ORIGINAL ARTICLE

Discrimination in Healthcare, Related Factors and Outcomes: A Systematic Review

MOHAMMAD JAVAD HOSSEINABADI-FARAHANI[1], MASOUD FALLAHI-KHOSHKNAB[2*], NARGES ARSALANI[3], MOHAMMADALI HOSSEINI[4], EESA MOHAMMADI[5]

[1]*Ph. D Candidate, Department of Nursing, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.*
[2]*Professor, Department of Nursing, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran*
[3]*Associate Professor, Department of Nursing, University of social Welfare and Rehabilitation Sciences, Tehran, Iran.*
[4]*Associate Professor, Department of Nursing, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.*
[5]*Professor, Department of Nursing, Faculty of Medical Sciences, University of Tarbiat Modares, Tehran, Iran.*
**Corresponding author: Masoud Fallahi-Khoshknab. Professor, Department of Nursing, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran. E-mail: fallahi@uswr.ac.ir Tel:00989125097144*

ABSTRACT

Discrimination in healthcare is one of the main concerns of healthcare systems around the world. A systematic review can help to clarify and integrate results from different pieces of evidence about discrimination in healthcare. Articles published in English were retrieved using the main keywords in the Scopus, PubMed, and Web of Science databases without a time limit. Then, the items with inclusion criteria were studied and analyzed. Out of the 322 retrieved articles, 23 articles were reviewed. Analyzing the articles and extracting the data was done by two researchers simultaneously, and data were summarized thematically. Two main concepts emerged: "Socio-demographic factors as the main factor of healthcare discrimination" and "change in health behavior." Finally, discrimination continues to be a serious international challenge in the health services. Health managers should identify the related factors that cause discrimination in health and develop preventive measures.

Keywords: Ethics, Discrimination, Health Care, Systematic Review.

INTRODUCTION

Discrimination in healthcare means not providing or providing incomplete health care or different from an individual or group of people due to their individual and social characteristics [1].It is a phenomenon experienced by many people in the community but only reported by some people, most of whom are also minorities in terms of race, ethnicity, or certain illnesses or unusual conditions such as disability [2]. Discrimination in healthcare manifests itself in various forms such as discrimination based on gender [3], race [4],age, type of illness, religion [5], language [6], economic level and social status, in all of which individual's access to health services is reduced or is of poor quality[7].

In a study titled "Experienced discrimination amongst old European citizens," Heuvel (2011) states that, on average, 26% of respondents aged 62 years sometimes, and 11% of them always experience age discrimination. In a study titled "Discrimination Experience and Health Status in Spanish Immigrants," Rodriguez (2017) reports that at least one per 10 immigrants experienced discrimination in receiving healthcare. They also stated that these discriminations were not due to the age, sex, and educational level of the immigrants, but merely due to their being an immigrant and ethnic differences [8, 9]. In another study in the UK in 2010, 1301, people over 50 were surveyed, 23% of them had experienced age discrimination in the past year [10]

One of the international health organization's concerns in different countries is to control and reduce discrimination in health care [11]. Multiple studies have been done in this regard. However, there is no general conclusion about the factors and outcomes of this phenomenon. On the other hand, various studies have reported discrimination, some factors, and its results in health care, but a study with a systematic review approach has not examined how this process works. Therefore, a systematic review study can be helpful by the integration of various evidence-based studies conducted on the grounds of discrimination in health care and its implications to understand this phenomenon better and control it and develop clinical guidelines, so the present study aimed at determining and comprehensive description of discrimination in healthcare and related factors and outcomes in different societies.

METHODS

According to the purpose of the study, this study was conducted by a systematic review method [12, 13]. The study was approved by the Research Ethics Committee of the University of Social Welfare and Rehabilitation Sciences (Ethics code: IR.USWR.REC.1398.023). The resources of libraries and Internet databases were searched using the following English words using the "MeSh" strategy and the free strategy. Based on this, "PubMed," "Web of Science," and "Scopus" databases were searched without any time limit and using the following keywords:

"Healthcare Discrimination" OR "Discrimination in Healthcare" OR "Discrimination in care" AND "Health Service" OR "Therapy" OR "Treatment" OR "Nursing."

