- 1 Reproductive autonomy in fertility research and evidence in sub-Saharan
- 2 Africa: a scoping review protocol
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- 6 Abstract
- 7 **Objective:** The objective of this review is to clarify how the concept of reproductive autonomy has
- 8 been assessed and applied in fertility research and evidence in sub-Saharan Africa. This clarification
- 9 includes the sub populations studied and the role of gender and other power dynamics internal and
- 10 external to couples.
- 11 Introduction: Reproductive autonomy is an important prerequisite for people to achieve their
- 12 desired fertility in sub-Saharan Africa. However, individual, female-focused conceptualizations of
- 13 reproductive autonomy tend to neglect the power dynamics both internal and external to a couple
- 14 that shape a woman's reproductive autonomy. Furthermore, they disregard the reproductive
- autonomy of men, couples and potentially other sub populations as a unit of analysis.
- 16 Inclusion criteria: This review will consider studies that assess and apply reproductive autonomy in
- 17 fertility research and evidence in sub-Saharan Africa. Study populations will include people of all
- 18 genders, sexual orientations, and ages, both at individual and couple level. Eligible for inclusion are
- 19 empirical peer-reviewed studies, including quantitative, qualitative and mixed-methods research,
- 20 published since 1994.
- 21 Methods: Articles will be obtained from a range of databases covering demography, public health and
- 22 sociology disciplines. Titles and abstracts of all retrieved articles will be screened based on the
- 23 inclusion criteria, after an initial limited search in Scopus and PubMed and the removal of duplicates.
- 24 Iteratively, 2 reviewers will independently review full texts of potentially eligible studies, while eligible
- 25 articles are extracted and charted. The results will both be tabulated and presented in a narrative
- summary to answer the research questions.
- 27 Review registration number: Open Science Framework registration number to be added
- 28 Keywords: reproductive autonomy; reproductive justice; reproductive rights; scoping review; sub-

- 29 Saharan Africa
- 30 Abstract word count: 248
- 31 Total manuscript word count: 2113 words (excluding abstract, references and appendices)

Introduction

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In sub-Saharan Africa, fertility levels on average continue to be above population-replacement level, i.e. 4.6 births per woman in 2021. As such, fertility is an important driver of population growth in the region. The population in sub-Saharan Africa is projected to almost double between 2022-2050, and, in this same period, its relative share of the world population will increase from 14% to 22% (1). This rapid growth is of concern considering its consequences for population wellbeing and sustainable development (2). Central to realized fertility is reproductive autonomy. Reproductive autonomy can be defined as 'the power to decide about and control matters associated with contraceptive use, pregnancy, and childbearing' (3), (p.20). This includes not only the right to decide whether, when and how to have children but also the right to make choices about one's body, sexual identity and behaviors (4). To increase empowerment and reproductive autonomy, of women in particular, the International Conference on Population and Development (ICPD) 1994 Program of Action stipulated the need for gender equality and access to health care and education (5). Reproductive autonomy is an important prerequisite for people to achieve their desired fertility as well as other related reproductive health needs (6). Recent decades in sub-Saharan Africa have shown a strong correlation between declining desired and realized fertility at the aggregate level, although there is variation between countries (7). At the individual level, it can still mean that people are not realizing their ideal number of children under the conditions of their choice, even when declining fertility is observed (8). For instance, a study in rural Northern Ghana found that people were not having fewer children because of contraceptive uptake but because of outmigration of spouses and of environmental stress on livelihoods and as strategy to cope with food insecurity (9). As such, the ICPD Program of Action already acknowledged in 1994 that reproductive autonomy is an important end in itself, rather than only a means to influence population change through population policies (2,5). In line with the ICPD Program of Action, studies on desired fertility in sub-Saharan Africa regularly focus on women and the need to increase their empowerment, level of education and access to contraception (10,11). However, such individual, female-focused conceptualizations of reproductive autonomy may neglect that reproductive reasoning and behaviors are highly contextual and that reproductive autonomy is shaped by power dynamics both internal and external to couples (12-14). Power dynamics internal to a couple may concern partners' communication about their fertility

