



The Urban Environment and Disparities in Sexual and Reproductive Health Outcomes in the Global South: a Scoping Review

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Abstract By 2050, the Global South will contain three-quarters of the world’s urban inhabitants, yet no standardized categorizations of urban areas exist. This makes it challenging to compare sub-groups within cities. Sexual and reproductive health and rights (SRHR) are a critical component of ensuring that populations are healthy and productive, yet SRHR outcomes within and across urban settings vary significantly. A scoping review of the literature (2010–2022) was conducted to describe the current body of evidence on SRHR in urban settings in the Global South, understand disparities, and highlight promising approaches to improving urban SRHR outcomes. A total of 115 studies were identified, most from Kenya (30 articles; 26%), Nigeria (15; 13%), and India (16; 14%), focusing on family planning (56; 49%) and HIV/STIs (43; 37%). Findings suggest significant variation in access to services, and challenges such as gender inequality, safety, and precarious circumstances in employment and housing. Many of the studies ($n = 84$; 80%) focus on individual-level risks and do not consider how neighborhood environments, concentrated poverty, and social exclusion shape behaviors and norms related to SRHR. Research gaps

in uniformly categorizing urban areas and key aspects of the urban environment make it challenging to understand the heterogeneity of urban environments, populations, and SRHR outcomes and compare across studies. Findings from this review may inform the development of holistic programs and policies targeting structural barriers to SRHR in urban environments to ensure services are inclusive, equitably available and accessible, and direct future research to fill identified gaps.

Keywords Urban · Poverty · Sexual and reproductive health and rights

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Background

By 2030, over 60% of the world’s population will live in urban areas, with about 2.9 billion people living in cities where social, economic, and health inequalities have increased in recent decades [1]. This increase will largely take place in the Global South, driven both by natural population growth and rural–urban migration [2]. According to UN-HABITAT, there are currently an estimated 763 million internal migrants in the world [3]. While we

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refer to the Global South throughout this paper, we acknowledge the limitations of this terminology [4].

While some literature exists comparing sexual and reproductive health and rights (SRHR) outcomes between urban and rural settings, generally urban populations are treated as a monolith. Cities offer major opportunities in resources and infrastructure to improve health outcomes, but these are not equitably distributed or available. The UNDESA World Social Report [1] highlights significant inequality within cities as urban areas are often segregated, with some neighborhoods or sub-groups experiencing worse health outcomes [1]. The heterogeneity, including the context and variegated spaces within urban areas, means that the unique needs of vulnerable urban populations, such as slum residents, street children, urban refugees, and migrants have to be targeted at the right delivery points. SRH risks for the urban poor include high rates of unwanted pregnancies, sexually transmitted infections, poor maternal and child health outcomes, and high rates of gender-based violence (GBV) [5]. Urban areas also have a higher prevalence of HIV particularly in sub-Saharan African cities, with heightened risk in urban slums [6–9].

Intersectionality, or the interconnected nature of social characterizations or identities including gender, race, and class, has rarely been explored as a framework for understanding drivers of urban SRHR outcomes, yet it is vital to a more holistic understanding of the ways in which social systems, power, and identity influence SRHR outcomes and behaviors. SRHR in urban contexts is critical to the development of healthy productive urban populations and, ultimately, the improvement of quality of life. Thus, addressing the challenges of urbanization, gender equity, and poverty within urban areas is key to achieving sustainable development [10]. Addressing SRHR is also a critical component of inclusive urbanization, an approach to proactively addressing inequities to ensure that no one is “left behind” or excluded from global health and economic gains and progress [11]. Without planning and attention, cities will continue to exclude certain residents, mainly migrants and the urban poor. This exclusion can be inadvertent, or in some situations intentional, and leads to a reinforcing cycle of poverty, exclusion, and deepening geographic segregation, often resulting in poor health outcomes, including for SRHR [12].

A major research challenge lies in defining the urban environment itself. There are no standard categories used to define cities or slums, and there is a lack of appropriate tools at national and city levels and limited capacities for data collection, management, and comparative analysis [13]. Research often refers to solely the rural vs urban dichotomy and fails to capture the heterogeneous nature of urban environments across countries and regions in terms of size/scale, topography, climate, services, and culture [10, 14]. Governments may define cities based on minimum population size, but this can vary from a minimum of 2500 people in Mexico to 20,000 in Nigeria, limiting comparability between countries [15]. Places are often labeled as urban or rural by government authorities. Once categorized, they are rarely recategorized, and the categorization used may be subject to political influence (e.g., redefining an area as urban may trigger different requirements regarding government allocation of resources or infrastructure) [16]. Differentiations within urban areas are even less clear. Some extant literature has categorized urban areas as slum and non-slum areas, but it is unclear how these categorizations are delineated. As the world urbanizes, understanding the full urban spectrum is critical to understanding and addressing how environment and infrastructure result in persistent heterogeneities in health, poverty, environmental risks, and other key livelihood and well-being factors that directly and indirectly relate to SRHR [17].

In addition to the lack of standard definitions, many surveys, such as the Demographic and Health Survey (DHS) and Multiple Indicator Cluster Surveys (MICS), that are often used to inform SRHR research, programs, and policies do not capture the diversity of experiences and needs of vulnerable groups within urban settings due to a lack of disaggregated data [13, 14, 17, 18]. Nationally representative surveys can only be disaggregated by urban vs rural, and the samples are not designed for intra-urban comparison. Satellite-derived datasets offer an opportunity to explore more objective measures of urbanicity, quantifying the degree of urbanization per grid cell (e.g., 1 km² cells) as a combination of the built environment and population density that is independently derived from national administrative boundaries or input [19]. A gender lens is also critical as internal migration flows and urban populations have measurably “feminize” in recent decades, so girls and women now

disproportionately account for the urban population in the Global South [20]. As adolescent girls and young women flock to cities for employment, prudent planning requires adopting a gendered and age-sensitive lens that will enable an understanding of the experiences and needs of adolescent girls [14, 21].

With this understanding, we conducted a scoping review with three objectives. First, to explore drivers, barriers, and contextual factors that relate to SRHR access and needs in urban contexts in the Global South. If studies disaggregate within urban areas, we report and explore these urbanicity measures and how they relate to SRHR outcomes. Second, the review describes the interventions tested to improve SRHR outcomes in urban areas, with a focus on studies that describe how the urban context relates to the design, implementation, or outcomes evaluated. Lastly, it outlines the next steps for priority research areas on SRHR in urban areas.

Methods

This scoping review focuses on SRHR in urban settings in the Global South using a list of countries defined by the UN [22] and the World Bank [16]. The Global South or low- and middle-income country (LMIC) are generally used to refer to countries in Latin America, Asia, Africa, and Oceania, with obvious limitations that warrant further examination. Given that there is no standardized definition of urban, we explore literature that defines its population as urban, using broad search terms that include metropolitan, peri-urban, slum, informal settlement, or inner city to capture any relevant settings. The literature search was conducted in PubMed/MEDLINE, SCOPUS, COCHRANE Library, Web of Science, POPLINE, JSTOR, and Google Scholar restricted to studies published between 2010 to 2022, according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The following keywords were used: “Urban,” “urbanization,” “city,” “slum,” “peri-urban,” “suburban,” “metropolitan,” “informal settlement,” “LMIC,” “Global South,” “sexual and reproductive health,” “SRH,” “SRHR,” “family planning,” “HIV,” “unmet need,” “fertility,” “pregnancy,” “contraception,” “abortion,” “gender-based violence,” “girl,” “women,” “female,” “adolescent,” “empower,” “empowerment,” “gender,”

“equality,” “inequality,” “equity,” “disparity,” “poverty,” “economy,” “disparity,” “education,” “support,” “policy,” “SDG,” “inequality,” “UHC,” “Universal health coverage.”

In PubMed, MeSH terms were used to search the key words and used Booleans of “AND” and “OR.” In Web of Science, Topic (TS) was used to search the keywords using Booleans “AND” and “OR.” In Scopus, the Booleans “AND” and “OR” were used to search the keywords using title (TITLE), abstract (ABS), and keyword (KEY) (TITLE-ABS-KEY). We retained only studies published in English between 2010 and 2022. To identify relevant grey literature, a more targeted search of organizations that conduct urbanization and well-being research was conducted, including, Population Council, APHRC, UN-Habitat, and World Bank. Bibliographies in the identified literature (peer-reviewed and grey literature) were also searched manually to identify further, relevant references.