The inclusion criteria for entering articles into the study include: 1. Research related to the causes and outcomes of discrimination in health care 2. Publication of the papers in English 3. Access to the full text of articles in open access journals and subscribed journals accessible via the University Library link. It should be noted that there were no restrictions on the entry of studies based on the design of the studies. Exclusion criteria include: 1- Lack of access to the full text of article 2- Letter to the editor articles. The titles and abstracts were analyzed for relevance to the inclusion and exclusion criteria. After that,

the full text of the selected articles was read and interpreted. The quality of the studies was assessed through the "Data Extraction Form" based on the purpose of the research by the researcher was designed. This form includes sections such as specifications of study methodology (purpose, sampling method, sample size, research location, type of study, tools). Moreover, related information on the causes and frequency of discrimination in health care and the most important consequences of discrimination in health care.

In the second stage, the titles and abstracts were reviewed, of which 312 articles were retrieved, 270 articles remained after removing duplicate items. Repetitive studies were studies that had the same title, author's name, and published journal. Of these, 235 articles were removed after reviewing the title and abstract for reasons unrelated, insufficient data reporting, and poor quality. Finally, 35 articles were eligible, and the full text of articles was examined for a more detailed review. At the end of the second stage, only 23 descriptive articles from the reviewed articles had a full text and related to the scope of the research work (Figure 1). To increase the accuracy and robustness of the research methodology and to evaluate the quality of the collected articles and to prevent possible biases, two professors of the research team with experience in systematic review assessed and analyzed the articles in terms of abstract, introduction, method, results, discussion, and resources.

Ethics: This study was approved by the Research Ethics Committee of Tehran University of Social Welfare and Rehabilitation Sciences (Ethics code: IR. USWR. REC.1398.023).

Data Synthesis: Data extraction tools have been prepared to obtain data from the selected studies. The data is summarized in a thematic model by the first author. The first step involved reading and re-reading texts from individual studies and mentioning metaphors, themes, and interpretive categories. This step continued throughout the data collection period. The thematic analysis allows the development and improvement of emerging topics in the text and the evaluation of existing issues related to the process of discrimination in health care to identify and control it. The research team held meetings to discuss key findings and to summarize and interpret the evidence.

RESULTS

All the articles reviewed were original studies, all of which were quantitative. The results of the findings of the articles show two main concepts, including "social-demographic factors as a context of discrimination in health care" and "change in health behaviors." The process of discrimination in health care is shown in Figure 2. Accordingly, various social factors can provide a platform for patients and clients to receive medical treatment and health services to experience discriminatory behavior by health care providers. The result of this experience is the formation of the phenomenon of discrimination in health care, which has various consequences. Initially, patients lose confidence in the health care system due to the experience of discrimination in receiving services, which ultimately leads to a change in their health behaviors. The result of this change in health behaviors will be a lack of continued treatment or use and non-participation in preventive programs. A summary of the most relevant results of the articles is given in Table 1.

Based on the data obtained from the reviewed articles, three articles directly identified different types of discrimination in health care [14, 15]. In these articles, discrimination in health care and the provision of medical care for various kinds including age, sex, race, disability, religion, weight, physical appearance, economic status, language, and sexual orientation. An article also identified two types of discrimination in health care in the form of positive and negative discrimination in the provision of health care. Among the various kinds of Discrimination in health care, Discrimination based on age has been the most common type of discrimination in health care among European countries. Also, in this regard, among European countries, the United Kingdom and Cyprus have reported the highest and lowest levels of discrimination in health care, respectively [16].

Social-demographic Factors as a Context of Discrimination in Health Care: In the studied articles, 17 articles identified and determined the factors and settings in which discrimination in health care is formed and manifested by health care providers [14, 17-32]. Race/ethnicity and income level have been the essential factors in the emerging and experienced discrimination in health care by health care providers. In the studies, patients of different races or ethnicities, as well as people of color, reported more experience of discrimination in receiving health care. The level of income and economic status of patients and clients of medical centers were other socio-demographic factors identified in the articles that cause discriminatory behaviors by health care providers. People who did not have a good economic situation and had a moderate- and low-income level reported more discrimination in receiving health care. Also, people with low levels of education reported higher levels of discrimination, mainly due to their lack of knowledge and awareness of their rights. Other identified fields are shown in Table 2.

