

Review of Health Equity in Chicago, 2023

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CENTER FOR COMMUNITY HEALTH EQUITY



Center for Community Health Equity

The Center for Community Health Equity was founded by DePaul University and Rush University in 2015 with the goal of improving community health outcomes and contributing to the elimination of health inequities in Chicago. To learn more about the center, please visit us at www.healthequitychicago.org.

Annual Review

Our Annual Review offers a concise summary of peer-reviewed health equity research in Chicago. Our aim is to document, on an annual basis, the extent to which research in this city is focused on problem-focused or solution-focused work. These annual reviews, conducted since 2016, can be accessed here:

<https://healthequitychicago.org/our-work/annual-review-of-health-equity-research/>

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Abstract

Introduction: Chicago has long served as a critical setting for documenting health disparities and evaluating efforts to address health inequities. Despite this history, comprehensive annual summaries of health equity research in Chicago have only been developed in the last ten years. This review builds upon prior work by providing a systematic overview of Chicago-based or Chicago-focused health equity research published in 2023, including research influenced by the COVID-19 pandemic.

Methods: We conducted a structured search of PubMed to identify original research articles published in 2023 using the keyword “Chicago.” Studies were included if they focused on health equity, disparities, or the health of minority or at-risk populations within Chicago. Eligible articles were categorized by study design, thematic focus (e.g., race, age, socioeconomic status, gender), and whether they were problem-focused (describing disparities) or solution-focused (evaluating interventions or strategies).

Results: In total, 208 original research studies met our inclusion criteria. Most articles were authored by researchers affiliated with academic institutions. The academic institutions contributing the largest number of publications were University of Chicago (n=52), University of Illinois (n=48), and Northwestern University (n=47). University health systems, like Sinai Urban Health Institute (n=8), contributed to this review as did several academic institutions outside of Chicago. The majority of the studies were problem-focused (n=166), while fewer examined solutions (n=42). The most common themes included race (n=121), age (n=45), socioeconomic status (n=36), and gender (n=27). COVID-19 was a prominent topic across themes, particularly in studies that focused on vaccination methods, disparities, and community-level impacts.

Discussion: Health equity research in Chicago remains largely focused on describing disparities rather than testing solutions. Race continues to be the most frequently examined theme, with increasing attention to age and socioeconomic factors. The continued prominence of COVID-19 related research reflects its ongoing impact on health inequities. Future research should prioritize intervention-based approaches to advance solutions and reduce persistent health disparities in Chicago.

Introduction

Health inequities have long disproportionately affected marginalized populations in the United States, with Chicago serving as a critical setting for documenting disparities and evaluating efforts to address them. Since 2016, the Center for Community Health Equity (www.healthequitychicago.org) has conducted an annual review to summarize health equity research in Chicago and assess trends in the field. Building on prior work, this review continues to showcase current problems and possible solutions for health inequities in Chicago but also offers new insights and solutions (namely vaccine distribution) into these inequities in the context of the COVID-19 pandemic. As previously done, the articles were categorized by type (descriptive or analytic/experimental) and themes (race, gender/sexuality, religion, socioeconomic status, age, and disability) to highlight specific commonalities in health inequities in 2023. This review aims to identify gaps in the current literature to inform future efforts to advance health equity in Chicago.

Methods

A scoping review was chosen to better understand the health equity review in 2023. A comprehensive literature search was developed by the authors. A review of the literature included articles published from January 1, 2023, until December 31st, 2023. The following databases were searched: PubMed.

PubMed was used to search for articles that were published in 2023. For a broader search, the PubMed query was: ("Chicago"[Title/Abstract]) AND ("2023"[Date - Publication] : "2023"[Date - Publication]). Originally, 1,253 articles were pulled from PubMed by student interns (EF, JU, DC, MZ, and TH). Articles were reviewed by one of the authors (SL) who selected articles based on the inclusion criteria, including location, time period, and connection to health equity. Conflicts concerning article inclusion were decided by another author (RCS). Accepted studies focused on Chicago and pertained to health equity, disparity, and/or the health of a minority or at-risk group. Studies involving multiple cities were included if results specific to Chicago were found. The selected articles were summarized in a Google Sheets table and were categorized based on study design, topic, themes, and type (descriptive or analytic/experimental) by one of the authors (SL). For items that could not be abstracted or that had questions, a second author attempted to locate the information (RCS).

