional ($n = 29$, 87%), 4 were secondary analysis (10%), 2 were cohort studies, and was a panel survey. Asia was the most common country of origin ($n = 13$, 35%), Europe ($n = 12$, 32%), Africa ($n = 7$, 18%), and the USA ($N = 5$, 13%). Studies defined HSU as a dichotomous-dependent variable. Thus, less than 12 months HSU were used as HSU indices prior to data collection (the interview), whether there was a self-reported need for outpatient care services, including primary or secondary health services, and whether the respondents had contacts with (visit) health care professionals (e.g., general practitioners and specialists) and received medication in the preceding 2 weeks. The results of this review are summarized in Table 2.

Age

In some studies, aging was associated with a reduced chance of utilizing outpatient health services (Hall *et al.*, 2014), and in others, aging was associated with an increased chance of utilizing health services (Abaerei *et al.*, 2017; Araujo *et al.*, 2017; Bastos *et al.*, 2011; Qian *et al.*, 2017). Also, some studies did not find a relationship between age and health services utilization (Hajek and König, 2022; Hassanzadeh *et al.*, 2013; Homaie Rad *et al.*, 2015; Janković *et al.*, 2018; Tountas *et al.*, 2011; Wiru *et al.*, 2017).

Marital status

According to some studies, the use of outpatient services in widows and divorced women was higher than in other women (Hall *et al.*, 2014; Homaie Rad *et al.*, 2015; Qian *et al.*, 2017; Sipsma *et al.*, 2013). Some research (Bastos *et al.*, 2011; Esmailnasab *et al.*, 2014; André Hajek and König, 2022; Hansen *et al.*, 2012; Hassanzadeh *et al.*, 2013; Tountas *et al.*, 2011; Wiru *et al.*, 2017) did not discover a significant relationship between marital status and OHSU.

Level of education

Findings showed that women with higher education utilized more health services (Bastos *et al.*, 2011; Esmailnasab *et al.*, 2014; Hall *et al.*, 2014; Htun *et al.*, 2021; Janković *et al.*, 2018; Minyihun and Zemenu Tadesse, 2020; Narain *et al.*, 2017; Tountas *et al.*, 2011; Vikum *et al.*, 2013; Vikum *et al.*, 2012), while in other investigations, lower education was associated with less use of health services (Ezzatabadi *et al.*, 2018; Hall *et al.*, 2014; Sipsma *et al.*, 2013; Vahedi *et al.*, 2021). Some studies also did not report a significant relationship between education level and OHSU (Abaerei *et al.*, 2017; Hansen *et al.*, 2012; Hassanzadeh *et al.*, 2013; Homaie Rad *et al.*, 2015; Wiru *et al.*, 2017). In the study of Qian *et al.* (2017), the rate of OHSU in the last 2 weeks was higher in illiterate women than in women with higher education, and this rate decreased with increasing educational levels.

Spouse education

Higher education of the spouse increased the chances of health services utilization in women (Minyihun and Zemenu Tadesse, 2020), and lower education of spouses was one of the barriers to the use of health services among women (Brownson and Eyong, 2020).

Rape experiences

In the study of Sipsma *et al.* (Sipsma *et al.*, 2013), women who experienced sexual harassment were less likely to seek medical services.

Place of residence (urban/rural)

The findings of the reviewed studies showed that residing in urban areas increased the use of health services among women (Esmailnasab *et al.*, 2014; Htun *et al.*, 2021; Vikum *et al.*, 2012). Rural living was associated with fewer health services utilization according to some investigations (Minyihun and Zemenu Tadesse, 2020; Vahedi *et al.*, 2021). Some studies also did not report differences between living in urban or rural areas and the use of health services (Brownson and Eyong, 2020; Tountas *et al.*, 2011).

The number of children

Having fewer children was associated with more use of health services in one study (Htun *et al.*, 2021).

Employment status

A review of studies showed that having a job could increase the use of health services (Hall *et al.*, 2014; Htun *et al.*, 2021). While two studies showed that having a job was associated with a decrease in the use of health services (Abaerei *et al.*, 2017; Hajek and König, 2022; Hyun and Kan, 2022), but in the study by Qian *et al.* (Qian *et al.*, 2017). The rate of OHSU in the last 2 weeks was higher among unemployed women. In other studies, no relationship was found between employment status and access to health services (Esmailnasab *et al.*, 2014; Hansen *et al.*, 2012; Hassanzadeh *et al.*, 2013; Wiru *et al.*, 2017); having an inflexible job was associated with women's less recent utilization of both GPs and nurses' services (Moss *et al.*, 2022).

Socio-economic status

Findings from other studies showed that women with higher socio-economic status were more likely to seek healthcare services than their poorer counterparts (Esmailnasab *et al.*, 2014; Hall *et al.*, 2014; Janković *et al.*, 2018; Minyihun and Zemenu Tadesse,