Change in Health Behavior: In the reviewed articles, 13 articles have identified the various consequences that have been experienced following discrimination in healthcare [14-26]. According to the data obtained from the reviewed articles, the main result of discrimination in health care is a change in health behaviors, so people and patients receiving health services after experiencing discrimination in their visits due to the loss of their trust in health service staff and begin to use and refer less for preventive treatments such as screening programs. Other changes in people's health behaviors include less use of vaccination programs, lack of follow-up treatment and rehabilitation programs, and increased use of cigarettes. Table 3 shows the types of health behaviors that have changed after experiencing discrimination in health care.

Among the articles examined, two articles in their results presented the most important consequences of discrimination experience in health care by reducing the quality of care and exacerbating the symptoms of the disease and consuming higher doses of blood sugar control drugs [14, 21]. Also, among the evaluated articles, two articles identified psychological consequences

following the experience of discrimination in health care in individuals and clients [22, 25]. Psychological distress and sometimes suicidal thoughts are the results of these studies as effects and psychological harms of discrimination in health care. Also, the loss of proper communication and disrespect for health care providers has been cited as another consequence.

Table 1. Features and Results of Studies on Discrimination in Health Care

Article	Year	Designee	Main results
Perceived Discrimination and Self-Rated Health in Europe: Evidence from the European Social Survey [27]	2013	Descriptive analytical	Three common forms of discrimination in health care in the European Union, including age discrimination, sex discrimination, and discrimination in disability.
Discrimination in healthcare as a barrier to care experiences of socially disadvantaged populations in France from a nationally representative survey [32]	2020	Descriptive analytical	Gender, immigration, race, and religion have been identified as contexts of discrimination in health care.
An Examination of Factors Associated with Healthcare Discrimination in Latina Immigrants: The Role of Healthcare Relationships and Language [33].	2014	Cross-sectional	People who could better communicate reported less discrimination in health care.
Perceived discrimination in medical settings and see the quality of care: A population-based study in Chicago [24]	2019	Descriptive analytical	Discrimination in health care by physicians and other medical staff in the form of providing less time for the patient or his less participation in the decision-making process of treatment.
The Effects of Perceived Discrimination on Immigrant and Refugee Physical and Mental Health [25]	2019	Descriptive analytical	Lack of social support, different language, and lack of proper communication identified as consequences of discrimination in health care.
Discrimination in Healthcare Settings is Associated with Disability in Older Adults: Health and Retirement Study, 2008–2012 [14] .	2015	Descriptive analytical	The experience of discrimination in patients has led to an exacerbation of disability, followed by less use of health services.
Perceived Discrimination and Privilege in Health Care: The Role of Socioeconomic Status and Race [34]	2017	Descriptive analytical	Race, low levels of education, lack of health insurance, low incomes, and poor economic status are social factors that lead to discrimination in health care.
Perceived Discrimination is Associated with Health Behaviors among African Americans in the Jackson Heart Study [23]	2016	Cross-sectional	Discrimination in health care has led to changes in people's health behaviors in the form of more smoking and high-fat foods in men.
Impact of perceived discrimination in health care on patient-provider communication [22]	2011	Cross-sectional	Discrimination in race-based health care destroys respect and communication between health care providers and individuals.
Socially Assigned Race, Healthcare Discrimination, and Preventive Healthcare Services [19]	2013	Cross-sectional	Discrimination in health care has led to changes in health behaviors, including less participation in Influenza and pneumonia vaccination programs.
The Link Between Everyday Discrimination, Healthcare Utilization, and Health Status Among a National Sample of Women [20]	2016	Descriptive analytical	Age, race, level of education, annual income, type of health insurance, and employment status were main factors.
Perceived Discrimination in Health Care and Health Status in a Racially Diverse Sample	2008	Descriptive analytical	Factors such as low level of income, little education, the amount of health insurance coverage, and the financial capacity of medical expenses were also identified as areas of discrimination in health care.
Provider Factors and Patient-Reported Healthcare Discrimination in the Diabetes Study of California (DISTANCE) [36]	2011	Descriptive analytical	Nurses who did not communicate well with patients reported higher levels of discrimination in their patient care.
Association between perceived Discrimination and Healthcare-seeking behavior in people with a disability [17]	2017	Cross-sectional	People with disabilities, especially those with physical disabilities and communication disabilities, experienced higher levels of discrimination in health care.
Racial Discrimination and Uptake of Dental Services among American Adults [18]	2019	Descriptive	The emotional effects that patients experience following racial discrimination in health care are a predictor of health and the use of dental services.
Perceived Discrimination in Health Care and the Use of Preventive Health Services [15]	2008	Cross-sectional	Negative Discrimination in health care has led to fewer people using preventive and screening therapies.
Racial Discrimination in Health Care and Utilization of Health Care: A Cross-sectional Study of California Adults [35]	2018	Cross-sectional	Factors such as health insurance, race, citizenship status, age, English speaking skills, income and living standards in urban or rural areas were identified in relation to discrimination in care.
Perceived discrimination and self-rated health in Canada: an exploratory study [28]	2016	Descriptive analytical	Age, religion, and disability were also identified as factors associated with discrimination in health care.
Perceived discrimination and health outcomes among Asian Indians in the United States [16]	2016	Cross-sectional	Self-assessment of poor health was identified as one of the consequences of discrimination in health care.
Discrimination based on criminal record and healthcare utilization among men recently released from prison: a descriptive study [26]	2014	Cross-sectional	Criminal record and imprisonment have been one of the contexts of discrimination in health care provided by health care providers.
Factors associated with perceived discrimination in health services of Brazil: Results of the Brazilian National Health Survey, 2013.	2016	Cross-sectional	Restrictions on financial resources and social class of clients were identified as the main areas of discrimination in the care provided by health care providers.
Self-reported Racial/Ethnic Discrimination in Healthcare and Diabetes Outcomes [21]	2011	Descriptive analytical	Discrimination in health care has led to a decline in the quality of health care indicators in people with diabetes.
Perceived Discrimination Based on Criminal Record in Healthcare Settings and Self-Reported Health Status among Formerly Incarcerated Individuals.	2020	Descriptive analytical	Discrimination in health care by physicians, nurses, and other health care providers for people with a history of imprisonment has led to weak public health reports.

