Inequality in health, social determinants, and intersectionality: a systematic review

Desigualdade em saúde, determinantes sociais, e interseccionalidade: uma revisão sistemática

DOI:10.34119/bjhrv3n5-040

Recebimento dos originais:08/08/2020
Aceitação para publicação:04/09/2020

Olinda do Carmo Luiz
Doutora em Medicina Preventiva
Pesquisadora do Departamento de Medicina Preventiva/ Saúde Coletiva, Faculdade de Medicina, Universidade de São Paulo
Endereço: Av. Dr. Arnaldo, 455, 2º andar. São Paulo/SP. 01246-903
E-mail: olinda@usp.br

Marcia Thereza Couto
Doutora em Sociologia
Docente do Departamento de Medicina Preventiva/ Saúde Coletiva, Faculdade de Medicina, Universidade de São Paulo
Endereço: Av. Dr. Arnaldo, 455, 2º andar. São Paulo/SP. 01246-903
E-mail: marthet@usp.br

Elda de Oliveira
Doutora em Ciências
Professora visitante da Escola Paulista de Enfermagem, Universidade Federal de São Paulo
Rua Napoleão de Barros, 754, Vila Clementino. São Paulo/SP. 04023-062
E-mail: eldade@usp.br

Marco Antonio Separavich
Doutor em Saúde Coletiva
Pesquisador do Grupo de Estudo e Pesquisa em Saúde, Interseccionalidade e Marcadores Sociais da Diferença, Faculdade de Medicina, Universidade de São Paulo
Endereço: Av. Dr. Arnaldo, 455, 2º andar. São Paulo/SP. 01246-903
E-mail: mseparavich@hotmail.com

ABSTRACT
The intersectionality seek to expand the explanations for inequalities in health in contemporary society. This study sought to map the conceptual and methodological approach of intersectionality using quantitative data analysis studies on health inequalities. Systematic review was held in April 2017 using multiple sources of information. Inclusion criteria were articles that converged with the themes of health care disparities, gender identity, ethnic groups, social class, and public health and that simultaneously applied the...
concept of intersectionality in the analysis. Exclusion criteria were articles that only mentioned intersectionality without discussing its applicability and articles exclusively theoretical and conceptual or with a qualitative methodological approach. The search strategy resulted in 1,763 articles. After removing the duplicates and articles by titles and abstracts, 20 articles composed the corpus of analysis of the review. The methodological resources most often used in the intersectional analyses were stratification of social markers of difference, interaction analysis, multivariate regression models, and multilevel analysis. The perspective of inter-sectionality allows for a greater specificity in mapping health disparities. However, caution is required in the subdivision of the population arising from the stratification of variables, without forgetting to focus on the interactive systems of power at the source of health inequalities.

**Keywords:** ethnicity, gender, health inequality, intersectionality, race, social determinants

**RESUMO**
A interseccionalidade busca expandir as explicações para as desigualdades em saúde na sociedade contemporânea. Este estudo procurou mapear a abordagem conceitual e metodológica da interseccionalidade usando estudos quantitativos de análise de dados sobre as desigualdades em saúde. A revisão sistemática foi realizada em abril de 2017, usando várias fontes de informação. Os critérios de inclusão foram artigos que convergiram para os temas de disparidades na assistência à saúde, identidade de gênero, etnia, classe social e saúde pública e que aplicaram simultaneamente o conceito de interseccionalidade na análise. Os critérios de exclusão foram artigos que mencionaram apenas a interseccionalidade sem discutir sua aplicabilidade e artigos exclusivamente teóricos e conceituais ou com abordagem metodológica qualitativa. A estratégia de busca resultou em 1.763 artigos. Após a remoção dos duplicados e artigos por títulos e resumos, 20 artigos compuseram o corpus de análise da revisão. Os recursos metodológicos mais frequentemente utilizados nas análises interseccionais foram a estratificação de marcadores sociais da diferença, análise de interação, modelos de regressão multivariada e análise multinível. A perspectiva da intersetorialidade permite maior especificidade no mapeamento das disparidades em saúde. No entanto, é necessária cautela na subdivisão da população decorrente da estratificação de variáveis, sem esquecer o foco nos sistemas interativos de poder gerador das desigualdades na saúde.