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desires and the extent to which joint decision-making is taking place (15). For instance, sociocultural norms may instigate male partners to have more say in the decision-making, and as such they may influence women's abortion trajectories or lead women to covert contraceptive use (16,17). External power dynamics may refer to the influence of family members, social networks, sociocultural norms and governmental policies and regulations on both individuals' and couples' reproductive autonomy (13,18-20). Population policies in general, and pronatalist policies in particular, can be shaped by heteronormative and cisnormative norms and values that expect women to can and want to become mothers (14). Not only can such norms put pressure on women to have children, but they can also increase stigma around infertility and childlessness, and neglect the fertility desires of sexual and gender minority populations (2,21). As fertility research informs population policies, it is important that studies address the reproductive autonomy of all populations, including men, sexual and gender minority populations, and couples as a unit of analysis (16,22-25). Therefore, there is a need to investigate the scope of studies being conducted on reproductive autonomy to clarify how the concept of reproductive autonomy has been assessed, and applied, in fertility research in sub-Saharan Africa. Neglecting sub populations and power dynamics at various interpersonal and societal levels perpetuates reproductive autonomy inequalities and may result in ineffective fertility policies and interventions (14,26). For instance, studies focusing solely on women may also develop recommendations focused on empowering this subpopulation, e.g. (27), thereby overlooking the interpersonal and contextual factors also affecting their ability to have reproductive autonomy. A preliminary search of PROSPERO, the Cochrane Database of Systematic Reviews, JBI Evidence Synthesis, Figshare, Open Science Framework (OSF) and Scopus was conducted and no current or inprogress scoping reviews or systematic reviews on reproductive autonomy in sub-Saharan Africa were identified. One scoping review on reproductive autonomy focused on justice-involved black women in the United States of America (4). Other studies we found researched related concepts such as reproductive empowerment, reproductive coercion, reproductive justice and reproductive health, most of them addressing high-income countries or not any region in specific. We found a couple of reviews focusing on sub-Saharan Africa, including studies on sexual and reproductive health, reproductive health care services and abortion, addressing various subpopulations including adolescents, men, women of reproductive age, vulnerable populations, persons with disabilities and young people living with HIV.

In our preliminary search, we found scoping reviews underscoring the importance of addressing interpersonal and contextual factors in relation to reproductive autonomy, such as a review on women's reproductive decision-making indicating the role of gender and pronatalist norms (12), a review on reproductive coercion underscoring the link to power and inequalities at interpersonal, community and institutional levels (14), and a review discussing the role of gender inequities at community and societal levels affecting reproductive health in Rwanda (13). The present scoping review will build upon these findings to advance research informing policies and interventions geared towards improving reproductive autonomy. A useful concept for this is reproductive justice.

The concept of reproductive justice, as posed by Loretta Ross in 2017, stipulates that each individual and couple has the right to have, or not, a child under their preferred conditions, and to parent a child in a safe and healthy environment. Reproductive justice also acknowledges that due to inequalities in society and policies, some individuals and sub populations have fewer opportunities to enjoy those rights compared to other sub populations. As a result, they may have less reproductive autonomy. The universality of the reproductive justice framework explicates that every person should have the same capability to enjoy reproductive autonomy (28,29).

The objective of this scoping review is to clarify how the concept of reproductive autonomy has been assessed, and applied, in fertility research and evidence in sub-Saharan Africa. This clarification includes the sub populations studied and the role of gender and other power dynamics internal and external to couples. Conducting a scoping review is the appropriate method for this study as it aims to clarify the application of a concept and to identify potential gaps in the literature, such as with regard to the representation of all sub populations (30).