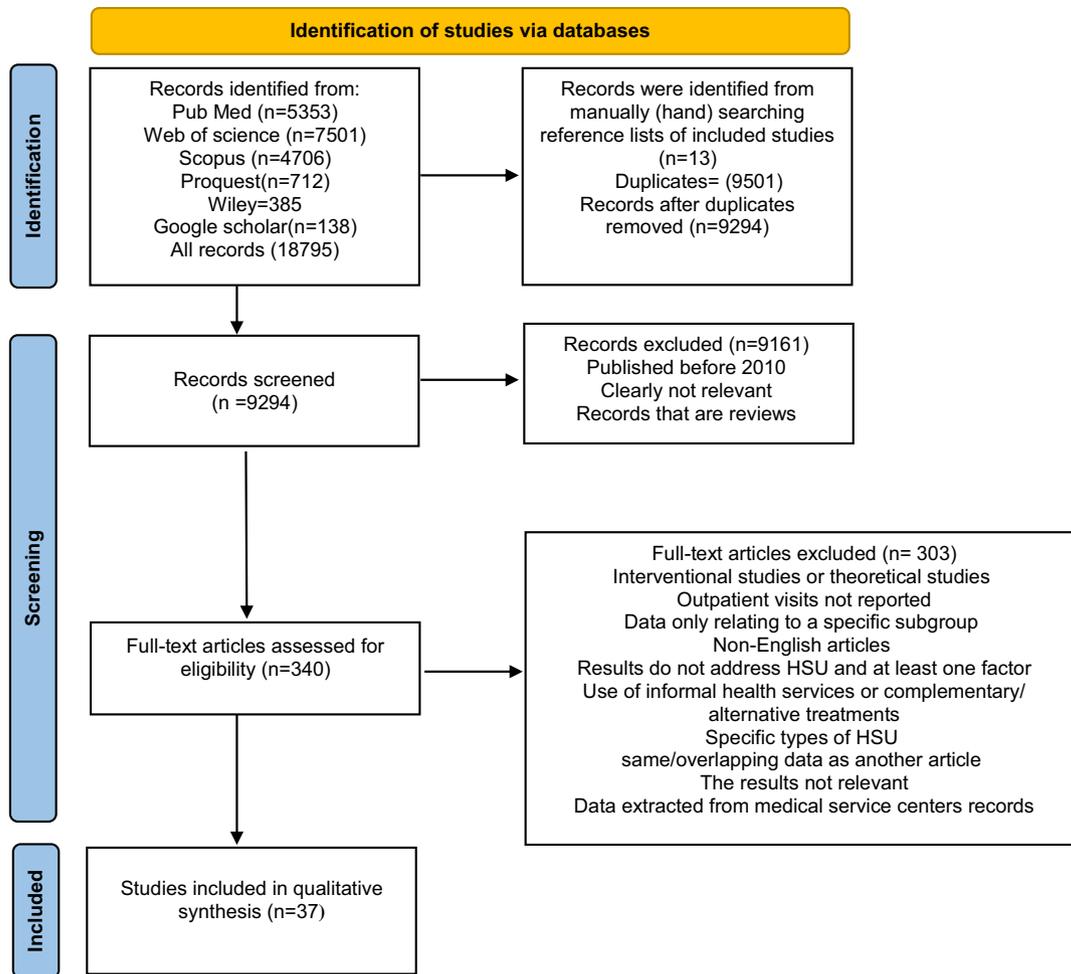


Figure 1. PRISMA flowchart showing a selection of studies

2020; Sipsma *et al.*, 2013). Some studies showed that poor women use health services less (Ezzatabadi *et al.*, 2018; Fujita *et al.*, 2016; Hall *et al.*, 2014; Hassanzadeh *et al.*, 2013; Homaie Rad *et al.*, 2015; Keetile and Yaya, 2021). In Qian *et al.* (2017) study, the rate of outpatient services utilization in the past 2 weeks was not different in women with different socioeconomic statuses. A significant relationship was also found between higher socioeconomic status and the use of GP and family physician services in other studies (Fujita *et al.*, 2016; Janković *et al.*, 2018; Tountas *et al.*, 2011; Vikum *et al.*, 2013). Also, higher socioeconomic status in other studies was indirectly correlated to the use of general practitioners' services, but it was directly correlated to the utilization of health services provided by specialist physicians (Filc *et al.*, 2014; Hoebel *et al.*, 2016; Janković *et al.*, 2018; Mohammadbeigi *et al.*, 2013; Narain *et al.*, 2017). This is while people with low socioeconomic status used the services of general practitioners more often (Filc *et al.*, 2014; Hoebel *et al.*, 2016; Keetile and Yaya, 2021).

Income level

In a study by Hall and colleagues, no significant relationship was found between annual income and health services utilization (Hall *et al.*, 2014). In other studies, a relationship was found between increased income and less use of GP services in upper socioeconomic classes (Agerholm *et al.*, 2013; Hansen *et al.*, 2012; Narain *et al.*, 2017; Vikum *et al.*, 2013), and more use of GP services

in lower socioeconomic classes (Agerholm *et al.*, 2013; Hansen *et al.*, 2012; Narain *et al.*, 2017). Some studies showed that women with low per capita incomes used more public health services than those with higher per capita incomes (Agerholm *et al.*, 2013; Bastos *et al.*, 2011; Bazie and Adimassie, 2017), as well as those with higher incomes used more private specialized services (Agerholm *et al.*, 2013; Narain *et al.*, 2017; Vikum *et al.*, 2012; Wiru *et al.*, 2017).

Family structure

One study found that families with more family members had better chances of utilizing health care services (Htun *et al.*, 2021). However, another study showed that a larger number of family members reduced the chances of health services utilization (Brownson and Eyong, 2020).

Having insurance

Studies showed that having health insurance was associated with higher use of health services (Abaerei *et al.*, 2017; Araujo *et al.*, 2017; Blanchet *et al.*, 2012; Gorman *et al.*, 2016; Hall *et al.*, 2014; Homaie Rad *et al.*, 2015; Mohammadbeigi *et al.*, 2013; Qian *et al.*, 2017; Tountas *et al.*, 2011), and on the other hand, lack of health insurance was therefore connected with lower use of health services (Ezzatabadi *et al.*, 2018; Vahedi *et al.*, 2021). In one study, health insurance was not associated with HSU (André Hajek and König, 2022).

Table 2. Factors that facilitate and inhibit the use of outpatient health services among women

No	Article Name and year	Location, Country	Design/ approach	Sample size	Participant age range, proportion of women	Determinant factors	Quality assessment score
1	(Htun <i>et al.</i> , 2021)	Myanmar	Secondary analysis	7759	7759, women aged 15–49 years	Education level, having children, coming from rich households, employment status, family structure, living in urban areas.	18
2	(Qian <i>et al.</i> , 2017)	china	A cross-sectional study	57 529	57 529 women aged 15 years and above	Education level, marital status, employment status, economic status, medical insurance, chronic diseases, poor self-rated health, residency in urban/rural areas, and age had a significant correlation with HSU.	20
3	(Minyihun and Zemenu Tadesse, 2020)	East African Countries	secondary analysis	148 483	148 483 women aged 15–49 years	The study revealed that access to women's health care was positively associated with factors such as being educated women, having an educated husband, being from households with middle or high socioeconomic status, unplanned pregnancy	19
4	(Sipsma <i>et al.</i> , 2013)	Liberia	A cross-sectional study	3925	3925, women ages 15 through 49	Low educated, sexually abused, and married women were less likely to use healthcare services. Women in higher wealth quintiles, and with more decision-making power had greater odds of using healthcare services.	16
5	(Gorman <i>et al.</i> , 2016)	USA	A cross-sectional study	2088	1092 women aged ≥ 18	Ethnicity, language proficiency, health insurance status, having a regular doctor, negative social exchanges, family cohesion, and smoking, had a significant relationship with health services utilization. Obesity, alcohol consumption, and self-reported physical and mental health were not associated with health services utilization.	19
6	(Hall <i>et al.</i> , 2014)	USA	Secondary analysis	7897	6200 women, aged ≥ 18	The less odds of service use were greater among older, poor, unemployed women as well as women with less educational attainment, and socioeconomically advantaged women. Lack of insurance was associated with service use. Annual income was not associated with health services utilization.	19
7	(Brownson and Eyong, 2020)	Nigeria	A cross-sectional study	300	300 women aged ≥ 18	Family size, spousal literacy level, access roads to health care, and cultural beliefs were among social determinant affecting women's health care service utilization.	15
8	(Esmailnasab <i>et al.</i> , 2014)	Iran	A cross-sectional study	1200	1200 women aged 18–49	Academic educational level, residents of urban, pregnancy status, high level of household wealth, and high level of quality of health services were predictors of health care utilization. There was no significant relationship between occupation status, marital status, and health care utilization.	15
9	(Hansen, Halvorsen; Ringberg, and Forde, 2012)	Norway	A cross-sectional study	12 982	6933 women, aged 30–87 years	High income was associated with less frequent use of women's visit to a general practitioner. General practitioner services utilization was significantly higher in lower SES groups. There was no statistically significant relationship between marital status, education level, employment status, self-rated health status, and use of general practitioner services.	17
10	(Abaerei, Ncayiyana and Levin, 2017)	south Africa	A cross-sectional study	27 490	15 655 women ≥ 18 years old	Total household income, place of residence, self-perceived satisfaction on standard of living, and satisfaction with health care services the government provides were not significant relationship with HSU. Age of participants, population group, employment status, medical insurance, and immigration status were found to be significantly associated with health-care utilization.	21

(Continued)

Table 2. (Continued)