Themes were determined by assessing the overall subject matter and objective of the study. Articles that were borderline were discussed and a decision regarding the primary theme was made by the authors. Once the articles were categorized into a given theme, each article was summarized. One article was highlighted per theme based on the quality of the methodology, as well as its ability to add to the knowledge about inequities. Key terms were grouped together and were utilized to assess sub-themes within the primary themes. Additional information, such as study objective, timing, sponsoring institution, outcome measures, research question, and results, were documented in the same Google Sheets table.

Results

Of the initial 1,253 articles identified through the PubMed search, 208 met the inclusion criteria and were included in the final analysis. Results are presented across article

characteristics, research orientation, and thematic patterns. The article metrics and key themes are summarized below.

ARTICLE METRICS

Author Characteristics

All of the major academic institutions in Chicago were represented in this analysis. While many academic institutions contributed articles, the top four academic institutions represented were University of Chicago (n=52), University of Illinois (n=48), Northwestern University (n=47), and Rush University (n=18). Major Chicago hospitals like Ann & Robert H. Lurie Children's Hospital (n=19) contributed to this review. Non-profit groups and/or medical organizations such as Sinai Urban Health Institute (n=8) and Cook County Health (n=4) also contributed.

While the majority of the articles were from groups based in Chicago, articles also came from academic institutions, nonprofit groups, and hospitals outside of the Chicagoland region. For instance, the 2023 review also included authors from Rutgers University, University of Minnesota, and John Hopkins University. Additionally, several federal institutions such as National Institutes of Health (NIH) and Centers for Disease Control and Prevention (CDC) contributed articles included in this analysis. In addition, a small number of organizations outside of the United States were highlighted in this review, including the University of Oxford, Nanjing Forestry University, and The Chinese University of Hong Kong.

Problem- vs. Solution-Focused

The focus of each paper was evaluated to better understand if the research was directed at analyzing current problems in the context of health disparities or offering potential solutions to close these health outcome gaps. For 2023 studies, 166 of the 208 articles were problem-focused and 42 were solution-focused. Next, there was a breakdown of problem-focused articles into descriptive or analytical and solution-focused articles into descriptive, analytical, or clinical trials. One problem-focused and one solution-focused article was chosen to be highlighted, as they each provide invaluable insights into improving disparities on a community- and city-level in Chicago.

Problem-Focused Article Example: "The Impact of Race and Age on Response to Neoadjuvant Therapy and Long-Term Outcomes in Black and White Women with Early-Stage Breast Cancer"

This study evaluated responses to neoadjuvant chemotherapy and determined long-term outcomes in young Black women with early-stage breast cancer. The study focused on 2,196 Black and White women with early-stage breast cancer treated at the University of Chicago over the last 2 decades. The results showed that young Black women had the highest risk of recurrence, which was 22% higher than young White women and 76% higher than older Black women. These age/racial differences in recurrence rates were not statistically significant after adjusting for subtype, stage, and grade. In terms of overall survival, older Black women had the worst outcome. In the 397 women receiving neoadjuvant chemotherapy, 47.5% of young White women achieved partial cancer remission, compared to 26.8% of young Black women.

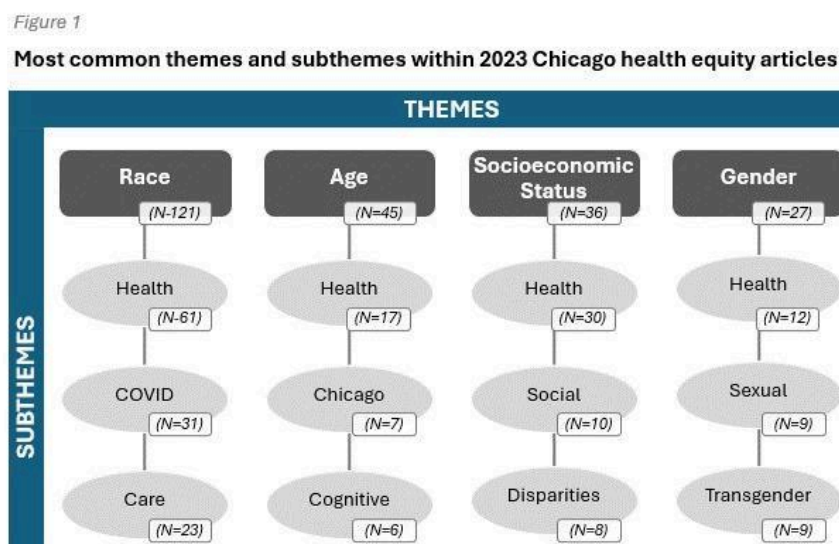
Solutions-Focused Article Example: “Developing and Implementing Racial Health Equity Plans in Four Large US Cities: A Qualitative Study”