Data was extracted from relevant papers using pre-defined evidence summary templates. Information from each article was extracted to capture the following categories: “article title,” “authors,” “journal,” “year of publication,” “region,” “country,” “Urban definition (e.g., slums, general urban area, rural vs urban),” “Study population age,” “gender focus,” “study design,” “sample size,” “individual characteristics,” “attitudes and norms, interpersonal characteristics,” “neighborhood level,” “facility level,” societal/policy level,” and “main study objective summary,” “Dataset (e.g., if the study identified an accessible dataset for potential secondary analysis, such as DHS, MICS, IPUMS, PMA2020),” and “SRH area (e.g., FP, unintended pregnancy, abortion, HIV, fertility, early pregnancy, GBV).” One reviewer extracted each paper, and a second reviewer extracted a random sample of half of the articles, with a third reviewer if there was any disagreement. This is a scoping review that aims to present an overview of a very diverse body of research, including a range of study types, outcomes, and focus areas. To allow for a more inclusive review, a measure of quality is not reported.

The initial search yielded a total of 1550 studies identified through database searching and 160 additional pieces of grey literature, including targeted organizational searches and pulling references from other systematic reviews. The review began in 2021 but has been ongoing. After removing duplicates, 890 records were

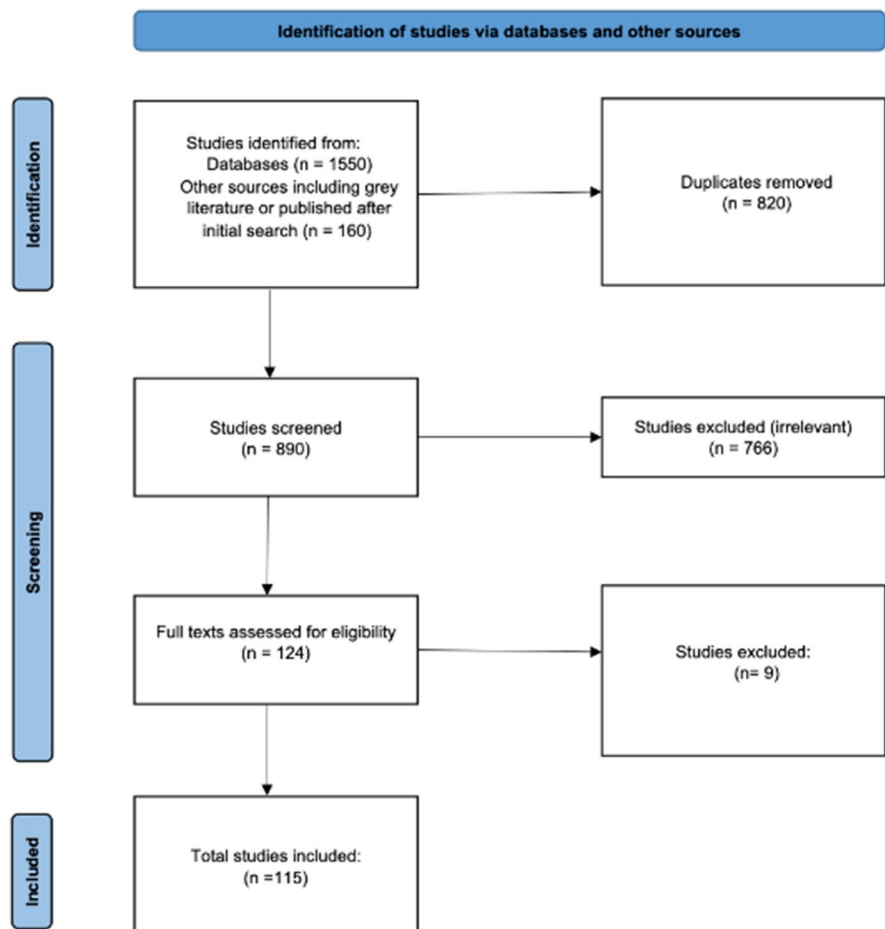
left for screening. Upon completion of title and abstract screening, 766 were excluded leaving 124 full texts deemed potentially relevant for review. Subsequently, 115 papers fulfilled our eligibility criteria (Table 1) and were included in this review (Fig. 1). After extracting the data into the evidence table, we summarized the results

and mapped key findings. Results sections are categorized based on themes that emerged from the synthesis. We adopt a narrative synthesis approach given the variety of study designs, focus areas, outcomes, and the number of countries covered.

Table 1 Inclusion/exclusion criteria

Criteria	Inclusion	Exclusion
Study design	Quantitative, qualitative or mixed methods, systematic reviews or meta-analyses, grey literature	Editorials, newspaper articles and other forms of popular media, dissertations
Location	Global South	High income countries (with human development index of 0.70 and above); regions outside the Global South
Date	2010–2022	
Language	English only	
Age	Adolescents (ages 10–19 years) and adults of reproductive age	

Fig. 1 Study selection procedure for the literature synthesis (PRISMA flow chart)



Results

The 115 articles included in this review cover a range of topics and use a variety of methods. The two most common topics were family planning (FP) (56 articles, 49%), and HIV/STIs (43, 37%). Many articles focused on women of reproductive age (15–49 years) (44, 38%), with 18 focused on adolescents (10–19 years of age, 16% of articles), and another 18 focused on adolescents and young people (15–24 years, 16% of articles). Only 16 studies sampled men (14%), and another 11 interviewed providers or stakeholders (10%). Half of the articles (58, 50%) included were conducted in a general urban area, with only 26 (23%) focused on slums (Table 2). Most articles came from India, Kenya, or Nigeria (Fig. 2). Most were quantitative (87, 76%), with only 16 (14%) qualitative studies and 12 (10%) mixed methods. An additional 14 (12%) were randomized evaluations. We identified three other scoping reviews in this process, one focused specifically on urban family planning [17], one focused on adolescent SRHR challenges in urban slums [23], and one focused on the impact of interventions for urban family planning in slums in LMICs [12]. While focused on slightly different aspects of SRHR, overall, our findings are aligned with these reviews and identify related challenges and gaps.

Structural Environment

In urban environments, SRHR are shaped by structural factors including geographic and infrastructural challenges, concentrated poverty, and legal and policy environments affecting access to services and information, affordability, and physical safety [14, 18, 24]. Unlike in most rural areas, urban ones have a higher density of facilities offering SRH services and travel between communities is shorter, resulting in greater choices of health facilities and different patterns of accessing care [25]. Despite these shorter distances, transportation, pricing, and stigma still influence access to services. Slums are often located on the peri-urban fringe and therefore do not always have the same resources as the rest of a city due to social, economic, and political exclusion [14, 26]. Slum residents often face a choice between paying more for closer, lower-quality FP services or traveling outside their neighborhood to access low-cost, better-quality

services [18, 27]. A South African study of mobile voluntary counseling and testing (VCT) found higher accessibility in urban areas with most users able to walk to the mobile site [28].

Urbanization may result in the concentration of poverty [1, 3], yet only 15 articles (13%) in the review capture the effects of poverty at the structural level on SRHR with most focusing more on individual behaviors and individual or household characteristics [6, 18, 29–40]. Beyond individual income, urban slum environments function as “spatial poverty traps” in which multiple and reinforcing disadvantages are amplified at the neighborhood level, presenting unique challenges to SRHR, particularly among adolescents [14]. Growing up in resource-constrained settings, younger adolescent girls are at risk of early sexual initiation, unintended pregnancy, early marriage, HIV infection, and GBV [6, 36, 38, 41]. Studies also suggest a higher prevalence of HIV infection in slum communities and among the urban poor as well as heightened gender disparities in HIV that disproportionately affect urban adolescents and young people, particularly those with no education [6, 42–45]. Because poverty constrains the ability to access quality information and services, poverty reduction strategies need to be considered alongside SRH services [30]. A holistic approach to improving SRHR in urban areas is critical to address overlapping structural level barriers that may compound to exacerbate harms.