No	Article Name and year	Location, Country	Design/ approach	Sample size	Participant age range, proportion of women	Determinant factors	Quality assessment score
11	(Vikum <i>et al.</i> , 2013)	Norway	A cross-sectional, Secondary analysis	97 251	87712 women ≥ 20 years old	Income, education, and socioeconomic were associated with GP utilization.	19
12	(Mohammadbeigi <i>et al.</i> , 2013)	Iran	A cross-sectional, Secondary analysis	2711	1626 women, aged 15 or older	People with higher household economic index used more specialist and general physician care, while people with lower household economic index used more health worker care.	18
13	(Bastos <i>et al.</i> , 2011)	Brazil	A cross-sectional study population-based study	2706	1534 women aged 20–69 years	Old age and young women had higher probability of using the medical services in the public system. Low level of schooling, low per capita family income, not having a regular physician and hospital admission in the previous year were associated with lower probability of using the medical service. Individuals aged 60–69 years who had poor health perception reported greater utilization of health services.	16
14	(Ezzatabadi <i>et al.</i> , 2018)	Iran	A cross-sectional study	1037	96 women aged 15 or older	Economic status, educational level, type of illness, and insurance coverage were the most influential factors in health services utilization.	13
15	(Rasu <i>et al.</i> , 2015)	USA	Medical Expenditure Panel Survey	22 599	12 791 women aged 15 or older	Health literacy was inversely associated with healthcare utilization	15
16	(Tountas <i>et al.</i> , 2011)	Greece	A cross-sectional, Secondary analysis	1005	460 women, aged ≥ 18 years old	Higher educational level, higher socioeconomic status, having chronic disease and having private health insurance were significantly associated with visiting family doctor. There was no significant relationship between age, marital status, place of residence and visiting family doctor.	18
17	(Vahedi <i>et al.</i> , 2021)	Iran	A cross-sectional study	14 000	8817 women aged ≥ 15	There was a significant pro-rich inequality in outpatient health care utilization and factors such as place of residence, health insurance, and education level had relationship with HSU.	16
18	(Agerholm <i>et al.</i> , 2013)	Stockholm	Secondary analysis	34 707	16 351 women aged 25–84 years	Income differentials in the number of visits to doctors were found in favor of lower-income groups among people aged 25–64 years when only controlling for age. When controlling for health status, income differentials in favor of higher-income groups were observed among women aged 65+ years, with higher-income groups having more visits than the lowest income group.	17
19	(Vikum <i>et al.</i> , 2012)	Norway	A cross-sectional study	44 755	24 147 women aged 20 years and above	Pro-rich and pro-educated inequity in utilization of both private medical specialists and hospital outpatient care were found. Population size of the municipalities was positively correlated with probability of utilization of general practitioner care and private medical specialists	
20	(Morteruel <i>et al.</i> , 2018)	Spain	A cross-sectional study	10 454	5585 women, 25 years and older	Individuals with lower socioeconomic status and lower educational levels were more likely to use primary care and less likely to use specialist services.	16

(Continued)

Table 2. (Continued)

No	Article Name and year	Location, Country	Design/ approach	Sample size	Participant age range, proportion of women	Determinant factors	Quality assessment score
21	(Janković <i>et al.</i> , 2018)	Bosnia and Herzegovina	A cross-sectional study	4128	2222 women aged 18 and older	Higher educated women and those worse-off more frequently visited family physician. Visits to family physician in females (were associated with poor self-perceived health. There were no positive association between age and greater use of primary health resources. There was significant socioeconomic inequalities in health services utilization.	14
22	(Blanchet <i>et al.</i> , 2012)	Ghana	Secondary analysis	2814	2,814 women aged 18 and over	Individuals enrolled in the insurance scheme were significantly more likely to obtain prescriptions, visit clinics, and seek formal health care when sick.	15
23	(Bagchi <i>et al.</i> , 2020)	India	A cross-sectional study	351 625	351 625 women aged 15–49 year	The reasons for women not using public healthcare facilities were; no nearby facilities, inconvenient facility timing, poor quality of care, absent of health personnel as often, and long waiting time.	16
24	(Araujo <i>et al.</i> , 2017)	Brazil	Cross-sectional population-based study	4001	2120 women aged ≥18 years	Physician visits were higher in the elderly and people with health insurance.	14
25	(Filc <i>et al.</i> , 2014)	Israel	retrospective cohort study	100 000	53 600 women 21 years and older	People with lower socio-economic status visited more primary physicians and people with higher SES visited more specialists	17
26	(Fujita <i>et al.</i> , 2016)	Japan	retrospective cohort study	222 259	113 633 women, 0–74 years	A significant and positive linear association was observed between income level and outpatient visit rates among all age groups	16
27	(Hoebel <i>et al.</i> , 2016)	Germany	representative cross-sectional analyses	6754	3700 women aged between 18 and 69 years	Outpatients with low socioeconomic status had more contacts with general practitioners than outpatients with high SES. The use of specialists was lower in people with low SES than in those with high SES.	18
28	(Homaie Rad <i>et al.</i> , 2015)	Iran	Cross-sectional study	1575	874 women, 18 years and older	Complementary insurances users used more specialist services. People with higher quality of life utilized fewer GPs' and specialists' services. Being smoker, marital status, and being covered by complementary insurances had a relationship with HSU. Age and education level had no relationship with HSU.	20
29	(Hassanzadeh <i>et al.</i> , 2013)	Iran	cross-sectional study	2711	1274 women, 15 years and older	Being in the lowest quintile of household wealth index was associated with the lower use of outpatient health services. No significant relationship was found between seeking outpatient health services and marital status, age group, supplementary insurance, place of residence, and the subjects' job.	17
30	(Yaddanapalli <i>et al.</i> , 2019)	India	A cross-sectional study	1500	792 female, aged over 15 year	The main barrier to not seeking care was distance to healthcare services	16
31	(Keetile and Yaya, 2021)	Botswana	Multistage cross sectional design	1178	813 female, <24 and over 65	Poor people did not seek health care and often used public health facilities.	16
32	(Bazie and Adimassie, 2017)	Ethiopia	A cross sectional study	420	228 women 18 years old,	Annual income greater than poverty line, poor perception of health status, high perceived severity of illness, and presence of chronic health problem were found to have a significant association with utilization of modern health services	17

(Continued)

Table 2. (Continued)

No	Article Name and year	Location, Country	Design/ approach	Sample size	Participant age range, proportion of women	Determinant factors	Quality assessment score
33	(Fan <i>et al.</i> , 2013)	China	A cross sectional study	529	298 female aged 16–64, 244 female locals and	Having excellent or good health and better psychological well-being were associated with lower probabilities of seeking care, while having at least one chronic condition was associated with higher probability of care utilization.	16
34	(Wiru <i>et al.</i> , 2017)	Ghana	A descriptive cross-sectional correlational design	171 Households	115 women aged over 18	income had significant association with HSU, and age, educational level, marital status, and employment status were not significantly association with the community-based health planning and services.	19
35	(Moss <i>et al.</i> , 2022)	England	Retrospective cross-sectional study	1 232 884	570 626 women aged 16–64 years	Having an inflexible job was associated with women's less recent utilization of both GPs and nurse	18
36	(Hajek and König, 2022)	Germany	Cross-sectional study	1238	650 women aged 17–95 years	Higher purpose in life was associated with an increased frequency of outpatient physician visits in the past 3 months among women. A higher number of outpatient physician visits was associated with never drinking alcohol, worse self-rated health and employment, outpatient physician visits was not associated with, age, smoking, and marital status	19
37	(Hyun and Kan, 2022)	Korea	Secondary analysis	No reported	Women aged over 25	Being employed or self-employed is negatively associated with women's expenditure on healthcare.	14

Having a chronic illness

Some studies reported that women with chronic diseases used more health services than others (Bazie and Adimassie, 2017; Ezzatabadi *et al.*, 2018; Fan *et al.*, 2013; Homaie Rad *et al.*, 2015; Qian *et al.*, 2017; Tountas *et al.*, 2011).

Health status

Women who reported poor health status were more likely to use health services (Bastos *et al.*, 2011; Bazie and Adimassie, 2017; Hajek and König, 2022; Janković *et al.*, 2018; Qian *et al.*, 2017). According to some studies, there is no connection at all between health condition and the use of GP services (Hansen *et al.*, 2012). Other studies showed that better health status was associated with less health services utilization (Fan *et al.*, 2013).

Decision-making power

In the study of Sipsma *et al.* (Sipsma *et al.*, 2013), women with higher decision-making power in the family were more likely to visit medical centers.

Ethnicity

The ethnic minority was associated with less HSU (Gorman *et al.*, 2016). In some studies, white women used health services more than colored women (Gorman *et al.*, 2016).

Language

Women's lack of familiarity with the official language of the country in which they resided or needed health services was reported as a barrier to using health services (Gorman *et al.*, 2016).