**Palavras-chave:** etnia, gênero, desigualdade em saúde, interseccionalidade, raça, determinantes sociais

**1 INTRODUCTION**

Economic, social, political, and environmental transformations change the health of individuals and populations. (1) Since the 19th century, the idea that health conditions are directly related to the context and the position of subjects in the social structure has increasingly been strengthened, creating the theoretical framework known as social determination of health and disease. (2) Poverty, poor housing conditions, urban environment, and unhealthy working conditions are factors that negatively affect the health...
of a population. The link between social and health conditions is so close that the magnitude of inequalities in health is an indicator of the impact of social and economic inequalities in people’s lives. Thus, the relationship of aspects such as education level, occupation, income, and unemployment with the indicators of health status has been the subject of research, strengthening the emphasis on socioeconomic conditions as source of differences in health.

Studies on social inequalities in health considering the social determinants and markers of difference verify that diseases more commonly affect the most vulnerable population groups. Even in economically developed countries, inequalities have increased in recent decades (3) as a reflection of the rapid changes in the distribution of wealth and income. (4)

In epidemiology, some authors highlight the challenge of developing analytical models sensitive to the different hierarchical power positions occupied by socially vulnerable groups, which structure health inequalities. (5, 6) Socioeconomic explanations point out that social determinants generate health inequalities, formed mainly by politics and the economic and productive organization. The Commission on Social Determinants of the World Health Organization pointed out that political, social, and economic factors must be subject to interventions aimed at reducing inequalities in health, (7) guided by the knowledge produced in research. (8)

Seeking to expand the explanations for the origin of inequalities in health and their reproduction within the complex relationships in contemporary society, some authors started to use intersectionality as a theoretical-methodological framework. Having as its origin the feminist and anti-racist traditions of 1980s America, intersectionality is an analytical approach about the interrelationship of multiple social markers of difference and social determinants, recognizing that the different axes of power and domination are at the root of health needs, resulting in the success of public policies for social justice. (9-14)

For more than two decades, the perspective of intersectionality based studies in the social sciences and humanities, thematizing the structuring and dynamics of the oppression and discrimination processes that shape social inequalities. At the end of the last decade, however, such a theoretical-methodological approach started to be applied, effectively and systematically, in public health research, (14) especially in analytical studies of primary and secondary data.

From the point of view of intersectionality, identity markers of social differences (gender, race/ethnicity, and social class, among others) are understood as constituting the
social determinants of health, articulated as categories that overlap but do not merge, and none of them is given precedence or prominence in the analyses. (5, 15) However, there is consensus on the need for methodological refinement in terms of data production and analysis, given the contemporary and innovative nature of their use on public health. (16)

Considering the increasing use of the theoretical-methodological approach of intersectionality in health, this study asks the following questions: How have researchers been employing the concepts of intersectionality in quantitative data analysis studies seeking to explain inequalities in health? What are the main social markers of difference incorporated and discussed in these studies? What are the methodologies used in the analyses?

Thus, this study aims to map and analyse the conceptual and methodological approach of intersectionality in quantitative data analysis studies on health inequalities.

2 METHODS

2.1 DESIGN

Systematic review was carried out according to Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) recommendations. (17)

2.2 ELIGIBILITY

Inclusion criteria were articles that converged with the themes: health care disparities, gender identity, ethnic groups, social class, and public health and that simultaneously applied the concept of intersectionality in the analysis. Exclusion criteria were articles that only mentioned the word intersectionality without, however, discussing its applicability, and articles exclusively theoretical, conceptual, or with qualitative methodological approach.