An additional set of seven articles (6%) captures how restrictive and exclusionary policies at local, sub-national, national, and global levels influence SRHR in urban environments. Because city governance structures often exclude urban slums from formal public services, in countries where most family planning clinics are in the public sector, people who live in slums tend to access informal clinics that offer services at higher costs [18]. Populations that are placed in marginalized positions from accessing safe and respectful SRHR services, such as female sex workers (FSWs), may face additional barriers imposed by inequitable policies [46, 47]. Urban areas have higher concentrations of FSWs, and this population experiences higher levels of unintended pregnancy than national estimates of all women, so restrictive abortion policies disproportionately create obstacles for FSWs in accessing safe abortion care. Local policing policies in Cameroon, for instance, were found to negatively influence

Table 2 Characteristics of included studies ($n = 115$)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Abuya et al., 2014	Determinants of educational exclusion: Poor urban girls' experiences in-and-out-of-school in Kenya	Kenya	Informal/slum settlements	Adolescent girls ages 10–19 years (who had attended school for at least 2 years); and teachers (currently teaching)	Qualitative	44	early marriage, GBV
Adedze et al., 2022	Exploring Sexual and Reproductive Health Needs and Associated Barriers of Homeless Young Adults in Urban Ghana: A Qualitative Study	Ghana	slums and informal settlements	Homeless young male and female adults between the ages of 10 and 24 years	Qualitative	30 in-depth interviews, 12 participants in focus group, and one key informant interview	contraceptive use/access, risky sexual behavior, STIs, abortion care
Agyekum et al., 2022	Partner support and women's contraceptive use: insight from urban poor communities in Accra, Ghana	Ghana	Urban area	currently married women and women in a union, ages 16–44 years; excludes currently pregnant women or those trying to be pregnant	Quantitative	1,578	contraceptive use/access
Ahmed et al., 2020	Impact of the societal response to COVID-19 on access to healthcare for non-COVID-19 health issues in slum communities of Bangladesh, Kenya, Nigeria and Pakistan: results of pre-COVID and COVID-19 lockdown stakeholder engagements	Bangladesh, Kenya, Nigeria, Pakistan	Urban slums	Various Stakeholders	Qualitative	860	HIV/STIs, GBV, maternal health

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Angeles et al., 2019	Reducing Inequity in Urban Health: Have the Intra-urban Differentials in Reproductive Health Service Utilization and Child Nutritional Outcome Narrowed in Bangladesh?	Bangladesh	Urban slums and non-slums	Ever married women only, ages 13–49 years	Quantitative	9,121 in 2006; 18,764 in 2013	contraceptive use/access, maternal health
Anusomteerakul et al., 2014	Adolescents' Reproductive Health Status in Urban Slums in the Khon Kaen Municipality, Thailand	Thailand	Urban slums	Male and female adolescents ages 10–19 years	Quantitative	277	contraceptive use/access, sexual debut, unintended pregnancy, abortion
Aransiola et al., 2014	Women's perceptions and reflections of male partners and couple dynamics in family planning adoption in selected urban slums in Nigeria: a qualitative exploration	Nigeria	Urban slums	Adult men and women, ages 18–49 years	Qualitative	16 focus groups (8–12 participants each)	contraceptive use/access
Atagame et al., 2017	Evaluation of the Nigerian Urban Reproductive Health Initiative (NURHI) Program	Nigeria	Urban area	Women only, ages 15–49 years	Quantitative	Baseline: 16,118; Endline: 10,672	contraceptive use/access
Austrian et al., 2015	Adolescent Girls Initiative—Kenya (Baseline Report)	Kenya	Urban informal settlements (slum) and a rural area	Girls only, ages 11–14 years	Quantitative	6,219	sexual debut, unintended pregnancy, GBV, early marriage, contraceptive use/access
Austrian et al., 2018	Adolescent Girls Initiative—Kenya (Midline Report)	Kenya	Urban informal settlements (slum) and a rural area	girls only, ages 11–14 years	Quantitative	4,093	sexual debut, unintended pregnancy, GBV, early marriage, contraceptive use/access

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Babalola et al., 2015	Factors associated with contraceptive ideation among urban men in Nigeria	Nigeria	urban areas	Men only, mean age is 33 years	Quantitative	2,358	contraceptive use/access
Balaji et al., 2011	The Acceptability, Feasibility, and Effectiveness of a Population based Intervention to Promote Youth Health: An Exploratory Study in Goa, India	India	Urban vs Rural	Young men and women ages 16–24 years	Quantitative	87	SRH, violence, mental health
Begum et al., 2014	Prevalence of unmet need for contraception in urban slum communities, Mumbai	India	Urban slums	Married women ages 18–39 years with at least 1 child	Quantitative	2,797	contraceptive use/access, fertility preferences
Beguy et al., 2014	Unintended Pregnancies among Young Women Living in Urban Slums: Evidence from a Prospective Study in Nairobi City, Kenya	Kenya	Urban slums	Young women ages 15–22 years	Quantitative	849	unintended, unwanted or mistimed pregnancies
Beguy et al., 2017	Changes in Use of Family Planning among the Urban Poor: Evidence from Nairobi Slums	Kenya	Urban slums and non-slums	Women who were married or living with a partner, ages 15–49 years	Quantitative	1,931 in 2000; 2,345 in 2012	family planning, urban and informal settlements
Beguy et al., 2013	Status Report on the Sexual and Reproductive Health of Adolescents Living in Urban Slums in Kenya	Kenya	Urban slums and non-slums	Adolescents and young men and women, ages 12–14; 15–19; 20–22 years	Mixed methods	Wave 1, n = 4058, Wave 2, n = 2,674, Wave 3, n = 1,923; 75 in-depth interviews	fertility, HIV/STIs, sexual debut, contraceptive use/access, unintended pregnancy, abortion

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Benson et al., 2017	Longitudinal evaluation of the Tupange Urban Family Planning Program in Kenya	Kenya	Urban area	Women only, ages 15–49 years	Quantitative	5,217	fertility and FP use
Benza et al., 2016	Fertility and urban context: A case study from Ghana, West Africa, using remotely sensed imagery and GIS	Ghana	Urban area	NA	Quantitative	unspecified	fertility
Bergam et al., 2022	"I am not shy anymore": A qualitative study of the role of an interactive mHealth intervention on sexual health knowledge, attitudes, and behaviors of South African adolescents with perinatal HIV	South Africa	urban township	Adolescent boys and girls with perinatal HIV	Qualitative	21	SRH knowledge for those living with HIV
Bond et al., 2016	"The difference that makes a difference": highlighting the role of variable contexts within an HIV Prevention Community Randomised Trial (HPTN 071/PopART) in 21 study communities in Zambia and South Africa	South Africa and Zambia	21 urban communities	Adult men and women	Mixed methods	66 key informant interviews, 81 group discussions, 140 observation activities, and 1,006 surveys	HIV/STI risks

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Bowring et al., 2020	Unmet Need for Family Planning and Experience of Unintended Pregnancy Among Female Sex Workers in Urban Cameroon: Results from a National Cross-Sectional Study	Cameroon	Urban areas	FSW ages 18 or older	Quantitative	2,250	contraceptive use/access, unintended pregnancy
Brahmbhatt et al., 2014	Prevalence and Determinants of Adolescent Pregnancy in Urban, Disadvantaged Settings across Five Cities	United States, South Africa, Nigeria, India, China	Urban areas	Adolescents ages 15–19 years	Quantitative	2,500	adolescent pregnancy, urban and disadvantaged settings
Bwalya et al., 2020	Social response to the delivery of HIV self-testing in households: experiences from four Zambian HPTN 071 (PopART) urban communities	Zambia	Urban communities	Adult men and women	Qualitative	40 interviews, 22 observations and 91 group discussions	HIV testing
Calhoun et al., 2013	Provider imposed restrictions to clients' access to family planning in urban Uttar Pradesh, India: a mixed methods study	India	Urban areas	healthcare providers in six cities in Uttar Pradesh, India	Mixed Methods	250 surveys; 21 interviews	Family planning, contraceptive use/access
Chamie et al., 2021	Financial incentives and deposit contracts to promote HIV retesting in Uganda: A randomized trial	Uganda	peri urban communities	Adult men and women	Quantitative—RCT	524	HIV testing

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Chang et al., 2019	Effect of Prices, Distribution Strategies, and Marketing on Demand for HIV Self-testing in Zimbabwe A Randomized Clinical Trial	Zimbabwe	urban vs rural	Adult men and women	Quantitative—RCT	3,996	HIV testing
Chin-Quee et al., 2021	Task sharing of injectable contraception services in Pakistan: A randomized controlled trial	Pakistan	urban vs rural	health facilities, providers, clients	Quantitative	urban = 355; rural = 105	contraceptive use/access
Choko et al., 2019	HIV self-testing alone or with additional interventions, including financial incentives, and linkage to care or prevention among male partners of antenatal care clinic attendees in Malawi: An adaptive multi-arm, multi-stage cluster randomised trial	Malawi	urban areas	male partners of women attending ANC	Quantitative—RCT	2,349	HIV testing
Choudhury et al., 2015	Urban and Rural HIV estimates among Adult Population (15–49) in Selected States of India using spectrum data	India	Urban vs rural	Men and women ages 15–49 years	Quantitative	unspecified	HIV/STIs
Contra-Achyt et al., 2016	Impact evaluation of the Urban Health Initiative in urban Uttar Pradesh, India	India	Urban areas	Currently married women only, ages 15–49 years	Quantitative	16,802 at baseline, 14,026 at endline	contraceptive use/access