Table 2. Identified factors and contexts leading to discrimination in healthcare

Identified factors and contexts	Number of articles	Identified factors and contexts	Number of articles	Identified factors and contexts	Number of articles
Race / Ethnicity	10	Religion	3	Immigration	1
Income level and economic status	7	Disability	3	Weight	1
Level of Education	5	Language and communication	3	Physical appearance	1
Lack of health insurance	5	Criminal and prison record	2	Type of disease	1
Age	4	Social situation	2	Lodging	1
Gender	3	Lack of social support	1	Sexual orientation	1

Table 3. Types of Changed Health Behaviors Following the Experience of Discrimination in Health Care

Health behaviors	**Number of articles**
Avoid follow up treatment	2
Poor health self-evaluation	2
Do not use or less use of preventive treatments and screening programs	1
Reduction of visits to medical centers for periodic examinations and regular visits	1
Less involvement in vaccination programs in at-risk individuals	1
Less use of dental services	1
More use of emergency services	1
Smoking more	1
Reduce and change sleep hours	1
Lack of diet and more use of fatty foods	1

DISCUSSION

The present study aimed at determining and comprehensive description of discrimination in healthcare and related factors and outcomes in different societies. It was done using a systematic review. The articles included in this study, analyzed, and evaluated, provided a picture of the phenomenon of discrimination in health care in different countries [16, 27, 28].

Based on the reported results, these studies show that discrimination in health care is a widespread phenomenon that affects the health system and is worth considering. According to studies, among different types of Discrimination in health care, Discrimination in the form of discrimination based on age, race, or ethnicity is more common than other types of discrimination in health care. Discrimination in the provision of health care due to the age of individuals has been investigated in various studies, and the rate of this type of discrimination has been reported at a high rate [27, 29, 30].

It seems that one of the reasons for the prevalence of age discrimination is the paternalism approach of health care providers to patients, due to which older people are less involved in decision-making and the process of treatment and care [31]. Also, the race or ethnicity of individuals, especially in countries with immigrant populations of different cultures, has been observed and reported more than other countries [25, 32, 33].