2.3 SOURCES OF INFORMATION

The research was performed in April 2017 in the following databases: Web of Science (social sciences, arts, and humanities); Embase (biomedical and health literature); CINAHL (Cumulative Index to Nursing and Allied Health Literature); Scopus (science, technology, medicine, social sciences, and arts and humanities); Sociological Abstracts (sociology); LILACS (Literature in the Health Sciences in Latin America and the Caribbean); and PubMed (biomedical and health literature), which includes MedLine.
2.4 SEARCH STRATEGY

Given the recent incorporation of the concepts studied here in the scientific literature in the health field, the most sensitive possible strategies were used. Thus, the terms used in PubMed/MedLine were intersectionality (All Fields) AND ("health"(MeSH Terms) OR "health"(All Fields)). Search strategies in the other sources are described in detail in Table 1. The references listed in the selected publications were searched to identify articles that had not been found in previous searches.

2.5 ARTICLE SELECTION

Two researchers carried out article selection independently, and a third researcher decided differences.

2.6 DATA EXTRACTION

Data extraction was performed in a spreadsheet. We mapped the country of origin of the corresponding author, the markers of difference, the reference authors that guided the concept of intersectionality applied in article, and the theoretical-methodological resources used.

3 RESULTS

The search strategy resulted in 1,763 articles. The studies were exported to EndNote Web, which manages references to remove duplicates. Excluding duplicates (n=629), 1,134 remained. After reading titles and abstracts, 1,098 were excluded; thus, 36 texts were read. In the full reading, 19 articles were excluded, and 3 articles were added after research in the references listed in the selected publications. Therefore, 20 articles composed the corpus of analysis of this review, as Table 1 shows.

Research from the perspective of intersectionality addressing social inequality in health started in 2008, and 2016 had the highest publication rate, with five articles. All studies used secondary data from research.

Gender is the social marker of difference that stands out for the whole production, followed by race/ethnicity and socioeconomic status, which is a term used to refer to differences of power, privilege, and desirable resources. This information can be best observed in Table 2. Gender is also an important aspect when the sex of the main or corresponding author of the studies was observed (13 men and 7 women).
When highlighting the concept of intersectionality, the six most cited authors, in order of citation, were: Kimberlé Crenshaw, Patricia Hill Collins, Olena Hankivsky, Leslie McCall, Lynn Weber, Ange-Marie Hancock. We emphasize that all are female and that only two have specific training in the health field. The remaining authors come from the social sciences and humanities and the legal field.

The methodological resources most used in the intersectional analysis were stratification of the social markers of difference, stratification of markers and analysis of interaction, multivariate logistic regression models, and multilevel analysis.

4 DISCUSSION
4.1 CONCEPT OF INTERSECTIONALITY

With a few variations, the analysed articles highlight the interconnection between the dimensions of social inequality, especially race/ethnicity, gender, and social class. (18-36)

These interconnected dimensions would be part of the operation of systems of oppression such as capitalism, patriarchy, and white supremacy. The simultaneity of dimensions makes them mutually constitutive and reproductive in a multiplicative, not only additive, relationship of social inequalities in health. Thus, the researchers propose that groups with multiple vulnerabilities are disadvantaged regarding life experiences and opportunities and, therefore, should be focused on by social health policies.

For the research, the implication of the approach of intersectionality is the focus on the multiple dimensions of inequality to highlight and discuss the complexity of the health and disease process. We considered the social markers of difference together, assuming that their interconnection defines the access to opportunities in life and reinforces in multiple ways the production and maintenance of health throughout life.

4.2 SOCIAL MARKERS OF DIFFERENCE AND SOCIAL DETERMINANTS

In general, the studies represented the socioeconomic level by the variables of education level, income, and/or employment. Gender was unanimously considered as a variable categorized binarily by man and woman. Two studies evaluated sexual orientation, categorized by lesbian, gay, bisexual, heterosexual, and those who were not sure. (18, 27), and a national study evaluated the conception of undergraduate medical and nursing students about gender identity (37).
If there was no heterogeneity in the measurement of socioeconomic status and gender, the markers of race/ethnicity were measured by disparate variables depending on the country where the studies were conducted. In American studies, race/ethnicity were expressed in variables with the categories white, black, and Hispanic. \((18, 19, 21-23, 25, 35)\) In some situations, such categories were combined as non-Hispanic whites, non-Hispanic blacks, and Mexican-Americans. In the studies in European countries, race/ethnicity was measured according to the country of birth, in variables that compared migrants with native citizens. \((20, 28, 36)\)