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Corroon et al., 2016	Key Role of Drug Shops and Pharmacies for Family Planning in Urban Nigeria and Kenya	Nigeria, Kenya	Urban areas	Women only, 15–49 years, who have had sex in the past year	Quantitative	Nigeria (N = 11,930), Kenya (N = 7,085)	contraceptive use/access
Cronin et al., 2018	The effects of health facility access and quality on family planning decisions in urban Senegal	Senegal	Urban areas	Women only, ages 15–49 years	Quantitative	9,614 women; 205 health facilities; 518 pharmacies	contraceptive use/access, fertility preferences
Das et al., 2015	Community mentors as coaches: transforming gender norms through cricket among adolescent males in urban India	India	2 urban slum communities	adolescent boys and young men, only (ages not specified)	Quantitative	168 intervention 141 comparison, + surveys with additional 26 coaches and 16 mentors	GBV
Dinsa et al., 2022	Equitable Distribution of Poor Quality of Care? Equity in Quality of Reproductive Health Services in Ethiopia	Ethiopia	Urban vs Rural	Facilities	Quantitative	DHS Ethiopia 2016 -17,000; SPA +: 1,327 public and private facilities, 1,640 ANC consultations and 1,026 FP consultations observed	Antenatal care, maternal health, contraceptive use/access
Dorward et al., 2017	Factors Associated With Poor Linkage to HIV Care in South Africa: Secondary Analysis of Data From the Thol'impilo Trial	South Africa	urban vs rural	Adult men and women, ages 27–41 years	Quantitative	2,398	linkage to care for HIV
Engelbrechtsen et al., 2011	Piloting a safe spaces, asset-building program for adolescent girls urban Ghana	Ghana	urban areas	adolescent girls only (ages not specified)	Quantitative	unspecified	health knowledge

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Engelbrechtsen et al., 2013	Follow-up study of migrant adolescent girls in domestic service who participated in the first cohort of the filles eveillees (Girls Awakened Program)	Burkina Faso	Urban area	migrant adolescent girls only, ages 11–16 at baseline, ages 12–18 years at follow up	Quantitative	180, subset 50 follow up	pregnancy knowledge, family planning knowledge, HIV/STI knowledge
Erulkar et al., 2011	Biruh Tesfa ('Bright Future') Program Provides Domestic Workers, Orphans & Migrants in Urban Ethiopia with Social Support, HIV Education & Skills	Ethiopia	Urban area	Girls ages 7–24 years; out-of-school slum-dwelling girls ages 10 to 19 years	Mixed Methods	31,590	HIV/STIs, GBV, maternal health
Escamilla et al., 2018	The Role of Distance and Quality on Facility Selection for Maternal and Child Health Services in Urban Kenya	Kenya	Urban Poor	Women only (ages 15–49 years)	Quantitative	8,932	contraceptive use/access
Ezeh et al., 2010	Reaching the Urban Poor with Family Planning Services	Ghana, Kenya, Malawi	Urban poor	currently married women, ages 15–49 years	Mixed methods	unspecified	contraceptive use/access
Fotso et al., 2013	Closing the poor-rich gap in contraceptive use in urban Kenya: are family planning programs increasingly reaching the urban poor?	Kenya	Urban area	Women of reproductive age	Quantitative	4,306	unmet need for FP

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Geldsetzer et al., 2019	Community health workers to improve uptake of maternal healthcare services: A cluster randomized pragmatic trial in Dar es Salaam, Tanzania	Tanzania	urban area	pregnant women and new mothers	Quantitative—RCT	2,329	Maternal child health
Go et al., 2011	High prevalence of forced sex among non-brothel based, wine shop centered sex workers in Chennai, India	India	slums	FSWs	Quantitative	522	HIV risk
Gosalia et al., 2012	Gynecological Morbidities in Women of Reproductive Age Group in Urban Slums of Bhavnagar City	India	Urban slums	Women of reproductive age, ages 15–49 years	Quantitative	750	gynecological morbidities
Greif et al., 2011	Urbanisation, Poverty and Sexual Behaviour: The Tale of Five African Cities	Ghana, Tanzania, Zimbabwe, Kenya, Uganda	Urban slums and non-slums	Women only, ages 15–49 years	Quantitative	1,354	HIV risk
Guilkey & Speizer, 2022	The direct and indirect effects of community beliefs and attitudes on postpartum contraceptive method choice among young women ages 15–24 in Nigeria	Nigeria	Urban areas	Young men and women, ages 15–24 years	Quantitative	1,649	Postpartum contraceptive use

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Hayes et al., 2017	A universal testing and treatment intervention to improve HIV control: One-year results from communities in Zambia in the HPTN 071 (Pop-ART) cluster-randomised trial	Zambia	21 urban communities	adult men and women	Quantitative—community RCT	59,283 men, 61,847 women	HIV testing and treatment
Hebert et al., 2012	Family planning providers' perspectives on family planning service delivery in Ibadan and Kaduna, Nigeria: a qualitative study	Nigeria	Urban areas	male and female family planning providers	Qualitative	59	contraceptive use/access
Hidrobo et al., 2013	The effect of cash, vouchers and food transfers on intimate partner violence: Evidence from a randomized experiment in Northern Ecuador	Ecuador	Urban poor	Women only, ages 15–69 years who are married or in unions at baseline	Quantitative	1,231	GBV
Huda et al., 2014	Prevalence of unintended pregnancy and needs for family planning among married adolescent girls living in urban slums of Dhaka, Bangladesh	Bangladesh	Urban slums	Married adolescent girls, ages 15–19 years	Mixed methods	1,008 surveys; 29 interviews	unintended pregnancy and unmet need for FP
Hulstrand et al., 2019	Contraception use and unplanned pregnancies in a peri-urban area of eSwatini (Swaziland)	eSwatini (Swaziland)	Peri-urban area	Women only, ages 14–19, 20–34, 35 and older	Quantitative	1,436	contraceptive use/access, unintended pregnancy, HIV/STIs, parity, maternal health (ANC attendance)

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Ikamari et al., 2013	Prevalence and determinants of unintended pregnancy among women in Nairobi, Kenya	Kenya	slum and non slum areas	women only, ages 15–49 years	Quantitative	1,262	unintended pregnancies
Do et al., 2020	Partner Discussion as a Mediator of the Effects of Mass Media Exposure to FP on Contraceptive Use among Young Nigerians: Evidence from 3 Urban Cities	Nigeria	Urban areas	young men and women, ages 15–24 years	Quantitative	777	contraceptive use/access
Kabiru et al., 2010	Transition into first sex among adolescents in slum and non-slum communities in Nairobi, Kenya	Kenya	Urban slums and non-slum areas	Adolescent men and women, ages 15–19 years	Quantitative	2,134	sexual debut
Kamal et al., 2011	Socioeconomic Factors Associated With Contraceptive Use and Method Choice in Urban Slums of Bangladesh	Bangladesh	slum and non-slum areas of 6 cities	women only, ages 13–59 years	Quantitative	14,191	contraceptive use/access
Kamndaya et al., 2016	The role of material deprivation and consumerism in the decisions to engage in transactional sex among young people in the urban slums of Blantyre, Malawi	Malawi	Urban slums	Young men and women, ages 18–23 years	Qualitative	60	transactional sex

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Keesara et al., 2015	Why do women choose private over public facilities for family planning services? A qualitative study of post-partum women in an informal urban settlement in Kenya	Kenya	Informal settlements	Women only, ages 19–38 years	Qualitative	91	contraceptive use/access
Kennedy et al., 2012	HIV/STD Risk Behaviors Among In-School Adolescents in Post Conflict Liberia	Liberia	8 urban schools	Adolescent boys and girls, ages 13–19 years	Quantitative—RCT	820	HIV/STIs, sexual debut, contraception, sexual risk behaviors
Khan et al., 2019	Knowledge about HIV/AIDS among women in Bangladesh: an urban–rural comparison of trend, attitude and determinants	Bangladesh	Urban vs rural	Women only, ages 15–49 years	Quantitative	11,440 in 2004; 17,863 in 2014	HIV/AIDS knowledge
Khanna et al., 2022	Social and economic marginalization and sexual and reproductive health and rights of urban poor young women: a qualitative study from Vadodara, Gujarat, India	India	6 slums	women only, ages 18–26 years	Qualitative	14 women and providers	contraceptive use/access, menstruation, exploring sexuality, fertility decisions, pregnancy and childbirth, abortion
Khoza et al., 2018	Cash transfer interventions for sexual health: meanings and experiences of adolescent males and females in inner-city Johannesburg	South Africa	Inner city	Adolescent males and females, ages 16–18 years	Qualitative (RCT pilot study)	120	HIV/STIs, sexual debut