According to the findings, the studies had a variety of samples, cities, and countries of research, which is essential, but it is necessary to state that the studies were conducted in different countries in Europe and the United States, so the information There is no evidence of discrimination in health care in other Asian and African countries, which seems to be related to cultural sensitivities, taboos about discrimination in health care, or lack of attention from researchers or lack of political acceptance to work on such issues in developing countries. Another noteworthy point is the lack of qualitative studies on this phenomenon, which can be considered as one of the gaps in the complete identification of this phenomenon. However, since the occurrence of discrimination in health care as an example of discrimination in different societies is inevitable and has wide-ranging negative consequences [3, 8, 32] and on the other hand, is affected by social and cultural interactions [34], so future studies, especially consider this phenomenon with a qualitative approach to the identification of buried layers.

Based on the evaluated studies, several factors are associated with discrimination in healthcare and can provide a basis for discriminatory behavior in healthcare. Among the analyzed factors and contexts, race or ethnicity was the most common factor associated with discrimination in health care. People of different races and ethnicities live in different countries. On the other hand, racial discrimination in health care is a multifaceted process consisting of cognitive, behavioral, and biological dimensions [35]. Studies have shown that differences in the race are mainly due to changes in skin color, such as blacks living in different states of the United States. The existence and experience of racial discrimination among racial and ethnic minority groups is not an unexpected finding, as noted in other studies [5, 18, 19, 21, 35].

The level of income and economic status, as well as the level of education of individuals, are other factors that, according to the findings of studies, provide the context for discrimination in health care. Among the social factors, income level and the number of financial resources has been identified as a source of power [7]. People's financial ability and economic power provide them with more access to health facilities and services and are not limited to certain public and private medical centers. On the other hand, the low level of education and the lack of sufficient knowledge about the quantity and quality of medical care in individuals and patients cause more discrimination in health care by health care providers [34]. Based on the evaluated studies, the identified factors are based solely on the results of descriptive and analytical studies and only show the relationship and effectiveness of these factors. In

contrast, these studies do not address how these social factors affect, so again, the need to do so. Qualitative studies in this area should be considered in new studies. In the articles reviewed and analyzed, the consequences of discrimination in health care were mainly reported as negative consequences. Of course, one study examined positive discrimination, describing the consequences of this form of discrimination as positive, and describing the use of health care and preventive programs by more people in the community [15]. Still, in general, the evaluated studies reported negative consequences, the most common of which were changes in people's health behaviors. This change in health behaviors, which is mainly due to the lack of follow-up treatment and avoidance of preventive and screening care programs, is probably due to previous experience of discriminating against people visiting medical centers, which ultimately destroys trust in medical personnel, including became doctors and nurses [15, 19, 24, 35]. Another negative consequence that has been obtained in the studies is the exacerbation of the complications of the disease and its poor control in infected people. These studies found that people with diabetes were less likely to control the disease than they were to seek medical attention in their health care visits, which could increase the dosage of medications and complications [21, 36]. On the other hand, the experience of discrimination in visiting health centers and the feeling of receiving incomplete medical care causes many emotional reactions and psychological damage in these people, as in the studies, the experience of discrimination in health care is as a factor in creating stress [23, 25].

CONCLUSION

The results of this review study show that discrimination in health care is an essential and international challenge. Based on the results obtained, in the process of discrimination in health care, socio-demographic factors create a platform for the occurrence of discriminatory behaviors in health care. Among these factors, race/ethnicity, income level, and economic status of individuals were the most socio-demographic factors that create grounds for discrimination in health care. On the other hand, changes in the health behaviors of people in the community and patients were recognized as a negative consequence of discrimination in health care. Changes in health behavior due to loss of trust lead to less use of medical services and a lack of follow-up treatment. Also, it is necessary to identify the various dimensions of this phenomenon in more reliable studies, including qualitative studies. For this purpose, future studies should move from descriptive studies to qualitative studies to identify in-depth and how factors affect and use in clinical settings. Researchers, managers, health policymakers, health care providers, especially physicians and nurses and other stakeholders, should enter the field with the participation of each other to find creative and practical strategies to control and minimize discrimination in health care.