Unlike European and American studies, an Indian study approached race/ethnicity according to the place of residence – rural or urban – and according to belonging to the various Indian castes. \((32)\)

The argument that emphasizes the importance of race/ethnicity as a social determinant or marker of difference in the analysed studies is that racial inequalities in health are not determined only by socioeconomic deprivation but that the dimensions of racial disadvantage and socioeconomic disadvantage intersect. Some racial groups would have greater obstacles to the use of the resources provided by policies to reduce social inequalities. As a result, measures to combat socioeconomic deprivation do not always reach certain racial groups.

4.3 METHODOLOGICAL RESOURCES

Regarding methodological resources, the researchers mainly used stratification, interaction analysis, multivariate logistic regression models, and multilevel analysis to examine the intersection of social markers.

In the stratification, the variables most often combined were race/ethnicity with gender. Thus, the health indicators of the categories of black men, white women, and black women were compared with the indicators of white men. Stratification between sexual orientation, race, and gender was found in. \((27)\) A stratified combination between race, religion, disability, and gender was found in. \((28)\) One of the studies stratified five variables: gender, race, socioeconomic status, marital status, and mental illness, totalling 24 categories combined. \((36)\)

In the analyses of interaction, researchers seek to find causal associations and estimate effect measures taking the social markers of difference – race/ethnicity, gender, social class – as exposures and social disadvantages or disadvantages in health as outcomes.
To evaluate the intersection between social markers of difference, interaction analyses and analyses of effect modification are used to quantify to what extent two or more exposure factors interfere with the occurrence of an outcome. In addition, one quantifies whether the combined effect of the exposures is greater than the simple effect arising from each one of them. (29)

When the resource of multilevel analysis is used, contextual aspects in the evaluations of causality are considered. The logic underlying multilevel models is that individuals who belong to a same group are subject to similar living conditions; therefore, in addition to investigating personal characteristics, it is important to understand the role of context in the relationships of causality. (20, 38)

We highlight the study of Blom, Huijts, and Kraaykamp (20), which sought to show the difference in health status according to race/ethnicity. The authors used data from 24 European countries to assess how ethnic inequity can be exacerbated or mitigated by national health policies. Using individual and context variables, they found that migrants report worse health levels compared to native citizens and that the difference is related, among other factors, to the national health policies. In general, countries that have invested in health services have reduced socioeconomic health differences but at the same time increased the differences between recent migrants and native citizens. In addition, policies directed specifically to improve the health of migrants only affect the well-being of those who live in Europe for more than 10 years.

The methodological approach used by Blom, Huijts, and Kraaykamp (20) allowed them to go beyond showing the difference in health status according to race/ethnicity, verifying the effect of context in the racial difference of health status. However, some studies have failed to fully explore the potential of the quantitative methodology. Sometimes, there was inadequacy between study design and statistical analysis when sequential cross-sectional data were assumed as a segment study without questioning their limit. In other situations, the adjustment for variables widely recognized as risk factors for the outcome under study was not always held, invalidating the results and conclusions.

The analysed studies showed heterogeneity in their methodology, but we have found that the epidemiological methodology has the potential to explain social dynamics from the perspective of intersectionality. Thus, we can state that the conceptual integration between theoretical propositions of intersectionality and methodological resources allow for greater approximation of the complexity of the health-disease process.
Therefore, the perspective of intersectionality may constitute one of the theoretical and conceptual frameworks for the epidemiological analysis of inequalities in health, since its framework is structured for the approach of the complex hierarchical interrelationships between the social markers of difference and the other determinants of the health-disease process. However, the analysis of studies points out that quantitative studies and statistical analyses focus on causal relationships, which explains only part of the complexity of social reality. For a greater understanding of this complexity, other methodological resources must be added.