Smoking

Smoking was linked in some studies to increased use of health facilities (Gorman *et al.*, 2016). In some other studies, a negative relationship was observed between smoking and the use of health services (Homaie Rad *et al.*, 2015). Smoking was not linked to HSU in one research (Hajek and König, 2022).

Social cohesion

Health services are utilized more in societies with more social cohesion (Gorman *et al.*, 2016) and less in societies with negative social relationships.

Having a regular physician

Women who had a regular physician, such as a family doctor, were more likely to use health services, according to some research (Gorman *et al.*, 2016), and women without a regular physician were less likely to use public health services (Bastos *et al.*, 2011).

According to some studies, women who had a regular physician, such as a family medicine, were more likely to utilize health services (Gorman *et al.*, 2016), and women who did not have a regular physician were less likely to use public health services (Bastos *et al.*, 2011).

Unplanned pregnancy

According to several studies, unplanned pregnancy was a barrier to utilizing health services (Minyihun and Zemenu Tadesse, 2020), and a number of studies have reported a relationship between pregnancy and increased use of health services (Esmainasab *et al.*, 2014).

Road accesses

Road access, travel time to medical facilities (Yaddanapalli *et al.*, 2019), and the expense of transit have all been identified as major obstacles to HSU for women in a number of studies (Brownson and Eyong, 2020).

A number of studies have reported road access (Brownson and Eyong, 2020), distance to health care centers, and transportation costs as significant barriers to HSU among women (Yaddanapalli *et al.*, 2019).

Cultural beliefs

Cultural beliefs, such as mistrust of some health services, like family planning services, were seen as obstacles to the use of health services in some cultures, particularly in some African nations (Brownson and Eyong, 2020).

Quality of services

Reviewed studies showed that, if recipients of health services perceive them as desirable and high-quality services, they will use them more (Esmailnasab *et al.*, 2014). Also, the lack of health care centers near the place of residence, inadequate health services timing, poor quality of health services, absence of healthcare personnel, and the long waiting time to receive services were other obstacles to the use of health services (Bagchi *et al.*, 2020).

Alcohol consumption

No association was found between alcohol consumption and health services utilization in some studies (Gorman *et al.*, 2016). A higher number of outpatient physician visits was associated with never drinking alcohol which was reported in André Hajek & König's study (Hajek and König, 2022).

Obesity

There was no relationship between obesity and OHSU (Gorman *et al.*, 2016).

Facilities in the place of residence

Studies have shown that the more affluent the place of residence, the more health services utilization would be for people living in these areas (Mohammadbeigi *et al.*, 2013). Some studies also did not find a relationship between the facilities of the place of residence and the use of health services (Hassanzadeh *et al.*, 2013).

History of hospitalization

Bastos *et al.* (2011) reported that women with a previous history of hospitalization were less likely to use public health services (Bastos *et al.*, 2011).

Health literacy

According to Rasu *et al.* (2015), women with a low level of health literacy were using more health services than their counterparts (Rasu *et al.*, 2015).

Having a purpose in life

Having a higher purpose in life was associated with an increased frequency of outpatient physician visits in the past 3 months among women (Hajek and König, 2022).

Discussion

Women, especially in less developed countries, are minorities due to cultural and social norms and have little power to make decisions about their health issues, and also in most countries, they have difficulty accessing healthcare services (Htun *et al.*, 2021).

The findings of the reviewed studies showed that in general, with increasing age, the utilization of health services increases, which is consistent with the results of previous studies (Rattay *et al.*, 2013). Previous studies have shown that aging is correlated with more use of health services (Gisele Alsina Nader Bastos *et al.*, 2011; Capilheira and Santos, 2006), so it can be told that aging is a contributing factor to more health services utilization due to physical mobility problems and increasing chronic diseases. The extensive and free coverage of health care services in some nations may be another factor in older people's greater use of health services. However, some studies' results revealed that aging was linked to a decline in the use of preventive services. In this sense, it can be said that getting older is linked to a decline in revenue and the capacity to pay for health care expenses. The danger of sexually transmitted diseases increases with age, and fertility declines as well. As a result, although more proof is required to back up this assertion, it is likely to result in a decrease in the use of preventive services.

The findings of studies that examined the relationship between educational level and the use of health services are contradictory. In general, it can be said that a higher educational level is associated with more health services utilization, especially visiting specialists, and women with lower education use health services less than educated women, but we found that less-educated women used services provided by general practitioners and the public health system more than educated women. As studies have pointed out, it seems that more health services utilization by less-educated women may be due to the high incidence of common diseases in this group, especially in rural areas (Li and Chen, 2005). According to studies, women with lower levels of education have lower socioeconomic status and are more vulnerable to diseases (Williams *et al.*, 2013). Educational level is not only the basis for assessing women's growth and social participation but also a significant indicator of women's socioeconomic status. In general, it can be said that more education gives women more knowledge and sources of income and make it possible for them to use more health services (Minyihun and Zemenu Tadesse, 2020).

The review of studies revealed inconsistent results on the relationship between marital status and health services utilization. The present study showed that widows and divorced women used more health services than married women. In this regard, it can be said that being divorced or widowed has a negative effect on women's health. This effect leads to more use of health services by them, as indicated in some studies. This finding, however, is in contrast with the results of previous studies, which have shown that married people use more health services (Girma *et al.*, 2011). Therefore, the hypothesis that married women seek more health services under the influence of those around them seems unbelievable.

Although employment and related income seem to have a positive effect on the HSU among women, the contradictory findings of the present review regarding the more use of health services by unemployed women can be justified by the fact that it is generally accepted that unemployment has a negative effect on an individual's health (Qian *et al.*, 2017), and unemployed individuals may become unemployed because of illness, so they need more health services. In this review, several studies have shown that employed

women use health service less frequently. Being employed and working can have a positive effect on health if working conditions are favorable (Urtasan and Nuñez, 2018). This explains why working and employed women are less likely to utilize health services.

The review of the studies showed that having more children prevented women from using health services (Brownson and Eyong, 2020). Previous studies have shown that having more children, especially children under 5 years of age, makes it difficult for women to visit and utilize health services (Halwinda *et al.*, 2013). It seems that having more family members and, as a result, more responsibilities towards them, such as cooking, cleaning the house, and taking care of children causes women to care less about their health status and not utilize health services when needed. This seems to be partly related to the insufficient income of large families.

According to our findings, socioeconomic status in most of the reviewed studies had the greatest effect on the use of health services by women, and this finding is consistent with the results of other studies (Annan *et al.*, 2021; Fagbamigbe and Idemudia, 2017; Hoebel *et al.*, 2016; Pons-Duran *et al.*, 2019). Various studies have also documented inequality in the use of health services in favor of the rich (Hansen *et al.*, 2012; Qian *et al.*, 2017). Higher levels of socioeconomic status and wealth were important factors in the use of health services in most studies, and the rich were more able and willing to pay for those services (Hansen *et al.*, 2012). Previous studies have shown that people with low socioeconomic status are more likely to be affected by physical and mental health hazards and are more in need of services provided by health care systems (Hoebel *et al.*, 2016). Also, living in poverty and disadvantaged region is associated with increased health care needs (Kirby and Kaneda, 2005), and even more use of health care in these people is due to their unhealthy lifestyle, which puts them at more risk of diseases (Limpuangthip *et al.*, 2019).