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Kohler et al., 2016	STI Screening Uptake and Knowledge of STI Symptoms among Female Sex Workers Participating in a Community Randomized Trial in Peru	Peru	Urban areas	FSWs	Quantitative—Community randomized trial	4,156	STI screening and knowledge of STI symptoms
Kurunge et al., 2022	Effectiveness of Cash Transfer Delivered Along With Combination HIV Prevention Interventions in Reducing the Risk of Sexual Behavior of Adolescent Girls and Young Women in Tanzania: Cluster Randomized Controlled Trial	Tanzania	urban, rural high risk, and rural low-risk areas	out of school adolescent girls and young women, ages 15–23 years	Quantitative—cluster RCT	3,026	HIV incidence, Herpes (HSV-2) incidence, risky sexual behavior
Leight et al., 2022	The effects of text reminders on the use of family planning services: evidence from a randomised controlled trial in urban Mozambique	Mozambique	urban areas	Women, only	Quantitative	21,560	contraceptive use/access
Levy et al., 2014	Assessing Gaps and Poverty-Related Inequalities in the Public and Private Sector Family Planning Supply Environment of Urban Nigeria	Nigeria	Urban areas	women only, ages 15–49 years	Quantitative	16,101	contraceptive use/access

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Limbada et al., 2022	Acceptability and Preferences of Two Different Community Models of ART Delivery in a High Prevalence Urban Setting in Zambia: Cluster-Randomized Trial, Nested in the HPTN 071 (Pop-ART) Study	Zambia	two urban communities	adult HIV + men and women, ages 18 and older	Quantitative—nested cluster RCT	2,499	HIV, acceptability and preferences for ART delivery models
Liyanto et al., 2022	How well are Indonesia's urban poor being provided access to quality reproductive health services?	Indonesia	Urban areas	women only, ages 15–49 years	Quantitative	43,852	contraceptive use/access, maternal health
Lulseged et al., 2022	Progress towards controlling the HIV epidemic in urban Ethiopia: Findings from the 2017–2018 Ethiopia population-based HIV impact assessment survey	Ethiopia	Urban areas	Adult men and women, ages 15–64 years	Quantitative	19,136	HIV prevalence
Machiyama et al., 2019	Childbearing desires and behaviour: a prospective assessment in Nairobi slums	Kenya	Urban areas	postpartum women, ages 15–49 years	Quantitative	4,140	Fertility
Madise et al., 2012	Are slum dwellers at heightened risk of HIV infection than other urban residents? Evidence from population-based HIV prevalence surveys in Kenya	Kenya	Urban slums and non-slums; intra-urban differences	Women (ages 15–49 years) and Men (ages 15–54 years)	Quantitative	9,756	HIV prevalence

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Magadi et al., 2013	The Disproportionate High Risk of HIV Infection Among the Urban Poor in Sub-Saharan Africa	20 countries in SSA	Urban poor	Women (ages 15–49 years) and Men (aged 15–54 years)	Quantitative	175,699	HIV prevalence
Maria et al., 2022	Cervical cancer screening among HIV-positive women in urban Uganda: a cross sectional study	Uganda	Urban areas	HIV-positive women ages 18–65 years	Quantitative	205	HIV/STIs; cervical cancer screening
McCarthy et al., 2017	Quality improvement intervention to increase adherence to ART prescription policy at HIV treatment clinics in Lusaka, Zambia: A cluster randomized trial	Zambia	urban area	Public health facilities, HIV infected men and women	Quantitative—cluster RCT	16 public health facilities, 17,728 patients	HIV, ART prescription policies
McIlwaine et al., 2013	Urbanization and gender-based violence: exploring the paradoxes in the global South	unspecified	Urban areas	-	Qualitative	unspecified	GBV
Muanda et al., 2018	Attitudes toward sexual and reproductive health among adolescents and young people in urban and rural DR Congo	DRC	Urban vs rural	Adolescent men and women, ages 15–24 years	Qualitative	224	modern contraceptive usage among sexually active unmarried women; adolescents' knowledge and practices related to SRH
Muhula et al., 2022	Six-Months Retention on Treatment and Attrition Risk Factors among People Living with HIV in Kibera Informal Settlement, Nairobi, Kenya	Kenya	informal settlements	newly HIV + enrolled in treatment, adult men and women ages 18 and older	Quantitative—unblinded RCT	388	HIV, ART treatment adherence

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Muindia et al., 2014	Migration and sexual behavior among youth in in Nairobi's slum areas	Kenya	Urban slums	Adolescent and young adult men and women, ages 12–22 years	Quantitative	3,200	Risky sexual behaviors, timing of first sex
Mulawa et al., 2016	Evidence of social network influence on multiple HIV risk behaviors and normative beliefs among young Tanzanian men	Tanzania	Urban areas	Adult men and women	Quantitative	1,249 men; 242 women	HIV
Mumah et al., 2015	Contraceptive Adoption, Discontinuation, and Switching among Postpartum Women in Nairobi's Urban Slums	Kenya	urban slums	postpartum women, ages 15–49 years	Quantitative	3,579	unmet need, contraceptive adoption, discontinuation and switching
Mutisya et al. 2019	Strengthening integration of family planning with HIV/AIDS and other services: experience from three Kenyan cities	Kenya	Urban areas	facilities/providers and adult clients	Mixed methods	103 providers, clients	FP and HIV/AIDS service integration
Nada et al., 2010	Violence, abuse, alcohol and drug use, and sexual behaviors in street children of Greater Cairo and Alexandria, Egypt	Egypt	urban areas	male and female youth, ages 12–17 years, living on the street	Quantitative	857	HIV prevalence and risk behaviors
Ndayishimiye et al., 2020	Availability, accessibility, and quality of adolescent Sexual and Reproductive Health(SRH) services in urban health facilities of Rwanda: a survey among social and healthcare providers	Rwanda	Urban areas	Male and female health providers ages 15–65 years	Mixed methods	159	adolescent pregnancy and contraction of HIV and STIs; quality and comprehensive SRH services and information for adolescents

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Okigbo et al., 2015	Determinants of Sexual Activity and Pregnancy among Unmarried Young Women in Urban Kenya: A Cross-Sectional Study	Kenya	Urban areas	Women only, ages 15–24 years, who had never been married, and were not living with a male partner	Quantitative	2,020	Sexual debut, time to first pregnancy (fertility), teen pregnancy
Ortblad et al., 2019	The Effect of HIV Self-Testing Delivery Models on Female Sex Workers'	Uganda	Urban areas	FSWs 18 and older	Quantitative	1,649	HIV
Pal et al., 2014	Sexual Behaviors: A Randomized Controlled Trial in Urban Uganda	India	Urban slums	Married women only, ages 15–44 years	Quantitative	414	Unmet need for family planning
Pinchoff et al., 2019	The evaluation of the Woman's Condom marketing approach: What value did peer-led interpersonal communication add to the promotion of a new female condom in urban Lusaka?	Zambia	urban areas	Sexually active young adult men and women, ages 18–24 years	Quantitative	21,560	contraceptive use/access
Plymoth et al., 2020	Socio-economic condition and lack of virological suppression among adults and adolescents receiving antiretroviral therapy in Ethiopia	Ethiopia	rural vs urban	HIV + adult men and women	Quantitative—case control study	307	HIV
Prasad et al., 2022	Factors Related to Health Service Utilization among Adolescent Girls in Urban Slums of Jaipur, India	India	Urban areas	girls only, ages of 10–19 years	Mixed methods	417 surveys; 7 focus groups (12 girls each)	Health service utilization (maternal and child health)

