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Abstract

Background: Global responses to the COVID-19 pandemic have exposed and exacerbated existing socioeconomic and health inequities that disproportionately affect the sexual health and well-being of many populations, including people of color, ethnic minority groups, women, and sexual and gender minority populations. Although there have been several reviews published on COVID-19 and health disparities across various populations, none have focused on sexual health. We plan to conduct a scoping review that seeks to fill several of the gaps in the current knowledge of sexual health in the COVID-19 era and facilitate multi-country comparisons.

Methods: A scoping review focusing on sexual health and COVID-19 will be conducted. Multiple bibliographic databases will be searched. Study selection will conform to Joanna Briggs Institute Reviewers’ Manual 2015 Methodology for JBI Scoping Reviews. Data will be used to inform multi-country comparisons.

Results: N/A

Conclusions: Original research is urgently needed to mitigate the risks of COVID-19 on sexual health. The planned scoping review will help to address this gap and contribute to multi-country comparisons as part of the I-SHARE network.

Systematic Review registrations: N/A

Background

Global responses to the COVID-19 pandemic have exposed and exacerbated existing socioeconomic and health inequities that disproportionately affect the health and well-being of people of color, ethnic minority groups, women, and sexual and gender minority populations [1, 2]. Many sub-populations may experience worse sexual health during COVID-19. Guidelines to stay at home, the resulting economic impact on individuals and families, and the need to shift healthcare resources (including money, clinic space, and staff) to the COVID-19 response are likely to affect sexual behavior, sexual health, and access to quality sexual health care. Research suggests that a reduction in economic opportunities may impact sexual healthcare access for women [3]. Similarly, during health crises, sexual health resources may be diverted to the pandemic response, with the potential to increase maternal mortality, and limit abortion care and contraception access [4, 5]. Sex workers worldwide may see clients in person, risking infection and perhaps not seeking medical care due to reduced healthcare provision [6]. In some countries, like the USA, the LGBTQIA community is also less likely to have health insurance [7], increasing negative economic impacts if they contract COVID-19. These factors may widen socioeconomic inequity and further reduce access to sexual health services. Key populations experience unique challenges in the wake of the pandemic including delays in seeking treatment due to fear of stigma, discrimination and involuntary outing of sexual orientation or immigration status through contact tracing and isolation [8].
Several published reviews have focused on COVID-19 and health outcomes across various populations [9, 10]. However, these reviews did not center on sexual health, an area of health and well-being potentially negatively affected by the pandemic. Sexual health is key to overall human health and well-being, and to the socioeconomic development of communities and countries [11]. Sexual health research is broadly defined as studies exploring individuals’ state of physical, emotional, mental and social well-being in relation to sexuality; not simply detailing the absence of disease, dysfunction, or infirmity [12]. Moreover, people of color, women and ethnic and sexual minorities likely face greater negative impacts from the pandemic, especially sexual health. The planned scoping review seeks to compile published evidence in the field to identify gaps in current understanding of sexual health and COVID-19. The review will include and contrast research detailing sexual health and COVID-19 among individuals of all genders and sexual identities [12]. This review will also include research that has examined a broad range of outcomes and studies related to sexual health and well-being (e.g. testing, risk behaviors, treatment, PrEP use, vaccination, gender-based violence, selling sex). Our review is also different from and adds to past research due to its affiliation with the International Sexual Health And Reproductive Health (I-SHARE) network [13], which allows access to original research in low- and middle-income countries (LMICs). The I-SHARE evidence base can also contribute to multi-country analyses proposed within the network.

The planned scoping review will build on existing reviews around COVID-19 and a range of other populations and health outcomes. Key to the development of interventions that improve sexual health amid COVID-19 is a comprehensive understanding of the current status of evidence around sexual health during the COVID-19 era.

The planned scoping review seeks to provide this evidence by contributing an evaluation of available literature about sexual health in relation to COVID-19, with the goal of identifying gaps in research and facilitating multi-country analysis.

**Methods/design**

**Aims**

This scoping review will be conducted by 13 individuals: 12 researchers from several universities worldwide, from a range of disciplines (e.g. medicine, sociology, demography, public health, criminology, economics, psychology, epidemiology), and an informationist from the Harvey Cushing/John Hay Whitney Medical Library at Yale University. We chose to conduct a scoping review due to: 1) Sexual health research outcomes were not sufficiently similar to warrant pooling or formal meta-analysis; 2) We are not examining the effect of an intervention on an outcome of interest, and it thus does not make sense to assess risk of bias, as per a systematic review [14]; 3) Scoping reviews are appropriate mapping an area of research [15].

Research objectives, inclusion criteria, and methodological techniques were determined before study commencement using the Joanna Briggs Institute Reviewers’ Manual 2015 Methodology for JBI Scoping
Reviews [16]. This process will adhere to the indicated framework: 1) identifying research question; 2) identifying relevant studies; 3) developing comprehensive search strategy; 4) selecting studies; 5) charting data; and 6) collating, summarizing and reporting results. The objective of the scoping review is to develop a better understanding of the current research landscape around sexual health and COVID-19 by investigating existing studies and gaps in the research. The broad research questions are “what has been reported on sexual health in the COVID-19 era?” and “what are the gaps in the current knowledge base on sexual health and COVID-19 across diverse populations, including marginalized groups?” The search strategy will be performed in line with techniques that enhance methodological transparency and improve the reproducibility of the results and evidence synthesis. The study team will develop a search strategy as recommended by the 2015 Methodology for JBI Scoping Reviews. Reporting of results will conform to PRISMA Extension for Scoping Reviews (PRISMA-ScR) [17]. See supplement for PRISMA-ScR checklist.