Based on the findings of this scoping review, we endeavor to propose a holistic framework for studying reproductive autonomy in sub-Saharan Africa geared towards reproductive justice and, thus, accounting for the various power dynamics at play in the reproductive autonomy of couples and individuals.

Review questions

- The following overall research question and related sub questions have been formulated: How is the concept of reproductive autonomy applied and assessed in fertility research and evidence in sub-Saharan Africa?
 - 1. How is reproductive autonomy defined in fertility research and evidence in sub-Saharan

124		Africa?				
125	2.	Which sub populations at the individual and couple level are studied in reproductive				
126		autonomy research and evidence in sub-Saharan Africa?				
127	3.	How are gender and other power dynamics internal and external to couples taken into				
128		account in reproductive autonomy research and evidence in sub-Saharan Africa?				
129	Inclu	sion criteria				
130	<mark>Partio</mark>	cipants				
131	This review will consider all human populations, meaning people of all genders, sexual orientations,					
132	and ages, both at individual and couple level.					
133	Conce	ept				
134	This review will consider studies that assess and apply reproductive autonomy in fertility research and					
135	eviden	ce.				
136	Conte	ext				
137	This review will consider studies that focus on sub-Saharan Africa and its countries and sub regions as					
138	classified by the United Nations (31).					
139	Types	s of sources				
140	This sc	oping review will consider empirical study designs for inclusion, including quantitative,				
141	qualita	qualitative, and mixed methods. Studies should be peer-reviewed, academic articles published since				
142	1994. The year 1994 was chosen because the importance of reproductive autonomy was globally					
143	acknowledged in the ICPD Program of Action in 1994. Due to language limitations of the authors,					
144	non-English studies will initially be included if they have an English title and abstract but excluded at					
145	the sta	ge of full-text screening. A list of articles excluded due to language barriers will be provided as				
146	an ann	ex to the review.				

Methods

The proposed scoping review will be conducted in accordance with the Joanna Briggs Institute (JBI) guidance for conducting scoping reviews (32) and the process principles as posed by Arksey and O'Malley, and as advanced by Levac et al. (33,34). The Preferred Reporting Items for Systematic reviews and Meta-Analysis (PRISMA) extension for scoping reviews (PRIMA-ScR) checklist will be

Search strategy

used to structure the scoping review (35).

The search strategy will aim to locate peer-reviewed published empirical studies. An initial limited search of Scopus and PubMed was undertaken to identify articles on the topic. The text words contained in the titles and abstracts of relevant articles, and the index terms used to describe the articles, were used to develop a full search strategy for Scopus (see Appendix 1). As all populations are included and we are only interested in one concept, i.e. 'reproductive autonomy', the development of the search strategy is mostly concerned with the inclusion of all relevant geographical locations. The search strategy, including all identified keywords and index terms, will be adapted for each included information source. The reference lists of articles selected for full text review will be screened for additional papers.

Fertility research is conducted in various disciplines. Therefore, we have selected databases covering this variety of disciplines, including demography, sociology, public health and psychology. The databases to be searched are Academic Search Premier (EBSCOhost), APA PsychInfo (EBSCOhost), CINAHL (EBSCOhost), EMBASE, IBSS (ProQuest), PubMed (NIH), Scopus, SOCIndex (EBSCOhost) and Web of Science (Clarivate). Additionally, we will do a search using only the key word "reproductive autonomy" in the African journal databases African Journals Online (AJOL), AfricaBib, catalogue of the African Studies Centre Leiden and Sabinet. Also, we will manually search for articles in the journal Pan African Medical Journal using the key word "reproductive".