This paper offered recommendations to address gaps in care for African Americans in the context of COVID-19 pandemic. It examined the development and implementation of equity-related plans and initiatives of local health departments within four large US cities: Baltimore, Boston, Chicago, and Philadelphia from January 2022 to April 2022. Thematic analysis was used to identify five themes across interviews. The first theme was that organizations were flexible in reallocating resources to address racial and health equity. The second theme was that multidisciplinary teams are necessary for effective development and implementation of health equity plans. The third theme was that community collaboration is required for meaningful and sustainable change. The fourth theme was that there is a direct relationship between racism, structural inequities, and health outcomes. Lastly, the fifth theme was that health departments have prioritized health equity plan development, but more work is required to address root causes.

Themes

In this analysis, each article was assigned a primary theme that was most accurately reflected in the paper. The top themes explored were race (n=121), age (n=45), socioeconomic status (n=36), and gender (n=27) (see Table 1). Each theme was further examined to identify the most prevalent key topics or subthemes. We then provide an article that offers valuable or innovative insights into a given primary subtheme.

Figure 1: Most common subthemes covered in each of the four themes associated with 2023 Chicago health equity articles (number of articles given in parentheses).



Race Example Article: *“The COVID-19, racism, and violence syndemic: Evidence from a qualitative study with Black residents of Chicago.”*

The selected article’s research question was: How did COVID-19, racism, and violence syndemic play into the disproportionate effect of COVID-19 on the Black community? Qualitative and individual interviews took place with community members, and they were coded for thematic analysis. The article outlined the four themes that reflect the COVID-19, racism, and violence syndemic during this time frame. The themes were: 1) the intersection of racism and violence in Chicago; 2) longstanding inequities were laid bare by COVID-19; 3) the pervasiveness of racism and violence contributes to poor mental health; 4) and COVID-19, racism, and violence emerged as a syndemic.

For age as a theme, a key article was titled “Childhood Exposure to Firearm Violence in Chicago and Its Impact on Mental Health.” In this descriptive study, a survey was administered to parents who lived in all 77 Chicago neighbourhoods to explore the effect of gun violence on individuals’ childhood and kids’ mental health. Chicago children with indirect and direct exposure to firearm violence had more parent-reported mental health symptoms than unexposed children. In the articles focused on the theme of age, the words “adolescent” and “aging” both came up five times. The word “child” came up three times in this review.

For socioeconomic status as a theme, a key article was titled: “A Neighbourhood-level analysis of mental health distress and income inequality as quasi-longitudinal risk of reported COVID-19 infection and mortality outcomes in Chicago.” This descriptive study had an overarching question centered around how the COVID-19 pandemic affected mental health distress and income inequality in Chicago neighbourhoods. Neighbourhood-level comparisons revealed differences in mental health distress, income inequality, and reported COVID-19 mortality. However, there were no differences in COVID-19 infection. Specifically, Westside and Southside neighbourhoods generally reported higher levels of mental health distress and greater concentration of poverty. Zip codes with more poverty were at increased risk of reported COVID-19 infection and a lower mortality risk. Zip codes with the highest percentage of people of color were at decreased risk of reported COVID-19 mortality.

For gender as a theme, a key article was “Development of a predictive model for identifying women vulnerable to HIV in Chicago.” This study took place from 2014 to 2020 and posed the question: How can we create a predictive model for women using cohort data from two major hospitals in Chicago with large opt-out HIV screening programs? The study involved matching 48 newly diagnosed women to 192 HIV-negative women based on a number of previous encounters at University of Chicago or Rush University hospitals. Data was examined for each woman for the two years prior to either their HIV diagnosis or their last encounter. Risk factors were accessed, including demographic characteristics and clinical diagnoses taken from patient electronic medical records using odds ratios and 95% confidence intervals. The findings of the study showed that the following clinical diagnoses were significant at the bivariate level and were included in the model: pregnancy, hepatitis C, substance use, and sexually transmitted infections (STIs) chlamydia, gonorrhoea, or syphilis.