Acknowledgments: This study was extracted from a Ph.D. thesis in nursing approved on May 29, 2019, in Tehran University of Social Welfare and Rehabilitation Sciences. The research team, thanks to the sincere cooperation of the staff of the Central Library of the University of Social Welfare and Rehabilitation Sciences, for introducing appropriate databases and providing electronic resources.
Conflict of Interest: The authors of this article state that there is no conflict of interest in writing this article.
Funding statement: None received

REFERENCES

1. Whitaker KM, Everson-Rose SA, Pankow JS, Rodriguez CJ, Lewis TT, Kershaw KN, Diez Roux AV, Lutsey PL. Experiences of Discrimination and Incident Type 2 Diabetes Mellitus: The Multi-Ethnic Study of Atherosclerosis (MESA). *Am J Epidemiol*. 2017;186(4):445-455. doi:10.1093/aje/kwx047.
2. Versey HS, Curtin N. The differential impact of discrimination on health among Black and White women. *Soc Sci Res*. 2016;57:99-115. doi:10.1016/j.ssresearch.2015.12.012.
3. Parker LJ, Hunte H, Ohmit A. Discrimination in Health Care: Correlates of Health Care Discrimination Among Black Males. *Am J Mens Health*. 2017;11(4):999-1007. doi:10.1177/1557988315585164.
4. Brondolo E, Brady Ver Halen N, Pencille M, Beatty D, Contrada RJ. Coping with racism: a selective review of the literature and a theoretical and methodological critique. *J Behav Med*. 2009;32(1):64-88. doi:10.1007/s10865-008-9193-0.
5. Perreira KM, Telles EE. The color of health: skin color, ethnoracial classification, and discrimination in the health of Latin Americans. *Soc Sci Med*. 2014;116:241-250. doi:10.1016/j.socscimed.2014.05.054.
6. Barber C. Disability discrimination in healthcare services and employment. *Nurs Stand*. 2015;30(5):40-45. doi:10.7748/ns.30.5.40.e9983.
7. Ginsburg O. Breast and cervical cancer control in low and middle-income countries: Human rights meet sound health policy. *Journal of Cancer Policy*. 2013;1(3-4):e35-e41.
8. Piette JD, Bibbins-Domingo K, Schillinger D. Health care discrimination, processes of care, and diabetes patients' health status. *Patient Educ Couns*. 2006;60(1):41-48. doi:10.1016/j.pec.2004.12.001.
9. Rodríguez-Álvarez E, González-Rábago Y, Borrell LN, Lanborena N. Perceived discrimination and self-rated health in the immigrant population of the Basque Country, Spain. *Gac Sanit*. 2017;31(5):390-395. doi:10.1016/j.gaceta.2016.12.014.
10. Swiery D, Willitts M. Attitudes to age in Britain 2010/11. 2012.
11 https://www.unaids.org/sites/default/files/media_asset/20171129_UNAIDS_PCB41_Zero_discrimination-health-care-settings_17.27_EN.pdf.
12. Khan KS, Kunz R, Kleijnen J, Antes G. Five steps to conducting a systematic review. *J R Soc Med*. 2003;96(3):118-121. doi:10.1258/jrsm.96.3.118.
13. Poorolajal J, Tajik P, Yazdizadeh B, Sehat M, Salehi A, Rezaei M, Holakouie Naieni K. Quality assessment of the reporting of cohort studies before STROBE statement. *Iranian journal of epidemiology*. 2009;5(1):17-26.
14. Rogers SE, Thrasher AD, Miao Y, Boscardin WJ, Smith AK. Discrimination in Healthcare Settings is Associated with Disability in Older Adults: Health and Retirement Study, 2008-2012. *J Gen Intern Med*. 2015;30(10):1413-1420. doi:10.1007/s11606-015-3233-6.
15. Hausmann LR, Jeong K, Bost JE, Ibrahim SA. Perceived discrimination in health care and use of preventive health services. *J Gen Intern Med*. 2008;23(10):1679-1684. doi:10.1007/s11606-008-0730-x.
16. Misra R, Hunte H. Perceived discrimination and health outcomes among Asian Indians in the United States. *BMC*