Study/Source of evidence selection

Following the search, all identified articles will be collated and uploaded into the bibliographic citation management software Endnote version 21. After removal of duplicates, the citation details will be imported into Rayyan, which is a free web application to facilitate the screening process for researchers working together on a scoping review (36). Then, we will first conduct a pilot test, using

a random sample of 25 titles/abstracts to check for potential discrepancies in the selection by the team members and to make modifications to the eligibility criteria if needed. In the next step, titles and abstracts will be screened by 2 independent reviewers for assessment against the inclusion criteria for the review. Potentially relevant papers will be retrieved in full. The full texts of selected citations will be assessed in detail against the inclusion criteria by the same 2 independent reviewers. Reasons for exclusion of full-text papers that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at each stage of the selection process will be resolved through discussion or with a third reviewer. The results of the search will be reported in full in the final scoping review and presented in a PRISMA flow diagram (37).

Data extraction

Data will be extracted from papers included in the scoping review by 2 independent reviewers using a data extraction tool developed by the reviewers. The data extracted will include key information relevant for answering the research questions, including how reproductive autonomy was defined, the inclusion of gender and other power dynamics internal and external to couples, and the populations studied. A draft extraction tool is provided (see Appendix II). The draft data extraction tool will be modified and revised as necessary during the process of extracting data from each included paper. Modifications will be detailed in the full scoping review. Any disagreements that arise between the reviewers will be resolved through discussion or with a third reviewer. Authors of papers will be contacted to request missing or additional data, where required.

Data analysis and presentation

The results will both be tabulated and presented in a narrative summary to respond to the review objective and answer the research questions. Based on the findings, implications will be discussed for future research, policy and practice.

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Author contributions

- 206 Conception of work: BH. Design of work: BH, SD, AK. Drafting and revision of the protocol: BH, AK,
- 207 SD; and final approval of the protocol: BH, AK, SD.

208 Conflicts of interest

209 The authors declare no conflict of interest.

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Appendix I: Search strategy

Scopus

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305 Search conducted on May 2, 2024.

Search	Query	Records retrieved
#1	"reproductive autonomy"	2,609
#2	((Africa South of the Sahara) OR (Africa south of the Sahara) OR (sub-Saharan) OR (subSaharan) OR (Angola) OR (Benin) OR (Botswana) OR (British Indian Ocean Territory) OR (Burkina Faso) OR (Burundi) OR (Cape Verde) OR (Cabo Verde) OR (Cameroon) OR (Central African Republic) OR (Chad) OR (Comoros) OR (Congo) OR (Cote d'Ivoire) OR (Côte d'Ivoire) OR (Democratic Republic of the Congo) OR (DRC) OR (Zaire) OR (Djibouti) OR (Equatorial Guinea) OR (Eritrea) OR (Eswatini) OR (Swaziland) OR (Ethiopia) OR (French Southern Territories) OR (Gabon) OR (Gambia) OR (Ghana) OR (Guinea NOT guinea pig*) OR (Guinea-Bissau) OR (Kenya) OR (Lesotho) OR (Liberia) OR (Madagascar) OR (Malawi) OR (Mali) OR (Mauritania) OR (Mauritius) OR (Mayotte) OR (Mozambique) OR (Namibia) OR (Niger) OR (Nigeria) OR (Reunion) OR (Réunion) OR (Rwanda) OR (Saint Helena) OR (Sao Tome and Principe) OR (Senegal) OR (Seychelles) OR (Sierra Leone) OR (Somalia) OR (South Africa) OR (South Sudan) OR (Togo) OR (Uganda) OR (Tanzania) OR (United Republic of Tanzania) OR (Zambia) OR (Zimbabwe) OR (Central Africa*) OR (Eastern Africa*) OR (Middle Africa))	5,213,719
#3	1 AND 2	743
Limited to	January 1, 1994 – May 2, 2024	

Appendix II: Data extraction instrument

Key information Extracted data Authors Title Year of publication Journal Article type Country origin Aims of the study Participants/population (including age and gender) Sample size Methodology Key findings 1. Definition reproductive autonomy Key findings 2. Inclusion of gender and other power dynamics internal and external to couples Key findings 3. Which sub populations at the individual and couple level are included Notes