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Psaki et al., 2022	What are we learning about HIV testing in informal settlements in KwaZulu-Natal, South Africa? Results from a randomized controlled trial	South Africa	informal settlements	Men ages 18–35 years, women ages 18–24 years	Quantitative—stepped wedge evaluation	1,528	HIV testing
Rashid et al., 2011	Human rights and reproductive health: political realities and pragmatic choices for married adolescent women living in urban slums, Bangladesh	Bangladesh	Urban slums	Married adolescent girls (ages not specified)	Qualitative	153	SRHR
Renzaho et al., 2021	Do Community-based Livelihood Interventions Affect Sexual Health and Rights of Young People in Slum Areas of Uganda: a Difference-in-difference with Kernel Propensity Score Matching Analysis	Uganda	Slums	Young men and women, ages 13–24 years	Quantitative	663- baseline; 579-follow-up	sexual debut, access to contraception and decision-making, reduced barriers to HIV testing, HIV/ risky sexual behaviors
Renzaho et al., 2017	Sexual, Reproductive Health Needs, and Rights of Young People in Slum Areas of Kampala, Uganda: A Cross Sectional Study	Uganda	Urban slums	Young men and women, ages 13–24 years	Quantitative	663	comprehensive categories of SRH including sexual behaviors, sexual education and access to contraceptive services, family planning, prevention of STDs, sexual consent as a right, gender-based violence, HIV testing and counseling

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Kimat et al., 2015	Interpersonal communication as an agent of normative influence: a mixed method study among the urban poor in India	India	Urban areas	women only, ages 15–49 years	Mixed methods	11,811	contraceptive use/access
Saggurti et al., 2014	Impact of the RHANI Wives intervention on marital conflict and sexual coercion	India	Urban areas	Women only, with a history of IPV	Quantitative—cluster randomized evaluation	220	IPV
Schwandt et al., 2017	Contraceptive service provider-imposed restrictions to contraceptive access in urban Nigeria	Nigeria	Urban areas	health service providers	Quantitative	Health facility providers (n = 1,479); Pharmacists (n = 415); PMVs (n = 483); Total: 2,377	contraceptive use/access
Sharanya et al., 2014	Reproductive health status and life skills of adolescent girls dwelling in slums in Chennai, India	India	Urban slums	Adolescent girls only, ages 13–19 years	Quantitative	130	Menstrual morbidity, reproductive/UTI, contraceptive use, abortion, HIV knowledge
Sidibe et al., 2020	Trends in contraceptive use, unmet need and associated factors of modern contraceptive use among urban adolescents and young women in Guinea	Guinea	Urban areas	Adolescent girls, ages 15–24 years	Quantitative	1,026 in 1999; 1,034 in 2005; 1,650 in 2012; 1,875 in 2018	contraceptive use/access
Sidze et al., 2014	Young women access and use of contraception: the role of providers' restrictions in urban Senegal	Senegal	urban areas	Women only, ages 15–29 years	Quantitative	2,340 married women; 237 unmarried women; 205 facilities, 647 provider interview	contraceptive use/access

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Speizer et al., 2015	Fertility desires, family planning use and pregnancy experience: longitudinal examination of urban areas in three African countries	3 countries: Kenya, Nigeria, Senegal	Urban areas	Women only, ages 15–49 years	Quantitative	Kenya: 3,108; Nigeria: 4,001; Senegal: 2,721; Total 9,830	fertility, contraceptive use/access
Speizer et al., 2019	Assessing the sustainability of the Nigerian urban reproductive health initiative facility level programming: longitudinal analysis of service quality	Nigeria	Urban areas	Health providers	Mixed-methods	156	
Speizer et al., 2013	Timing and Circumstances of First Sex among Female and Male Youth from Select Urban Areas of Nigeria, Kenya, and Senegal	Nigeria, Kenya, Senegal	Urban areas	Young men and women, ages 15–24 years	Quantitative	Kenya: 3,045; Nigeria 5,709; Senegal 4,195	Timing of first sex/sexual initiation, premarital first sex, modern FP use at first sex
Speizer et al., 2013	Influence of integrated services on postpartum family planning use: a cross-sectional survey from urban Senegal	Senegal	Urban areas	Women only, ages 15–49 years within 2 years postpartum	Quantitative	1,879	postpartum FP use
Starman et al., 2018	Examining diffusion to understand the how of SASA!, a violence against women and HIV prevention intervention in Uganda	Uganda	Urban areas	Male/Female adult couples	Mixed Methods	928 quant, 20 IDIs	HIV prevention and GBV
Thornton & Godlonton, 2016	Medical male circumcision: How does price affect the risk-profile of take-up?	Malawi	Urban areas	Adult men, only	Quantitative	1,649	HIV, circumcision, sexual behavior

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Tran et al., 2020	Effectiveness of postpartum family planning interventions on contraceptive use and method mix at 1 year after childbirth in Kinshasa, DR Congo (Yam Daabo): a single-blind, cluster-randomised controlled trial	DRC	urban vs suburban	postpartum women	Quantitative	576	postpartum FP; contraceptive use
Tumlinson et al., 2015	Provider barriers to family planning access in urban Kenya	Kenya	Urban areas	Health providers	Quantitative	692 health care providers from 273 healthcare facilities	contraceptive use/access
Urada et al., 2012	Condom Negotiations among Female Sex Workers in the Philippines: Environmental Influences	Philippines	urban areas	Women bar/spa workers, ages 18 years and older	Qualitative	142 interviews	negotiating condoms for FSWs
Van der Kop et al., 2018	Effect of an interactive text-messaging service on patient retention during the first year of HIV care in Kenya (WeTel Retain): an open-label, randomised parallel-group study	Kenya	Urban areas	HIV positive adult men and women	Quantitative—RCT	700	HIV care
Van Rooyen et al., 2013	Mobile VCT: Reaching men and young people in urban and rural South African pilot studies (NIMH Project Accept, HPTN 043)	South Africa	urban vs rural	Adult men and women	Quantitative	1,015 surveys, 40 interviews	HIV

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Wai et al., 2019	Unmet Need for Family Planning among Urban and Rural Married Women in Yangon Region, Myanmar—a Cross-Sectional Study	Myanmar	Urban vs Rural	married women only, ages 18–49 years	Quantitative	1,100	unmet need for FP
Weeks et al., 2011	Connecting the Dots Between Health, Poverty, and Place in Accra, Ghana	Ghana	Urban areas	women only	Mixed Methods	3,200	Child health, women's health
Winston et al., 2018	Impact of the Urban Reproductive Health Initiative on family planning uptake at facilities in Kenya, Nigeria, and Senegal	Kenya, Nigeria, Senegal	Urban areas	Health providers	Quantitative	Kenya (Baseline N = 279; Endline N = 377); Nigeria (Baseline N = 400; Endline N = 385); Senegal (Baseline N = 205; Endline N = 249)	FP uptake (supply side)
Wondemagegn & Berkessa, 2020	High level risky sexual behavior among persons living with HIV in the urban setting of the highest HIV prevalent areas in Ethiopia: Implications for interventions	Ethiopia	Urban areas	Adult men and women living with HIV	Quantitative	10 health facilities; 27 providers; 460 clients	HIV
Yadav et al., 2020	Unmet need for family planning services among young married women (15–24 years) living in urban slums of India	India	Urban slums	Young married women only, ages 15–24 years	Quantitative	535	unmet need for FP

Table 2 (continued)

Study	Title	Country	Urban level/type	Population	Study design	Sample size	SRH topic
Ziraba et al., 2018	Understanding HIV risks among adolescent girls and young women in informal settlements of Nairobi, Kenya: Lessons for DREAMS	Kenya	slum settlements	Adolescent girls only, ages 12–23 years	Quantitative	1,390	HIV risk