The perspective of intersectionality allows for a greater specificity in mapping health disparities. (16) However, caution is required in the subdivision of the population arising from the stratification of variables, without forgetting to focus on the interactive systems of power at the source of health inequalities.
REFERENCES

1 Marmot M, Allen JJ. Social Determinants of Health Equity. Am J Public Health. 2014; 104(Suppl 4): S517–S519.

2 Lima BM. Health inequalities: a global perspective. Ciênc. saude coletiva. 2017;22(7):2097-2108.

3 Barreto ML. Desigualdades em Saúde: uma perspectiva global. Ciênc. saude coletiva. 2017;22:2097-2108.

4 Bhugra D. Commentary: Social determinants, social discrimination, social justice, and social responsibility. Int J Epidemiol. 2017;46(4):1333–1335.

5 Caiola C, Docherty S, Relf, M, Barroso, J. Using an intersectional approach to study the impact of social determinants of health for African American mothers living with HIV. Adv Nurs Sci. 2017; 37(4):287-98.

6 Nygren KG, Olofsson A. Intersectional approaches in health-risk research: A critical review. Sociol Compass. 2014;8(9):1112-26.

7 Koh HH, Oppenheimer SC, Massin-Short SB, et al. Translating Research Evidence into Practice to Reduce Health Disparities: A Social Determinants Approach. Am J Public Health. 2010;100(Suppl 1):S72-S80.

8 Donkin A, Goldblatt P, Allen J, Nathanson V, et al. Global action on the social determinants of health. BMJ Glob Health. 2017; 3:e000603.

9 Ravindran TKS. Commentary: Beyond the socioeconomic in The Health Gap: gender and intersection-ality. Int J Epidemiol. 2017;46(4):1321–1322.

10 Viruell-Fuentes EA, Miranda PY, Abdurrahim S. More than culture: structural racism, intersectionality theory, and immigrant health. Soc Sci Med. 2012;75:2099–106.

11 Bambra C. Health inequalities and welfare state regimes: theoretical insights on a public health ‘puzzle’. J Epidemiol Community Health. 2011; 65(9):740-5.

12 Weber L, Parra-Medina D. Intersectionality and womens health: charting a path to eliminating health dispari-ties. In: Segal MT, Demos V, Kronenfeld JJ (eds). Gender Perspectives on Health and Medicine: New York: Emerald Group; 2003. p. 181–230

13 Roura M. Unravelling migrants’ health paradoxes: a transdisciplinary research agenda J Epidemiol Community Health. 2017;71:870-873.

14 Bowleg L. The problem with the phrase women and minorities: intersectionality-an important theoretical framework for public health. Am J Public Health. 2012;102(7):1267-73

15 Hankivsky O, Cristoffersen A. Intersectionality and the determinants of health: a Canadian perspective. Crit Public Health. 2008; 108(3): 271-83.
16 Bauer GR. Incorporating intersectionality theory into population health research methodology: challenges and the potential to advance health equity. Soc. Sci. Med. 2014;110:10-17.

17 Moher D, Liberati A, Tetzlaff J, et al. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med. 2009; 6(6): e1000097.

18 Austin SB, Nelson LA, Birkett MA, et al. Eating disorder symptoms and obesity at the intersections of gender, ethnicity, and sexual orientation in US high school students. Am J Public Health. 2013 Feb;103(2):e16-22.

19 Bengiamin MI, Capitman JA, Ruwe MB. Disparities in initiation and adherence to prenatal care: impact of insurance, race-ethnicity and nativity. Matern Child Health J 2010; 14(4):618-24.

20 Blom N, Huijts T, Kraaykamp G. Ethnic health inequalities in Europe. The moderating and amplifying role of healthcare system characteristics. Soc. Sci. Med. 2016; 158:43-51.

21 Brown TH, Richardson LJ, Hargrove TW, et al. Using Multiple-hierarchy Stratification and Life Course Approaches to Understand Health Inequalities: The Intersecting Consequences of Race, Gender, SES, and Age. J Health Soc Behav. 2016;57(2):200-22.