The results of the present study showed that, by increasing income, the use of GP services decreased. The results of international studies in most high-income countries also show a consistent pattern that GP services utilization is in favor of the poor, while specialized outpatient services are mainly used by people with higher incomes (Van Doorslaer *et al.*, 2006). This phenomenon is more pronounced in areas where private health insurance is common and private specialists cover a significant portion of existing health services (Doorslaer *et al.*, 2004). In low- and middle-income countries, the use of health services provided by general practitioners and the use of specialized outpatient care is generally lower among the poor (Hansen *et al.*, 2012; Janković *et al.*, 2010). This may be due to problems with the use of public health services such as long queues and a lack of an adequate number of specialists in the public centers, but higher-income individuals have easy access to specialists in the private sector. Thus, policymakers need to pay attention to increasing the number of physicians, particularly experts in the public sector and marginalized areas, in order to provide easy access to high-quality health services for the poor. Because the existence and use of public health services are associated with better access and reduced inequality in access to health services for disadvantaged groups (Meng *et al.*, 2015; Narain *et al.*, 2017).

The results of this study, in line with other studies, showed that those who described their health status as poor were using health services more than others (George *et al.*, 2012; Janko Janković *et al.*, 2010). It can be said that these people often have lower incomes and lower education (Rattay *et al.*, 2013), and for reasons such as having unhealthy nutrition and lifestyle and not using

preventive services, they have poorer health status and, as a result, need to utilize more health services.

Chronic diseases are often caused by unhealthy living conditions (Solhi *et al.*, 2020). This study showed that women with chronic diseases used more health services. It is not surprising that people with chronic diseases do not have any choice but to follow their treatment and utilize related health services, which is consistent with other studies (Bazie and Adimassie, 2017; Girma *et al.*, 2011).

Our study's results, which are consistent with those of other studies, indicated that living in rural areas was associated with less use of health services (Bhatt and Bathija, 2018; Mekonnen *et al.*, 2019; Tsawe and Susuman, 2014). Other studies have shown that the use of health services by urban dwellers is more than in rural ones (Fields *et al.*, 2015; Guo *et al.*, 2020; Sözmen and Ünal, 2016). In this regard, it can be said that living in rural areas can reduce access to health services due to factors such as a shortage of health care centers and long distance to health care centers compared to cities. Rural dwellers also have less access to secondary-level health services such as hospitals due to their lower ability to pay for the services compared to urban dwellers. Finally, it can be said that the distribution of specialists is such that they are mostly concentrated in urban areas. This can be the reason for the different use of health services between urban and rural residents.

The present investigation's findings, in line with other studies, showed that unplanned pregnancy was associated with less use of health services (Haddrill *et al.*, 2014; Sakeah *et al.*, 2017). This is perhaps due to the low literacy and socioeconomic status of these mothers.

Smoking and health services utilization were also found to be contradictory in our study. It is expected that smokers will face more health problems, thus seeking more health services. Other studies have shown that smokers are more likely to seek health services because they are concerned about their health (Choi *et al.*, 2008; Gorman *et al.*, 2016).

More health services utilization was associated with higher social cohesion and family relationships in the present study. Social support is an empowering factor at HSU, so it seems that a high level of family cohesion and strong social networks encourage and facilitate the use of health services (Gorman *et al.*, 2016).

Language restrictions were associated with lower health services utilization in the present review. In this regard, it can be said that not being familiar with the official language of the country is one of the considerable barriers to communicating with health care providers. Consistent with our findings, other studies have shown that ethnic minorities, especially colored women and those who are less familiar with the official language like immigrants, experience lower use of health services (Blendon *et al.*, 2007; Dias *et al.*, 2011; Gorman *et al.*, 2016; Hall *et al.*, 2014).

The present study's most significant finding is that people's perception of health services' quality was one of the factors which was associated with a higher chance of health services utilization. It seems that service providers, in addition to providing desirable and qualified services, need to be careful in dealing with patients and communicating with them.

Although alcohol consumption was expected to increase health services utilization due to its impact on physical and mental health, our study found no association between alcohol consumption and HSU. However, previous studies have found that not consuming alcohol can be associated with reduced use of medical and dental services (Limpuangthip *et al.*, 2019; SoleimanvandiAzar *et al.*, 2021).

In this study, we did not find a correlation between obesity and the use of health services. Being overweight or obese due to a lack of knowledge, inadequate nutrition, and a sedentary lifestyle (Zokaei *et al.*, 2020) can lead to low health status. As a result, it can increase the need to utilize more health services. So, due to the lack of evidence, it is necessary for future studies to examine the use of health services among obese people and alcohol users.

As expected, the results of the present study indicate that having insurance in any form, whether public or private, could have a positive effect on more use of health services (Abaerei *et al.*, 2017). Lack of insurance is the main barrier to the use of health services, especially among poor and deprived groups (Harris *et al.*, 2011).

In line with earlier studies (Gisele Alsina Nader Bastos *et al.*, 2011; Mendoza-Sassi and Béria, 2003), the current review showed that having a regular physician such as a family doctor was associated with increased use of health services.

Contrary to our expectations, one study found that people with low health literacy utilized more health services. Although more evidence is needed to support this finding, the conclusion can be justified by the fact that people with low health literacy often use more health services due to factors such as unhealthy diet and lifestyle, being more exposed to risk factors, and having more underlying diseases. It is also possible that people with a higher level of health literacy use more preventive and self-management services, so their use of health services is less. In any case, this finding is a warning signal for policymakers to design interventions to increase individuals' health literacy and facilitate communication between people and health service providers.

Utilization of health services is the outcome of interactions between those in need of health services and the supporting apparatus of the health care system. In agreement with this finding, other studies have revealed that despite some women's favorable socioeconomic circumstances, they were using fewer health services because of the subpar quality of those services, a shortage of providers, and the constrained amount of time for those services in the health centers (Barik and Thorat, 2015; Organization W. H., 2006; Prinja *et al.*, 2012).

Women scoring high in purpose in life may also particularly use preventive healthcare services as previously shown by other studies (Hajek *et al.*, 2021; Hajek *et al.*, 2021). The link between purpose in life and an increased frequency of outpatient physician visits may be particularly explained by health-conscious behavior among women who score high on purpose in life.

The present review has some limitations. First off, only papers published in English were considered for the study; abstracts, dissertations, and unreviewed studies were excluded. So, caution should be taken in generalizing the results of this study. Since contradictory results were observed in some of the findings, it seems that primary studies and even meta-analysis are necessary to be done to show the causal relationships and the real effect of variables on health services utilization. To some extent, it can be said that the controversial results in our findings may be due to differences in the definitions of health services, study time, and sample size. As another limitation, this review did not investigate studies that were published before 2010. It is suggested that future systematic review studies explore the relationship between variables and health services utilization regardless of time limitations.

Conclusion

The results of the present review showed that in order to achieve the universal goals of health services coverage and health service

utilization, it is necessary for countries to provide insurance coverage to the maximum number of people. Policymakers need to understand the correlated factors of women's health services utilization in the healthcare system. An effective health policy should promote improvements in general health conditions for women while achieving absolute and relative reductions in inequalities. The identification of factors related to women's health services utilization will be a good help for planning for the increase in health services accessibility. Policy and decision-makers have to consider improving the capability of women to access health services utilization. Also, policies should change in favor of the elderly, poor and low-income, low-educated, rural, ethnic minority, and chronically ill people and provide them with free preventive health services. Since there are other factors that can affect health services utilization among women but have not been considered in the reviewed studies, future primary studies should consider these variables, which include the nature of the job, patient awareness, attitudes toward medical institutions, and so on. The findings of the present study can extend the knowledge of factors related to health services utilization among women. Therefore, the development of health services models and the provision of services based on the results of the present review is recommended.