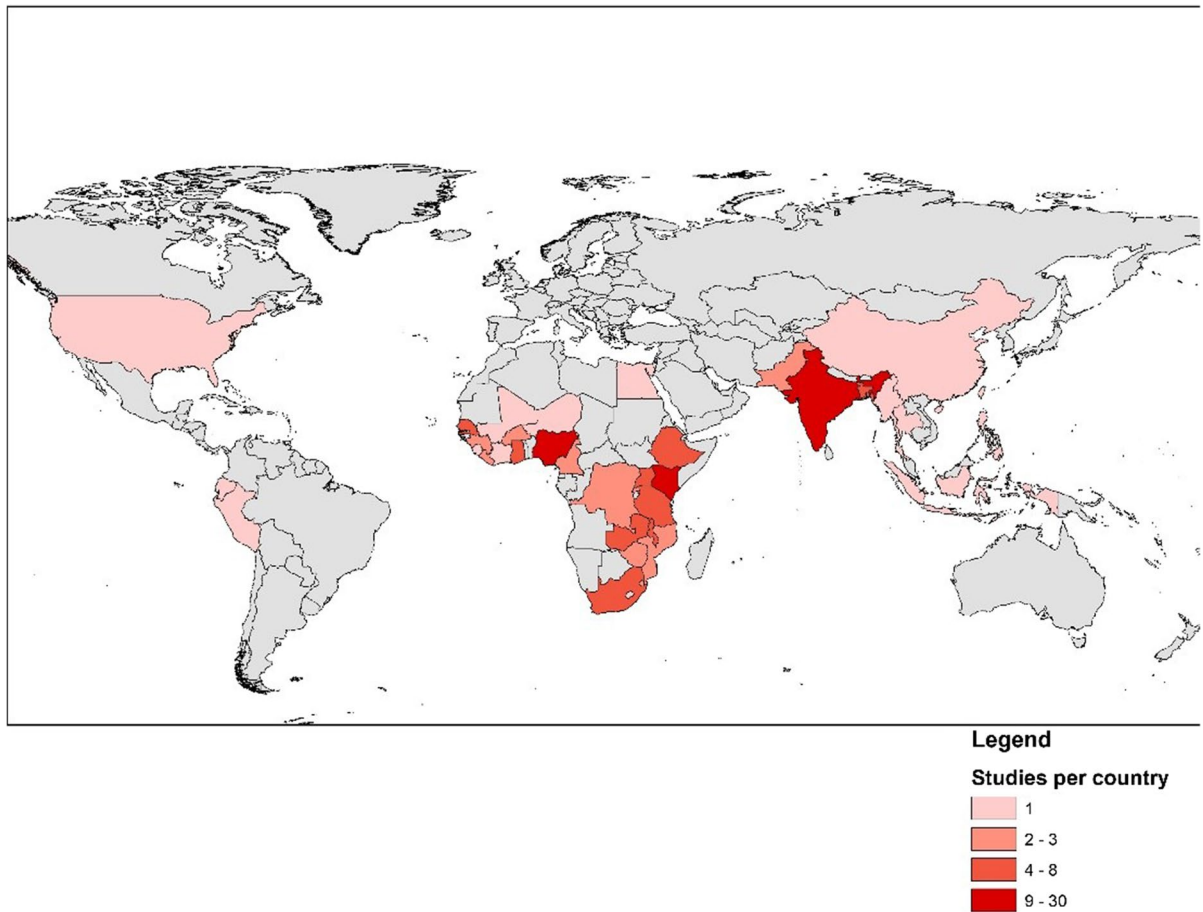


Fig. 2 Map with the quantity of publications from each country including in scoping review

condom usage and failure among FSWs [24]. On the national level, restrictive abortion policies create undue risk for all women and exacerbate harm for urban populations, such as FSWs. For example, countries where FSWs experience the greatest unintended pregnancies coincide with countries with the most restrictive abortion policies [24]. Relatedly, in the Philippines, FSWs with the least power to negotiate condom use were those that had been trafficked or faced higher poverty [47]. Even for young people in slums more generally, at the global scale, there is often a disconnect between legal human rights frameworks, notions of rights and entitlements, and the lived experiences of those living in urban slums in conditions of socioeconomic deprivation, as they are often not aware of their rights related to decisions to marry early, have children, terminate pregnancies, and engage in risky sexual behavior [37].

Gender Inequality

Gender inequality was discussed including inequitable gender norms at the community level and gender norms, behaviors, and power dynamics in interpersonal interactions related to social networks and partner dynamics. Only 11 articles (10%) consider the effect of gender inequality and inequitable gender norms on SRHR, with a focus on how such norms exacerbate GBV in urban settings. Exposure to violence in urban neighborhoods and slums includes personal experiences of sexual assault, harassment, and trafficking [14]. While the underlying causes of GBV are pervasive across geographic locations, certain risk factors that accompany urbanization processes, including urban poverty, low-quality sanitary facilities, fragmented social support networks, access to alcohol, and concentration of jobs associated

with GBV such as factory and sex work, often lead to higher incidences of violence [14, 36]. The loosening of restrictive patriarchal norms that often accompanies urbanization resulting in improvements in women's lives can also lead to women being less likely to tolerate GBV and equip them with resources and institutional support to better cope with violence [36]. Additionally, urbanization may increase women's labor force participation rates, which may shift household gender dynamics and give women the economic resources to escape violent households. However, this dynamic also has the potential to result in backlashes of violence against women [36]. Given the relationship between gender norms, negotiation power, and violence, several articles emphasize the importance of equitable gender norms for violence prevention and SRHR, particularly for young people and migrants who are most vulnerable [36, 48–51].

Housing and Economic Insecurity

The influence of housing, economic insecurity, and social dynamics on safety considerations and behavioral norms were discussed [6, 30, 41, 52]. Weaker social cohesion in urban settings plays a role in establishing norms, communicating trust, and mobilizing collective resources [6]. Studies of diffusion of information in urban areas are useful; in urban areas information may be spread through personal contacts and less so at the community level [53]. Higher population density and lower social cohesion increase safety concerns, particularly for urban sub-populations that are already at risk for worse SRHR outcomes, such as adolescent girls, especially those who are solo migrants, and FSWs [14, 24, 47]. The physical environment, including housing density and cramped living conditions, increases exposure to early sexual activity, and violence, and may limit the use of contraceptives due to a lack of privacy [31]. Inadequate street lighting, the garbage that obstructs the vision of the streets, and the absence of clean and safe public toilets pose safety risks, especially to girls who perceive higher levels of community violence and lack of safety [14, 30, 32]. Girls living in urban areas report feeling unsafe walking around their communities at night and consider a greater proportion of spaces to be unsafe compared with girls living in rural environments [41, 52]. Housing deprivation, including overcrowding, poor quality of housing, lack of basic

services such as water and electricity, and high levels of observed violence [32], also related to evictions [37], and the breakdown of social networks may all increase the vulnerability of young people to adverse SRHR outcomes, increasing their likelihood of engaging in risky sexual behaviors including transactional sex [35], increasing risk of adolescent pregnancy or STIs [32].

Health Facilities and Service Provision in Urban Settings

Issues related to health facilities and service provision in urban areas include unevenly distributed services, gaps in public sector service coverage, access to information/misinformation, confidentiality, cost, and product availability. Although SRH services are offered in both public and private health facilities, FP service delivery channels are often different in urban areas and gaps exist in service coverage from the public sector [26, 54]. Urban-dwelling women and adolescent girls generally prefer private over public facilities due to convenience and timeliness of services as well as more friendly environments and respectful providers, while other women may choose public facilities because they offer free service delivery [26, 27, 29, 55]. Drug shops and pharmacies play an important role in the provision of contraceptives, filling gaps in public sector service coverage in urban areas, particularly for vulnerable and harder-to-reach populations such as young and unmarried women (and men), as they may feel more comfortable at these sites [56]. With targeting, it is likely that contraceptive uptake can be increased—for example, in Bangladesh, a program based in slums successfully increased modern contraceptive use among married women of reproductive age (15–49 years) by 9 percentage points to reach 62%, higher than even non-slum areas (56%), reversing the intra-urban differential [26, 57].

Localized social networks in slums have been linked to the spread of misinformation about contraceptive methods and services that may create stigma for those seeking care and may dissuade young adults from utilizing SRH services [58]. In addition to social networks, nine studies focused on urban healthcare provision documenting how provider biases towards individuals seeking contraceptive and family planning information and services result in experiences

of stigma, particularly among adolescents and FSWs [24, 29, 31, 59]. For HIV testing and treatment programs, one study in urban Zambia found a higher preference for home-based models because they reported harsh treatment by clinic workers and long wait times at facilities [57]. Most often at private facilities, providers may impose policies and procedures to restrict FP methods and impede clients' access to FP based on age, parity, partner consent, and marital status [60–63]. The result is that people are discouraged from purchasing contraceptives from health centers or pharmacies, seeking SRH care, and undermining their agency as it relates to contraceptive choices [24, 59].

Evidence on Tested Interventions and Programs

Overall, only 21 evaluation studies (18%) on tested interventions in urban settings were identified. However [14], many approaches failed to explore or to take advantage of the urban environment and infrastructure and to tailor programs. Within the studies that did emerge, there is mixed evidence on programs and interventions to improve SRHR outcomes among urban populations. In order to address the complex and interrelated factors that contribute to SRHR at the social and community levels, programs must take into account socio-cultural contexts and consider the relationship between the health of urban individuals and the environments they live in [30, 40, 51].