22 Collins TW, Grineski SE, Chakraborty J, et al. Understanding environmental health inequalities through comparative intra categorical analysis: Racial/ethnic disparities in cancer risks from air toxics in El Paso County, Texas. Health Place. 2011; 17:335-44.

23 Cummings JL, Jackson PB. Race, gender, and SES disparities in self-assessed health, 1974-2004. Res Aging. 2008;30(2):137-68.

24 Etherington N. Race, Gender, and the Resources That Matter: An Investigation of Intersectionality and Health. Women Health. 2015;55(7):754-77.

25 Hinze SW, Lin J, Andersson TE. Can we capture the intersections? older black women, education, and health. Womens Health Issues. 2012;22(1):e91-e8.

26 Joe W. Intersectional inequalities in immunization in India, 1992-93 to 2005-06: a progress assessment. Health Policy Plan. 2015;30(4):407-22.

27 LeVasseus MT, Kelvin EA, Grosskopf NA. Intersecting Identities and the Association Between Bullying and Suicide Attempt Among New York City Youths: Results From the 2009 New York City Youth Risk Behavior Survey. Am J Public Health. 2013;103(6):1082-1089.

28 Millard AD, Raab G, Lewsey J et al. Mortality differences and inequalities within and between 'protected characteristics' groups, in a Scottish Cohort 1991-2009. Int J Equity Health. 2015; 14:142.
29 Novak NL, Geronimus AT, Martinez CAM. Change in birth outcomes among infants born to Latina mothers after a major immigration raid. Int J Epidemiol. 2017;46(3): 839–849.

30 Patterson AC, Veenstra G. Black-White health inequalities in Canada at the intersection of gender and immigration. Can J Public Health. 2016;107(3):e278-e84.

31 Sen G, Iyer A, Mukherjee C. A Methodology to Analyse the Intersections of Social Inequalities in Health. J Hum Dev Capab. 2009;10(3):397-415.

32 Sen G, Iyer A. Who gains, who loses and how: Leveraging gender and class intersections to secure health entitlements. Soc. Sci. Med. 2012;74(11):1802-11.

33 Veenstra G, Patterson AC. South Asian-White health inequalities in Canada: intersections with gender and immigrant status. Ethn Health. 2016;21(6):639-48.

34 Veenstra G. Race, gender, class, and sexual orientation: Intersecting axes of inequality and self-rated health in Canada. Int J Equity Health. 2011;10(1):3.

35 Warner DF, Brown TH. Understanding how race/ethnicity and gender define age-trajectories of disability: An intersectionality approach. Soc. Sci. Med. 2011;72(8):1236-48.

36 Wemrell M, Mulinari S, Merlo J. Intersectionality and risk for ischemic heart disease in Sweden: Categorical and anti-categorical approaches. Soc. Sci. Med. 2017;177:213-22.

37 Lopes LP, Carvalho MGF, Araújo LMB. Diversidade de gênero e acesso à saúde: concepção dos estudantes de medicina e enfermagem do centro universitário de Patos de Minas. Braz J Hea Ver. 2019; 2(4): 3286-3302.

38 Richardson LJ, Brown TH. (En)gendering racial disparities in health trajectories: A life course and intersectional analysis. SSM Popul Health. 2016;2:425-35.
Table 01. 
Search Strategies in the Scientific Publications on Intersectionality in the Public Health Field. Informational Resources, 2018.