Health Serv Res. 2016;16(1):567. doi:10.1186/s12913-016-1821-8.
17. Moscoso-Porras MG, Alvarado GF. Association between perceived discrimination and healthcare-seeking behavior in people with a disability. *Disabil Health J*. 2018;11(1):93-98. doi:10.1016/j.dhjo.2017.04.002.
18. Sabbah W, Gireesh A, Chari M, Delgado-Angulo EK, Bernabé E. Racial Discrimination and Uptake of Dental Services among American Adults. *Int J Environ Res Public Health*. 2019;16(9). doi:10.3390/ijerph16091558.
19. Macintosh T, Desai MM, Lewis TT, Jones BA, Nunez-Smith M. Socially-assigned race, healthcare discrimination and preventive healthcare services. *PLoS One*. 2013;8(5):e64522. doi:10.1371/journal.pone.0064522.
20. Fazeli Dehkordy S, Hall KS, Dalton VK, Carlos RC. The Link Between Everyday Discrimination, Healthcare Utilization, and Health Status Among a National Sample of Women. *J Womens Health (Larchmt)*. 2016;25(10):1044-1051. doi:10.1089/jwh.2015.5522.
21. Peek ME, Wagner J, Tang H, Baker DC, Chin MH. Self-reported racial discrimination in health care and diabetes outcomes. *Med Care*. 2011;49(7):618-625. doi:10.1097/MLR.0b013e318215d925.
22. Hausmann LR, Hannon MJ, Kresevic DM, Hanusa BH, Kwoh CK, Ibrahim SA. Impact of perceived discrimination in healthcare on patient-provider communication. *Med Care*. 2011;49(7):626-633. doi:10.1097/MLR.0b013e318215d93c.
23. Sims M, Diez-Roux AV, Gebreab SY, Brenner A, Dubbert P, Wyatt S, Bruce M, Hickson D, Payne T, Taylor H. Perceived discrimination is associated with health behaviours among African-Americans in the Jackson Heart Study. *J Epidemiol Community Health*. 2016;70(2):187-194. doi:10.1136/jech-2015-206390.
24. Benjamins MR, Middleton M. Perceived discrimination in medical settings and perceived quality of care: A population-based study in Chicago. *PLoS One*. 2019;14(4):e0215976. doi:10.1371/journal.pone.0215976.
25. Szaflarski M, Bauldry S. The Effects of Perceived Discrimination on Immigrant and Refugee Physical and Mental Health. *Adv Med Sociol*. 2019;19:173-204. doi:10.1108/s1057-629020190000019009.
26. Frank JW, Wang EA, Nunez-Smith M, Lee H, Comfort M. Discrimination based on criminal record and healthcare utilization among men recently released from prison: a descriptive study. *Health Justice*. 2014;2:6. doi:10.1186/2194-7899-2-6.
27. Alvarez-Galvez J, Salvador-Carulla L. Perceived discrimination and self-rated health in Europe: evidence from the European Social Survey (2010). *PLoS One*. 2013;8(9):e74252. doi:10.1371/journal.pone.0074252.
28. Du Mont J, Forte T. Perceived discrimination and self-rated health in Canada: an exploratory study. *BMC Public Health*. 2016;16:742. doi:10.1186/s12889-016-3344-y.
29. Kagan SH. Ageism in cancer care. *Semin Oncol Nurs*. 2008;24(4):246-253. doi:10.1016/j.soncn.2008.08.004.
30. Nguyen TT, Vable AM, Glymour MM, Nuru-Jeter A. Trends for Reported Discrimination in Health Care in a National Sample of Older Adults with Chronic Conditions. *J Gen Intern Med*. 2018;33(3):291-297. doi:10.1007/s11606-017-4209-5.
31. Kious BM. Respect for autonomy: deciding what is good for oneself. *J Med Ethics*. 2016;42(12):769-775. doi:10.1136/medethics-2015-103340.
32. Rivenbark JG, Ichou M. Discrimination in healthcare as a barrier to care: experiences of socially disadvantaged populations in France from a nationally representative survey. *BMC Public Health*. 2020;20(1):31. doi:10.1186/s12889-019-8124-z.
33. Sheppard VB, Williams KP, Wang J, Shavers V, Mandelblatt JS. An Examination of Factors Associated with Healthcare Discrimination in Latina Immigrants: The Role of Healthcare Relationships and Language. *J Natl Med Assoc*. 2014;106(1):15-22. doi:10.1016/s0027-9684(15)30066-3.
34. Stepanikova I, Oates GR. Perceived Discrimination and Privilege in Health Care: The Role of Socioeconomic Status and Race. *Am J Prev Med*. 2017;52(1s1):S86-s94. doi:10.1016/j.amepre.2016.09.024.
35. Alcalá HE, Cook DM. Racial Discrimination in Health Care and Utilization of Health Care: a Cross-sectional Study of California Adults. *J Gen Intern Med*. 2018;33(10):1760-1767. doi:10.1007/s11606-018-4614-4.
36. Lyles CR, Karter AJ, Young BA, Spigner C, Grembowski D, Schillinger D, Adler N. Provider factors and patient-reported healthcare discrimination in the Diabetes Study of California (DISTANCE). *Patient Educ Couns*. 2011;85(3):e216-224. doi:10.1016/j.pec.2011.04.031.