There is promise in multi-sectoral community-based interventions designed for adolescents, including those that utilize mentor-delivered curricula through safe spaces, to facilitate access to information, services, and social ties to improve SRHR outcomes, particularly for marginalized girls [38, 41, 64, 65]. These approaches have successfully improved SRHR outcomes related to delaying childbearing, reducing aspects of GBV attitudes and beliefs, increasing access to and decision-making about contraceptive and FP services, increasing voluntary counseling and testing for HIV, and increasing social participation and social safety networks. Relatedly, gender-transformative approaches focused on challenging and modifying harmful masculine norms and power dynamics may increase protective sexual behaviors, reduce violence, reduce transmission of HIV/STIs, and improve equitable gender relations [49, 66, 67]. Gaining the support of family members

and engaging community members and stakeholders that are often gatekeepers to young peoples' well-being (e.g., religious leaders, community leaders, parents, teachers, and peers) holds promise for GBV prevention and family planning service provision in urban settings [41, 50, 68].

Some programs leveraged behavior change approaches and a range of communication strategies. One evaluation adopted a peer-led interpersonal communication (IPC) approach to increase awareness and uptake of a new inner condom and found that this was a useful strategy to change norms and perceptions to increase acceptability and uptake [69]. Another program found text reminders to be effective in encouraging contraceptive uptake and clinic visits; however, effects were concentrated among women under 25 who may be more digitally engaged [70] though another found no effect of interactive text messages on patient retention for HIV care in Kenya [71]. The SASA! Project in South Africa used videos, performances, and other communication methods to address GBV [53]. Several studies tested financial incentives as nudges to change behaviors around HIV testing and male circumcision [72–76].

Several evaluations of facility-level intervention strategies to improve the quality of FP services and FP uptake among poor women in urban areas were reviewed [77–79]. The Urban Reproductive Health Initiative (URHI) program was initiated to increase contraceptive use in urban areas in four countries: India (Uttar Pradesh), Kenya, Nigeria, and Senegal through a range of country-specific demand and supply-side interventions [39, 80]. Evidence from the URHI in Nigeria and Kenya shows how targeting efforts to the urban poor and the particular barriers they face can successfully generate demand, improve efficiency in the delivery of FP services, and increase uptake of FP [54, 81, 82]. Results overall and across outcomes emphasize the need for larger system changes and more comprehensive strategies to address community-level factors, such as structural poverty or persistent gender norms, in order to achieve program sustainability and long-term impact [23, 78].

The most common outcome for rigorous evaluation was HIV testing and treatment in urban settings, comparing control arms to treatment groups that included financial incentives, different messaging, or different delivery of HIV services. Fourteen (12%)

articles were randomized controlled trials testing these interventions. However, almost none considered aspects of the urban environment in their analysis. While five of the 14 compared urban to rural settings, this was the extent of the comparison. One interesting approach was a paper written to complement the PopART Evaluation on HIV prevention in South Africa and Zambia, in which researchers assessed the different communities to understand how the community dynamics could influence the observed outcomes [83].

Discussion

This scoping review describes the current body of literature on SRHR in urban settings in the Global South published between 2010 and 2022. Most of the 115 studies identified were conducted in SSA and focused mainly on women of reproductive age (15–49 years), with less attention to the specific needs of young adolescent and marginalized girls as well as other sub-groups. Almost a third (37 articles; 32%) engaged men, mostly when focused on HIV as an outcome. Included publications focused heavily on FP and HIV/STIs, with few examining other aspects of SRHR such as abortion or menstrual health. Most of the studies were cross-sectional and quantitative in nature, with 14 rigorously designed randomized evaluations specifically exploring HIV outcomes. To address the complex and interrelated factors that contribute to SRHR at the social and community levels, programs must take into account socio-cultural contexts and consider the relationship between the health of urban individuals and the environments they are embedded in. Often, the focus is on individual-level correlates, failing to consider this important contextual information [30, 40, 51]. Similarly, there were few studies that focused on intra-urban differences, highlighting the need for urban surveys and datasets that allow for comparisons within cities, and with a sufficient sampling of marginalized groups.

While all papers included in the review focus on urban populations, few unpack how the urban environment and context specifically influence or relate to SRHR-related behaviors, preferences, and service provision. Research often focuses on large cities or broad urban–rural comparisons and may overlook the

changes happening in smaller settlements and urban peripheries [17].

There is no standard definition of “urban” or “slums,” limiting the ability to compare key findings across studies. This results in entire groups of people and places not being counted and important aspects of city conditions, intra-urban differences, and experiences not being measured due to a lack of evidence-based planning and programming [13, 26]. Overall, urban residents tend to have better SRHR outcomes [84], but studies with intra-urban comparisons find that slum residents and the urban poor tend to fare worse (Table 3). Clearly, a more granular understanding of how social forces such as urban poverty, inequality, and social norms including gender norms intersect and are distributed across urban neighborhoods is necessary. In recent years, stakeholders’ interest in research in urban areas has increased but more research is still needed to understand the dynamics within and across city neighborhoods and how urban environments and community characteristics may contribute to SRHR outcomes. Precise measurement of these factors will enable a deeper understanding of SRHR risks, opportunities, and behaviors in urban environments and emerging technology such as satellite imagery may hold promise for improving data collection and analysis with real-time monitoring capabilities [19].

Overall, we found few evaluations of interventions or policies focused on SRHR in urban areas in the Global South. However, this is an area of increasing interest and publication encouraging shifts towards a holistic approach that addresses socio-environmental and economic conditions that heighten vulnerability

Table 3 Definitions of urban areas for papers that conducted data collection or analysis ($n=115$)

Urban definitions and comparison groups	Number (%) of articles
General urban areas	58 (50%)
Urban slums (no comparison area)	26 (23%)
Slum vs other urban areas	8 (7%)
Urban vs rural	14 (12%)
Urban poor	4 (3%)
Peri-urban setting	2 (2%)
Informal settlements/inner city	2 (2%)
Urban gradient/urbanicity	1 (1%)

to poor SRHR outcomes in the urban context. HIV prevention is perhaps the most rigorously studied outcome, with 14 randomized evaluations in urban areas included in this review; however, few if any provided additional details regarding their urban sample. Furthermore, given the advent of COVID-19 and the disruption of services, there is a need to explore how to effectively scale up mHealth interventions to reach the urban poor but not miss key populations given challenges such as the digital gender divide [85]. Evaluations may take a long time and not allow for real-time flexibility; mixed methods approaches may be useful as programs evolve and adapt to dynamic circumstances.

Limitations

This review acknowledges certain limitations, including restrictions around language (English only), our search of two databases, and inclusion after the 2010 date may have missed some important publications. Although included in the search, our results highlight the need for future studies to explore high-risk and marginalized sub-groups, such as LGBTQ youth and their specific SRHR needs and challenges in urban settings. Due to the mix of study designs and other factors, this review did not apply an appraisal of rigor to individual studies. An additional limitation of this review is related to the search terms used to identify relevant publications. This review only captures studies that explicitly reference their focus on urban contexts. Because some studies may have instead used place names or other terms, this review may not have captured all relevant articles. Despite these limitations, the strengths of this review include our broad narrative synthesis/scoping review approach and the inclusion of many different components of SRHR outcomes.

Conclusion and Next Steps

Aspects of the urban environment offer major opportunities to improve SRHR, but these are not equitably distributed or available. While urban areas often have more infrastructure and services than rural areas, geographic proximity to such resources does not guarantee access to them, particularly for poor and

marginalized young people [50]. Additionally, social development in urban areas, including infrastructure (roads, housing, sanitation) and investments in health and education, have not kept pace with urban population growth, particularly in many sub-Saharan African countries [18]. Existing surveys and data are insufficient to capture within-city heterogeneity in SRHR needs and experiences. While geospatial approaches may be useful to categorize urban environments and identify hotspots of poor health outcomes, these do not capture larger normative, political, and regulatory barriers to change [20, 86, 87]. As most of the world's population will urbanize in the coming decades, proactive strategies and interventions tailored to the urban environment and the distinct needs and experiences of urban populations are critical in creating enabling environments for accessing SRH services and improving SRHR outcomes. Without a rights-based, inclusive, and evidence-based approach, urban areas may see widening disparities, particularly among marginalized populations. Better measurement and disaggregation of urban populations and environments, through targeted surveys and innovative strategies such as machine learning of social media and phone data are useful to understand needs, experiences, and health equity differentials among urban groups. Finally, developing and evaluating programs that address structural barriers to SRHR in urban environments, including public safety, poverty, transportation costs, and gender inequality through a more holistic approach may be more effective at improving SRHR outcomes.

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