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References

- Abaerei AA, Ncayiyana J and Levin J (2017) Health-care utilization and associated factors in Gauteng province, South Africa. *Global Health Action* 10. doi: [10.1080/16549716.2017.1305765](https://doi.org/10.1080/16549716.2017.1305765)
- Agerholm J, Bruce D, Burström B and Ponce Leon A (2013) Socioeconomic differences in healthcare utilization, with and without adjustment for need: an example from Stockholm, Sweden. *Scandinavian Journal of Public Health* 41, 318–325. doi: [10.1177/1403494812473205](https://doi.org/10.1177/1403494812473205)
- Annan J, Donald A, Goldstein M, Martinez PG and Koolwal G (2021) Taking power: women's empowerment and household well-being in Sub-Saharan Africa. *World Development* 140, 105292.
- Araujo MEA, Silva MT, Galvao TF and Pereira MG (2017) Prevalence of health services usage and associated factors in the Amazon region of Brazil: a population-based cross-sectional study. *Bmj Open* 7. doi: [10.1136/bmjopen-2017-017966](https://doi.org/10.1136/bmjopen-2017-017966)
- Arksey H and O'Malley L (2005) Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology* 8, 19–32.

- Bagchi T, Das A, Dawad S and Dalal K** (2020) Non-utilization of public healthcare facilities during sickness: a national study in India. *Journal of Public Health (Germany)*. doi: [10.1007/s10389-020-01363-3](https://doi.org/10.1007/s10389-020-01363-3)
- Barik D and Thorat A** (2015) Issues of unequal access to public health in India. *Frontiers in Public Health* **3**, 245.
- Bastos GAN, Duca GFD, Hallal PC and Santos IS** (2011) Utilization of medical services in the public health system in the Southern Brazil. *Revista de Saúde Pública* **45**, 475–484.
- Bazie GW and Adimassie MT** (2017) Modern health services utilization and associated factors in North East Ethiopia. *Plos One* **12**. doi: [10.1371/journal.pone.0185381](https://doi.org/10.1371/journal.pone.0185381)
- Bhatt J and Bathija P** (2018) Ensuring access to quality health care in vulnerable communities. *Academic Medicine* **93**, 1271.
- Blanchet NJ, Fink G and Osei-Akoto I** (2012) The effect of Ghana's National Health Insurance Scheme on health care utilisation. *Ghana Medical Journal* **46**, 76–84.
- Blendon RJ, Buhr T, Cassidy EF, Perez DJ, Hunt KA, Fleischfresser C, Benson JM and Herrmann MJ** (2007) Disparities in health: perspectives of a multi-ethnic, multi-racial America. *Health Affairs* **26**, 1437–1447.
- Brownson BA and Eyong BB** (2020) Social determinants of health care service utilization among women in cross River State. *ESUT Journal of Social Sciences* **5**(1), <https://esutjss.com/index.php/ESUTJSS/article/view/35>.
- Capilheira MF and Santos IdSd** (2006) Individual factors associated with medical consultation by adults. *Revista de saude publica* **40**, 436–443.
- Choi S, Rankin S, Stewart A and Oka R** (2008) Effects of acculturation on smoking behavior in Asian Americans: a meta-analysis. *Journal of Cardiovascular Nursing* **23**, 67–73.
- Cuschieri S** (2019) The STROBE guidelines. *Saudi Journal of Anaesthesia* **13** (Suppl 1), S31.
- Dias S, Gama A, Cortes M and de Sousa B** (2011) Healthcare-seeking patterns among immigrants in Portugal. *Health & Social Care in the Community* **19**, 514–521.
- Dominic A, Ogundipe A and Ogundipe O** (2019) Determinants of women access to healthcare services in sub-Saharan Africa. *Open Public Health Journal* **12**, 504–514. doi: [10.2174/1874944501912010504](https://doi.org/10.2174/1874944501912010504)
- Doorslaer Ev, Koolman X and Jones AM** (2004) Explaining income-related inequalities in doctor utilisation in Europe. *Health Economics* **13**, 629–647.
- Esmailnasab N, Hassanzadeh J, Rezaeian S and Barkhordari M** (2014) Use of health care services and associated factors among women. *Iranian Journal of Public Health* **43**, 70.
- Essendi H, Mills S and Fotso J-C** (2011) Barriers to formal emergency obstetric care services' utilization. *Journal of Urban Health* **88**, 356–369.
- Ezzatabadi MR, Khosravi A, Bahrami MA and Rafiei S** (2018) Socio-economic inequalities in health services utilization: a cross-sectional study. *International Journal of Health Care Quality Assurance* **31**, 69–75. doi: [10.1108/ijhcqa-04-2017-0059](https://doi.org/10.1108/ijhcqa-04-2017-0059)
- Fagbamigbe AF and Idemudia ES** (2017) Wealth and antenatal care utilization in Nigeria: policy implications. *Health Care for Women International* **38**, 17–37.
- Fan JX, Wen M, Jin L and Wang GX** (2013) Disparities in healthcare utilization in China: do gender and migration status matter? *Journal of Family and Economic Issues* **34**, 52–63. doi: [10.1007/s10834-012-9296-1](https://doi.org/10.1007/s10834-012-9296-1)
- Fields BE, Bell JF, Moyce S and Bigbee JL** (2015) The impact of insurance instability on health service utilization: does non-metropolitan residence make a difference? *The Journal of Rural Health* **31**, 27–34.
- Filc D, Davidovich N, Novack L and Balicer RD** (2014) Is socioeconomic status associated with utilization of health care services in a single-payer universal health care system? *International Journal for Equity in Health* **13**. doi: [10.1186/s12939-014-0115-1](https://doi.org/10.1186/s12939-014-0115-1)
- Fujita M, Sato Y, Nagashima K, Takahashi S and Hata A** (2016) Income related inequality of health care access in Japan: a retrospective cohort study. *Plos One* **11**. doi: [10.1371/journal.pone.0151690](https://doi.org/10.1371/journal.pone.0151690)
- George PP, Heng BH, Molina JADC, Wong LY, Lin NCW and Cheah JTS** (2012) Self-reported chronic diseases and health status and health service utilization—results from a community health survey in Singapore. *International Journal for Equity in Health* **11**(1), 1–7.
- Ghosh S** (2014) Equity in the utilization of healthcare services in India: evidence from National Sample Survey. *International Journal of Health Policy and Management* **2**, 29.
- Girma F Jira C and Girma B** (2011) Health services utilization and associated factors in Jimma zone, South west Ethiopia. *Ethiopian Journal of Health Sciences*. (Suppl 1), 85–94.
- Gorman B, Wade B and Solazzo A** (2016) Women go and men stay home? Gender and the utilization of preventive medical care among Asian and Latino adults. *Special Social Groups, Social Factors and Disparities in Health and Health Care (Research in the Sociology of Health Care, Vol. 34)*, Emerald Group Publishing Limited, Bingley, pp. 97–132. doi: [10.1108/S0275-49592016000034006](https://doi.org/10.1108/S0275-49592016000034006)
- Guo B, Xie X, Wu Q, Zhang X, Cheng H, Tao S and Quan H** (2020) Inequality in the health services utilization in rural and urban China: a horizontal inequality analysis. *Medicine* **99**(2), e18625.
- Haddrill R, Jones GL, Mitchell CA and Anumba DO** (2014) Understanding delayed access to antenatal care: a qualitative interview study. *BMC Pregnancy and Childbirth* **14**, 1–14.
- Hajek A, De Bock F, Huebl L, Kretzler B and König H-H** (2021) Determinants of postponed cancer screening during the COVID-19 pandemic: evidence from the nationally representative COVID-19 snapshot monitoring in Germany (COSMO). *Risk Management and Healthcare Policy* Jul, 14, 3003–3011.
- Hajek A, De Bock F, Kretzler B and König H-H** (2021) Factors associated with postponed health checkups during the COVID-19 pandemic in Germany. *Public Health* **194**, 36–41.
- Hajek A and König H-H** (2022) Association between purpose in life and healthcare use among women and men in Germany: cross-sectional analysis of the nationally representative German Socio-Economic Panel (GSOEP) study. *BMJ Open* **12**. doi: [10.1136/bmjopen-2022-061525](https://doi.org/10.1136/bmjopen-2022-061525)
- Hall KS, Dalton V and Johnson TRB** (2014) Social disparities in women's health service use in the United States: a population-based analysis. *Annals of Epidemiology* **24**, 135–143. doi: [10.1016/j.annepidem.2013.10.018](https://doi.org/10.1016/j.annepidem.2013.10.018)
- Halwindi H, Siziya S, Magnussen P and Olsen A** (2013) Factors perceived by caretakers as barriers to health care for under-five children in Mazabuka District, Zambia. *International Scholarly Research Notices*, **2013**, 10. doi: [10.1155/2013/905836](https://doi.org/10.1155/2013/905836)
- Hansen AH, Halvorsen PA, Ringberg U and Forde OH** (2012) Socio-economic inequalities in health care utilisation in Norway: a population based cross-sectional survey. *BMC Health Services Research* **12**. doi: [10.1186/1472-6963-12-336](https://doi.org/10.1186/1472-6963-12-336)
- Harouni GG, Sajjadi H, Rafiey H, Mirabzadeh A, Vaez-Mahdavi M and Kamal SHM** (2017) Current status of health index in Tehran: a multidimensional approach. *Medical Journal of the Islamic Republic of Iran* **31**, 29.
- Harris B, Goudge J, Ataguba JE, McIntyre D, Nxumalo N, Jikwana S and Chersich M** (2011) Inequities in access to health care in South Africa. *Journal of Public Health Policy* **32**, S102–S123.
- Hassanzadeh J, Mohammadbeigi A, Eshrati B, Rezaianzadeh A and Rajaeefard A** (2013) Determinants of inequity in health care services utilization in Markazi Province of Iran. *Iranian Red Crescent Medical Journal* **15**, 363–370. doi: [10.5812/ircmj.3525](https://doi.org/10.5812/ircmj.3525)
- Hoebel J, Rattay P, Prutz F, Rommel A and Lampert T** (2016) Socioeconomic status and use of outpatient medical care: the case of Germany. *Plos One* **11**. doi: [10.1371/journal.pone.0155982](https://doi.org/10.1371/journal.pone.0155982)
- Homaie Rad E, Ghaisi A, Arefnezhad M and Bayati M** (2015) Inequalities of general physicians and specialists visits' utilization and its determinants in Iran: a population based study. *International Journal of Human Rights in Healthcare* **8**, 125–131. doi: [10.1108/IJHRH-12-2014-0032](https://doi.org/10.1108/IJHRH-12-2014-0032)
- Htun NMM, Hnin ZL and Khaing W** (2021) Empowerment and health care access barriers among currently married women in Myanmar. *BMC Public Health* **21**. doi: [10.1186/s12889-021-10181-5](https://doi.org/10.1186/s12889-021-10181-5)
- Hyun MK and Kan MY** (2022) Association between work status and the use of healthcare services among women in the Republic of Korea. *Safety and Health Work* **13**, 51–58. doi: [10.1016/j.shaw.2021.10.004](https://doi.org/10.1016/j.shaw.2021.10.004)
- Janković J, Šiljak S, Eric M, Marinković J and Janković S** (2018) Inequalities in the utilization of health care services in a transition European country: results from the national population health survey. *International Journal of Public Health* **63**, 261–272. doi: [10.1007/s00038-017-1009-y](https://doi.org/10.1007/s00038-017-1009-y)