Given the continued relevance of COVID-19 in 2023, we identified articles that had COVID-19 as a topic area (n=40). When we examined the most frequent topic terms in addition to the articles with COVID-19, we found that the most common sub-topics within COVID-19 were health (n=24), disparities (n=9), community (n=7), and vaccine (n=7) were

the most common. For COVID-19 as a key topic, the article titled “Hazardous drinking by older adults with chronic conditions during the COVID-19 pandemic: Evidence from a Chicago-based cohort” is an example of the work published in 2023. The article focused on older adults with chronic conditions and investigated the question, “What are the factors associated with hazardous drinking as well as the changes associated with the COVID-19 pandemic?” The results showed that hazardous drinking was reported by 44.9% of participants in May 2020, but declined to 23.1% by July-August 2020 and continued to slowly decline to 19.4% by September-December 2021.

Discussion

This review continues the analysis conducted in previous years by the Annual Review of Health Equity Research through the Center for Community Health Equity and summarizes the health equity research about Chicago-based populations published in 2023. Most papers reviewed were problem-focused, meaning they described health disparities rather than tested interventions to advance equity. The 208 articles identified explored a wide variety of themes, including race, age, socioeconomic status, and gender. Keywords were extracted from each theme to gain further insight into overarching themes in the growing field of health equity research in the city of Chicago.

This review included fewer articles (208 vs. 248) than the 2022 review. However, this may have been due to methodological differences; specifically, this year we only used PubMed rather than also including articles from a Scopus search. Additionally, the COVID-19 pandemic could have paused some research studies during this time period.

The top themes explored in this year’s review were based on race (n=121), age (n=45), socioeconomic status (n=36), and gender (n=27). The primary categories of last year’s research articles were based on race (n=90), COVID-19 (n=35), SDOH (n=25), and HIV (n=24). While most of these categories remained priorities in research this year, the emergence of socioeconomic status and age were top categories this year. This may reflect a focus on identity as part of health equity research, specifically with a large focus on race, which usually stays constant year to year in Chicago. Additionally, the sociopolitical climate and the heightened dialogue around racial justice may have contributed to this spike.

This year’s review also showed a similar percentage of articles describing a solution [42 out of 208 total articles (20%) in 2023 vs. 46 out of 248 total articles (19%) in 2022]. This demonstrates a continued need for more solution-driven investigations to address health inequities in Chicago as many of the articles focused on the problems populations of people in Chicago are facing. It is critical to also look at health disparity issues from a solution-lens, creating feasible ways to meet health equity issues head on.

Within the category of race, keywords were present that highlighted an underlying shift in focus toward highlighting specific medical conditions. Several articles chose to highlight these in the context of race, highlighting the possible association between minorities and comorbid conditions. Of note, these conditions included COVID-19, colorectal cancer, HIV, mpox virus, and diabetes. The increased prevalence of these keywords in our search indicated a focus of research this year on the investigation of medical conditions in the context of racial disparities.

Age was a new major theme in health equity research in Chicago, with many keywords included in this theme, including “cognition,” “Alzheimer’s disease,” and “early childhood education.” Aging and the study of older adults is a research category that has been gaining more visibility in the last few years.

This year’s review also contained information on the continued development of the COVID-19 pandemic, specifically beginning from the US outbreak in March of 2020. As the year progressed, the information and high number of studies on this topic demonstrated a progression of knowledge and a deepening impact on the members of the Chicago community, with a focus on vaccines and vaccine distribution.

There are limitations to our work and the limitation of the literature at large. We believe that our search methodology is unbiased and is appropriately coded to capture solution-based papers. However, we might have found more papers focused on solutions by examining non-peer reviewed sources, but we have not developed a consistent and reliable method to do so. In addition, another major limitation we faced was that only articles published in major journals were included in the search, effectively excluding any research being conducted by smaller, local agencies.

Health inequity in Chicago continues to be an issue that impacts its residents across place, race, gender, sexuality, religion, and socioeconomic status, and many of those disparities have increased due to the COVID-19 pandemic and the strain that it has placed on all aspects of society. Topics like gender and sexuality remain major areas of academic interest, and we may see a shift to addressing solutions to these disparities in the coming years.

As problems are defined, they can ideally be solved. To properly address these health inequities, more research will need to be done to examine solutions in the city of Chicago, possibly with the aid of smaller, community-based coalitions and agencies who can more effectively address the needs of the people who live there.

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