| Informational Resources | Summary of the Search Strategy |
|-------------------------|--------------------------------|
| PubMed/MedLine          | intersectionality(All Fields) AND ("health"(MeSH Terms) OR "health"(All Fields)) |
| CINAHL                  | TX intersectionality AND TX health |
| Embase                  | intersectionality(all fields) AND health (all fields) |
| Scopus                  | TITLE-ABS-KEY (intersectionality) AND TITLE-ABS-KEY (health) |
| Web of Science          | TOPIC: (intersectionality) AND TOPIC: (health) |
| Lilacs                  | (tw:(interseccionalidade)) AND (tw:(saúde)) |
|                         | intersections AND (health public) filter (gender OR feminism OR race OR social research OR minority & ethnic groups OR domestic violence OR violence OR public health OR racism OR gays & lesbians OR socioeconomic factors OR ethnicity OR inequality OR qualitative research OR social classes OR gender differences OR poverty OR race relations OR health OR health care) NOT (studies AND women AND politics AND humans AND sociology AND families & family life AND africanamericans AND society AND older people AND children & youth AND female AND nonfiction AND culture AND research AND behavior AND history AND religion AND male AND teenagers AND aging AND anthropology AND political activism AND sexuality AND aliens AND theory AND parents & parenting AND social activism AND social policy AND community AND social conditions & trends AND neoliberalism AND adult AND education AND immigration AND personal relationships AND human rights AND sex roles AND sexual behavior AND citizenship AND marriage AND employment AND women AND health AND social change AND globalization AND mothers AND adolescent AND migration AND urban areas AND criminology AND social networks AND book reviews AND social justice AND mental health AND risk factors AND perceptions AND public policy AND multiculturalism & pluralism AND rural areas AND students AND men AND middle aged AND social sciences AND united states AND hispanicamericans AND crime AND ideology AND social support AND law AND sex crimes AND social psychology AND stereotypes AND aged AND field study AND neighborhoods AND political economy AND whites AND human immunodeficiency virus--hiv AND capitalism AND drug use AND females) |

1 - Does not have the word “intersectionality,” thus the word “intersection” was chosen.
Figure 01. Flowchart of the selection of articles on intersectionality in the Public Health field.
Table 2.
List of Authors Distributed According to Year, Country of Origin of the Main Author, and Social Markers of Difference Used in the Studies, 2018.

| Author / Year | Country       | Social Markers Of Difference                                                                 |
|---------------|---------------|------------------------------------------------------------------------------------------------|
| Wemrell, Muliniari, Merlo, 2017 | Sweden | Gender, age, and social class. |
| Richardson, Brown, 2016 | USA | Gender, race/ethnicity, socioeconomic status, and age. |
| Brown, Richardson, Hargrove, Thomas, 2016 | USA | Gender, race/ethnicity, socioeconomic status, and age. |
| Veenstra, Patterson, 2016 | Canada | Gender, race/ethnicity, and socioeconomic status. |
| Patterson, Veenstra, 2016 | Canada | Gender, race/ethnicity, and socioeconomic status. |
| Blom, Huijts, Kraaykamp, 2016 | Netherlands | Gender, race/ethnicity, and socioeconomic status. |
| Etherington, 2015 | Canada | Gender, race/ethnicity, and socioeconomic status. |
| Millard, Raab, Lewsey, Eaglesham, Craig, Ralston et al., 2015 | United Kingdom | Gender, race/ethnicity, sexuality, age, religion, and disability. |
| Joe, 2015 | India | Gender, geosocial space, and caste. |
| Sen, Iyer, 2012 | India | Gender and social class. |
| Hinze, Lin, Andersson, 2012 | USA | Gender, race/ethnicity, and socioeconomic status. |
| Collins, Grineski, Chakraborty, Yolanda, McDonald, 2011 | USA | Gender, race/ethnicity, social class, and age. |
| Veenstra, 2011 | Canada | Gender, race/ethnicity, socioeconomic status, and sexuality. |
| Warner, Brownc, 2011 | USA | Gender, race/ethnicity, age, socioeconomic status. |
| Bengiamin, Capitman, Ruwe, 2010 | USA | Gender, social class, and race/ethnicity. |
| Sen, Iyer, Mukherjee, 2009 | India | Gender and social class. |
| Cummings, Jackson, 2008 | USA | Gender, race/ethnicity, socioeconomic status. |
| Austin, Nelson, Birkett, Calzo, Everett, 2013 | USA | Sexual orientation identity and ethnicity groups. |
| LeVasseus, Kelvin, Grosskopf, 2013 | USA | Sexual minority, gender, and Hispanic ethnic identities. |
| Novak, Geronimus, Martinez, 2017 | USA | Ethnicity and nativity. |