- Janković J, Simić S and Marinković J (2010) Inequalities that hurt: demographic, socio-economic and health status inequalities in the utilization of health services in Serbia. *European Journal of Public Health* **20**, 389–396.
- Keetile M and Yaya S (2021). Socioeconomic inequalities and determinants of health care utilization in Botswana: a decomposition analysis. *Journal of Public Health (Germany)*. doi: [10.1007/s10389-021-01494-1](https://doi.org/10.1007/s10389-021-01494-1)
- Kirby JB and Kaneda T (2005) Neighborhood socioeconomic disadvantage and access to health care. *Journal of Health and Social Behavior* **46**, 15–31.
- Li T and Chen R (2005) Overview of clinical epidemiology of cervical cancer. *Practical Journal of Clinical Medicine* **2**, 19–22.
- Limpuangthip N, Purnaveja S and Somkotra T (2019) Predisposing and enabling factors associated with public denture service utilization among older Thai people: a cross-sectional population-based study. *BMC Oral Health* **19**, 1–8.
- Logie C (2012) The case for the World Health Organization's commission on the social determinants of health to address sexual orientation. *American Journal of Public Health* **102**, 1243–1246.
- Mekonnen T, Dune T and Perz J (2019) Maternal health service utilisation of adolescent women in sub-Saharan Africa: a systematic scoping review. *BMC Pregnancy and Childbirth* **19**, 1–16.
- Mendoza-Sassi R and Béria J (2003) Prevalência do médico de referência, fatores associados e seu efeito na utilização de serviços de saúde: um estudo de base populacional no Sul do Brasil. *Cad Saude Publica* **19**, 1257–1266.
- Meng Q, Fang H, Liu X, Yuan B and Xu J (2015) Consolidating the social health insurance schemes in China: towards an equitable and efficient health system. *The Lancet* **386**, 1484–1492.
- Minyihun A and Zemen Tadesse T (2020) Determinants of access to health care among women in East African countries: a multilevel analysis of recent demographic and health surveys from 2008 to 2017. *Risk Management and Healthcare Policy* **13**, 1803–1813. doi: [10.2147/RMHP.S263132](https://doi.org/10.2147/RMHP.S263132)
- Mohammadbeigi A, Hassanzadeh J, Eshtrati B and Rezaianzadeh A (2013) Socioeconomic inequity in health care utilization, Iran. *Journal of Epidemiology and Global Health* **3**, 139–146. doi: [10.1016/j.jegh.2013.03.006](https://doi.org/10.1016/j.jegh.2013.03.006)
- Moss C, Munford LA and Sutton M (2022) Associations between inflexible job conditions, health and healthcare utilisation in England: retrospective cross-sectional study. *BMJ Open* **12**. doi: [10.1136/bmjopen-2022-062942](https://doi.org/10.1136/bmjopen-2022-062942)
- Murphy L (2016) *Improving access to health for women and girls in low-income urban settlements*. IDS Policy Briefing 110, Brighton: IDS. <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/8975>
- Narain K, Bitler M, Ponce N, Kominski G and Ettner S (2017) The impact of welfare reform on the health insurance coverage, utilization and health of low education single mothers. *Social Science & Medicine* **180**, 28–35. doi: [10.1016/j.socscimed.2017.03.021](https://doi.org/10.1016/j.socscimed.2017.03.021)
- Ogundipe OM, Olurinola OI and Ogundipe AA (2016) Health intervention and child health in sub-Saharan Africa: assessing the impact of the millennium development goal. *Journal of Sustainable Development* **9**, 187–201.
- Pons-Duran C, Lucas A, Narayan A, Dabalen A and Menéndez C (2019) Inequalities in sub-Saharan African women's and girls' health opportunities and outcomes: evidence from the Demographic and Health Surveys. *Journal of Global Health* **9**(1), 010410. doi: [10.7189/jogh.09.010410](https://doi.org/10.7189/jogh.09.010410).
- Prinja S, Kaur M and Kumar R (2012) Universal health insurance in India: ensuring equity, efficiency, and quality. *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine* **37**, 142.
- Qian YY, Zhou ZL, Yan JE, Gao JM, Wang YP, Yang XW, Xu YJ and Li YL (2017) An economy-related equity analysis of health service utilization by women in economically underdeveloped regions of western China. *International Journal for Equity in Health*, **16**. doi: [10.1186/s12939-017-0667-y](https://doi.org/10.1186/s12939-017-0667-y)
- Rasu RS, Bawa WA, Suminski R, Snella K and Warady B (2015) Health literacy impact on national healthcare utilization and expenditure. *International Journal of Health Policy and Management* **4**, 747–755. doi: [10.15171/ijhpm.2015.151](https://doi.org/10.15171/ijhpm.2015.151)
- Rattay P, Butschalowsky H, Rommel A, Prütz F, Jordan S, Nowossadeck E and Domanska O (2013) Utilisation of outpatient and inpatient health services in Germany. *Bundesgesundheitsblatt-Gesundheitsforschung-Gesundheitsschutz*. **56**, 832–844.
- Sakeah E, Okawa S, Rexford Oduro A, Shibanuma A, Ansah E, Kikuchi K, Debpuur C, Gyapong M, Owusu-Agyei S, Williams J, Debpuur C, Yeji F, Kukula VA, Enameh Y, Asare GQ, Agyekum EO, Addai S, Sarpong D, Adjei K, Tawiah C, Yasuoka J, Nanishi K, Jimba M, Hodgson A and the Ghana EMBRACE Team (2017) Determinants of attending antenatal care at least four times in rural Ghana: analysis of a cross-sectional survey. *Global Health Action* **10**, 1291879.
- Schmidt-Traub G, Kroll C, Teksoz K, Durand-Delacre D and Sachs JD (2017) National baselines for the sustainable development goals assessed in the SDG index and dashboards. *Nature Geoscience* **10**, 547–555.
- Shannon G, Jansen M, Williams K, Cáceres C, Motta A, Odhiambo A, Eleveld A and Mannell J (2019) Gender equality in science, medicine, and global health: where are we at and why does it matter? *The Lancet* **393**, 560–569.
- Sipsma H, Callands TA, Bradley E, Harris B, Johnson B and Hansen NB (2013) Healthcare utilisation and empowerment among women in Liberia. *Journal of Epidemiology and Community Health* **67**, 953–959. doi: [10.1136/jech-2013-202647](https://doi.org/10.1136/jech-2013-202647)
- Soleimanvandiazar N, Kamal SHM, Sajjadi H, Ardakani HM, Forouzan AS, Karimi SE and Harouni GG (2021) Outpatient health service utilization and associated factors: A cross-sectional population-based study in Tehran in 2019. *Medical Journal of the Islamic Republic of Iran* **35**, 71.
- Soleimanvandiazar N, Kamal SHM, Sajjadi H, Harouni GG, Karimi SE, Djalalinia S and Forouzan AS (2020) Determinants of outpatient health service utilization according to Andersen's Behavioral model: a systematic scoping review. *Iranian Journal of Medical Sciences* **45**, 405.
- Solhi M, Azar FEF, Abolghasemi J, Maheri M, Irandoost SF and Khalili S (2020) The effect of educational intervention on health-promoting lifestyle: intervention mapping approach. *Journal of Education Health Promotion* **9**, 196. doi: [10.4103/jehp.jehp_768_19](https://doi.org/10.4103/jehp.jehp_768_19).
- Sözmen K and Ünal B (2016) Explaining inequalities in health care utilization among Turkish adults: findings from health survey 2008. *Health Policy* **120**, 100–110.
- Tountas Y, Oikonomou N, Pallikarona G, Dimitrakaki C, Tzavara C, Souliotis K, Anargiros M, Pappa E, Kontodimopoulos N and Niakas D (2011) Sociodemographic and socioeconomic determinants of health services utilization in Greece: the Hellas Health I study. *Health Services Management Research* **24**, 8–18. doi: [10.1258/hsmr.2010.010009](https://doi.org/10.1258/hsmr.2010.010009)
- Trico AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, Moher D, Peters MDJ, Horsley T, Weeks L, Hempel S, Akl EA, Chang C, McGowan J, Stewart L, Hartling L, Aldcroft A, Wilson MG, Garrity C, Lewin S, Godfrey CM, Macdonald MT, Langlois EV, Soares-Weiser K, Moriarty J, Clifford T, Tunçalp Ö and Straus SE (2018) PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Annals of Internal Medicine* **169**, 467–473.
- Tsawe M and Susuman AS (2014) Determinants of access to and use of maternal health care services in the Eastern Cape, South Africa: a quantitative and qualitative investigation. *BMC Research Notes* **7**, 1–10.
- Urtasun A and Nuñez I (2018) Healthy working days: the (positive) effect of work effort on occupational health from a human capital approach. *Social Science & Medicine* **202**, 79–88.
- Vahedi S, Ramezani-Doroh V, Shamsadiny M and Rezapour A (2021) Decomposition of gendered socioeconomic-related inequality in outpatient health care utilization: a cross-sectional study from Iran. *International Journal of Health Planning and Management* **36**, 656–667. doi: [10.1002/hpm.3109](https://doi.org/10.1002/hpm.3109)
- Van Doorslaer E, Masseria C and Koolman X (2006) Inequalities in access to medical care by income in developed countries. *CMAJ* **174**, 177–183.
- Vandenbroucke JP, Von Elm E, Altman DG, Gøtzsche PC, Mulrow CD, Pocock SJ, Poole C, Schlesselman JJ, Egger M and STROBE Initiative (2009) Strengthening the reporting of observational studies in epidemiology (STROBE): explanation and elaboration. *Gaceta Sanitaria* **23**, 158.
- Vikum E, Bjørngaard JH, Westin S and Krokstad S (2013) Socio-economic inequalities in Norwegian health care utilization over 3 decades: the HUNT Study. *European Journal of Public Health* **23**, 1003–1010. doi: [10.1093/eurpub/ckt053](https://doi.org/10.1093/eurpub/ckt053)