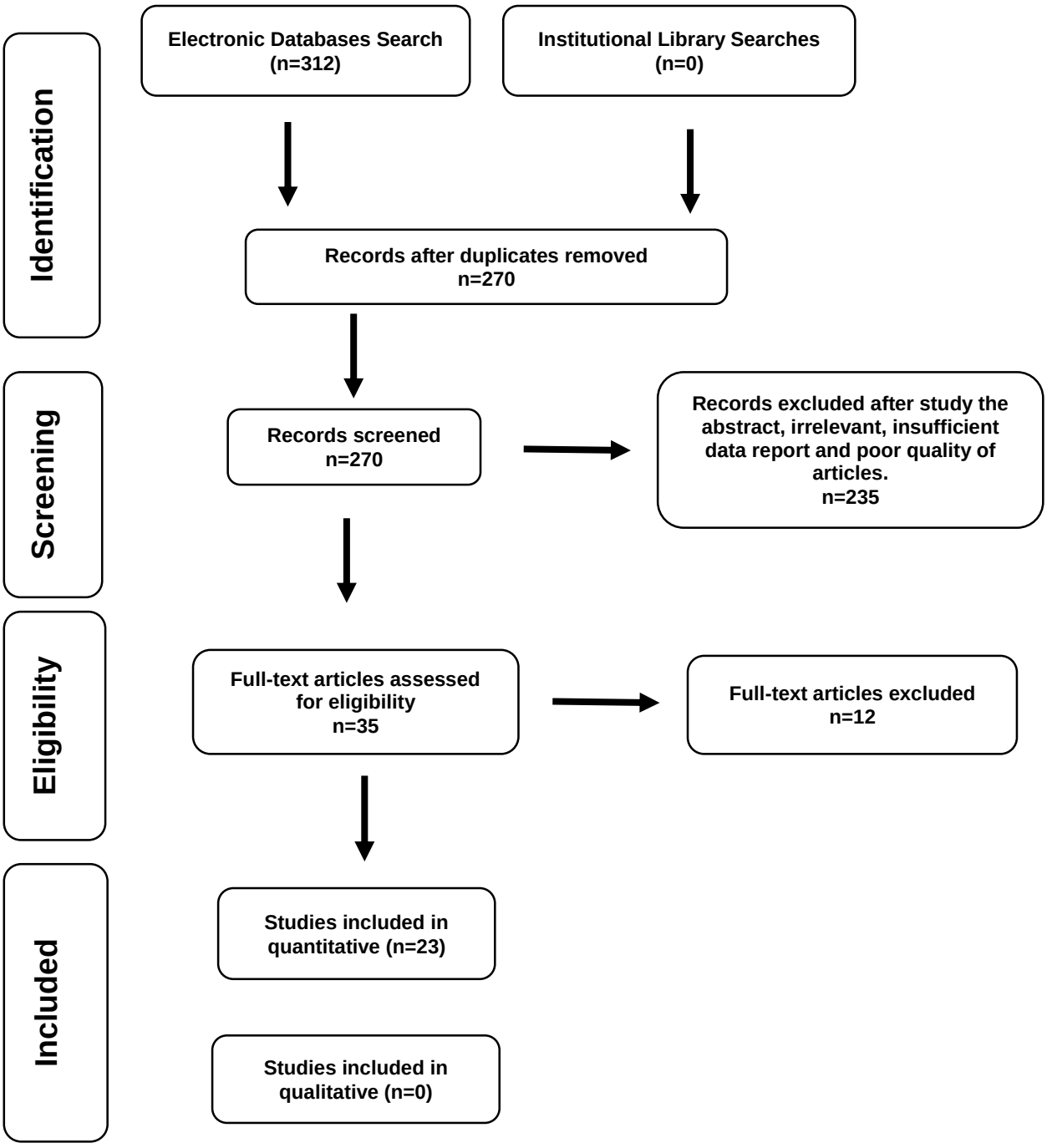

Figure 1. The process of reviewing and selecting articles based on the PRISMA