Search method

Studies will be reviewed across 13 databases: Cumulative Index to Nursing and Allied Health Literature, China National Knowledge Infrastructure, Africa-Wide Information, Web of Science Core Collection, Embase, Gender Studies Database, Gender Watch, Global Health, WHO Global Literature on Coronavirus Disease Database, WHO Global Index Medicus, PsycINFO, MEDLINE and Sociological Abstracts. Using similar techniques, we will also search preprint servers such as EuropePMC and PsyArXiv. We will include English language studies only. Past work indicated that excluding non-English language records from a review seemed to have a minimal effect on results and may be a viable methodological shortcut for rapid reviews such as ours [18, 19].

We will search the literature from December 2019 (COVID-19 inception) until August 2020 [20]. The review will be updated in six months, making it a living review [21]. A living review is apt given the evolution of the pandemic and its likely differential effect on sexual health over time. Living reviews are high quality summaries of research that are updated as new studies become available [21]. We will also conduct a grey literature search using Disaster Lit, Google Scholar, governmental websites and clinical trials registries (e.g. ClinicalTrials.gov, World Health Organization International Clinical Trials Registry Platform and International Standard Randomized Controlled Trial Number registry). We will use search terms similar to our main search to find articles for inclusion. All grey literature will be compiled in a folder and reviewed similarly to articles obtained from our database searches. EndNote, a bibliographic software, will be used to store, organize, and manage all references [22]. Covidence will be used to manage the title/abstract and full-text screening phases [23].

Study selection criteria

We will include all studies with all study designs involving COVID-19 and sexual health. Two independent reviewers will screen each title and abstract as per inclusion/exclusion criteria (see below).
Inclusion criteria

Research (grey literature included) investigating sexual health and COVID-19 in all populations and settings.

There will be no restrictions on age, region, and gender, with a particular focus on sex workers, LBTQIA persons, and persons at risk for HIV.

All study designs - original research only, e.g. quantitative and qualitative studies, will be included.

Exclusion criteria

Studies focused on reproductive health alone will be excluded, given our focus on sexual health.

Commentaries, editorials, and opinion pieces will be excluded. Governmental or other agency guidelines will be excluded.

Non-English studies will be excluded.

Study selection

Reviewers will be trained in calibration and will utilize standardized screening forms. Reviewers will independently screen all titles and abstracts that we identify through the literature search strategy. We will obtain full-text articles of all possibly eligible studies and evaluate article eligibility. Reviewers will resolve disagreement around eligibility by discussion, or if necessary, with a third reviewer. Studies reported only as conference abstracts will be included. Conference abstracts are often left out of systematic reviews as they may not contain adequate information. Here, we will include conference abstracts as they are often published earlier than full manuscripts [24], which is key to a thorough scoping review on an ongoing phenomenon. We will contact authors where necessary if the abstracts do not provide sufficient information [24]. We will also identify specific studies in the 33 countries where I-SHARE is taking place to inform multi-country comparisons [13].

Data extraction

Reviewers will undergo practice exercises and then independently extract data from studies. Reviewers will abstract the data using a pretested data extraction template. We will use a standardized coding protocol to collect information such as: title of study, authors, date published; author affiliation as a measure to ascertain the discipline focus of the study and collaborating institutions; study setting; study design; description of methodology; description of study sample; definition or type of sexual health studied (if any); measurements and scales used; main findings; funder information.

Descriptive analysis
A narrative synthesis of the outcomes and other information collected regarding selected studies will be detailed in the final review. The broad goal of the synthesis is to identify gaps in research and present recommendations for future research agendas.

Amendments

Any amendments to this protocol will be documented with reference to saved searches and analysis.

Dissemination

Results of the review will be disseminated in a peer-reviewed journal and likely in other media such as: conferences, seminars, symposia. As per PRISMA-ScR guidelines, we will present results in a user-friendly format [25].

**Discussion**

The strength of the planned scoping review is the use of a transparent and reproducible procedure for a scoping literature review. We state the data sources, search strategy, and data extraction [26]. Through publishing this research protocol, we strengthen the clarity of the search strategy.

There have been limited multi-country comparisons and few studies which compile available evidence from various settings in relation to sexual health and COVID-19. Our review will provide an overview of these studies, synthesizing evidence. There is much anecdotal work around sexual health and COVID-19, with few published studies. The planned review will highlight areas of research focus and gaps which require more attention. Moreover, the COVID-19 context is quickly changing [27] likely affecting sexual health in a rapidly shifting fashion. Our review will chart the change in sexual health research, such as shifts in topics of focus and research technique (e.g. qualitative versus quantitative), to determine if some research areas are tied to changes in pandemic progression. Results will thus provide high-level information to inform, support, and customize design of interventions to mitigate reduced sexual health outcomes in this setting. As researchers attempt to minimize the harms from COVID-19, especially for marginalized populations (e.g. people of color, ethnic minority groups, women, and sexual and gender minority populations), they need to be aware of scientific evidence to develop interventions to achieve their aim. The planned scoping review seeks to provide this evidence by contributing an evaluation of what is currently known about sexual health in relation to COVID-19, with the goal of identifying gaps in research and presenting recommendations for future research foci.

**Abbreviations**

PrEP: Pre-Exposure Prophylaxis

LMICs: low- and middle-income countries

I-SHARE: International Sexual Health and Reproductive Health JBI: Joanna Briggs Institute
Declarations

Availability of data and materials

The datasets used and analyzed will be made publicly available on the Open Science Framework.

Ethical Approval and Consent to participate Not applicable

Consent for publication

All authors approved submission.

Availability of supporting data

Available from authors at reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Author's contributions

NK and KJ wrote the first draft. NK, KN, KJ, LF, DC, VM, JS, JMF, SMV, MU, WHZ, AK, ECL, JTE, JDT contributed to the manuscript write-up and review.

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