- Vikum E, Krokstad S and Westin S** (2012) Socioeconomic inequalities in health care utilisation in Norway: the population-based HUNT3 survey. *International Journal for Equity in Health*, **11**. doi: [10.1186/1475-9276-11-48](https://doi.org/10.1186/1475-9276-11-48)
- Von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC and Vandenbroucke JP** (2007) The Strengthening of Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Bulletin of the World Health Organization* **85**, 867–872.
- Williams LK, Andrianopoulos N, Cleland V, Crawford D and Ball K** (2013) Associations between education and personal income with body mass index among Australian women residing in disadvantaged neighborhoods. *American Journal of Health Promotion* **28**, 59–65.
- Wiru K, Kumi-Kyereme A, Mahama EN, Amenga-Etego S and Owusu-Agyei S** (2017) Utilization of community-based health planning and services compounds in the Kintampo North Municipality: a cross-sectional descriptive correlational study. *BMC Health Services Research* **17**. doi: [10.1186/s12913-017-2622-4](https://doi.org/10.1186/s12913-017-2622-4)
- World Health Organization** (2006) *The world health report 2006: working together for health*: World Health Organization.
- World Health Organization** (2009) *Women and health: today's evidence tomorrow's agenda*: World Health Organization. <https://apps.who.int/iris/handle/10665/44168>
- Yaddanapalli SC, Srinivas R, Simha BV, Devaki T, Viswanath V, Pachava S and Chandu VC** (2019) Utilization of health services in Tenali Mandal, Andhra Pradesh- a cross-sectional study. *Journal of Family Medicine and Primary Care* **8**, 2997–3004. doi: [10.4103/jfmpc.jfmpc_462_19](https://doi.org/10.4103/jfmpc.jfmpc_462_19)
- Zere E, Tumusiime P, Walker O, Kirigia J, Mwikisa C and Mbeeli T** (2010) Inequities in utilization of maternal health interventions in Namibia: implications for progress towards MDG 5 targets. *International Journal for Equity in Health* **9**, 1–11.
- Zokaei A, Ziapour A, Khanghahi ME, Lebni JY, Irandoost SF, Toghrolri R, Mehedi N, Foroughinia A and Chaboksavar F** (2020) Investigating high blood pressure, type-2 diabetes, dislipidemia, and body mass index to determine the health status of people over 30 years. *Journal of Education and Health Promotion* **9**.