Original Research Article

A systematic review exploring the contraception values and preferences of sex workers, transmasculine individuals, people who inject drugs, and those living in humanitarian contexts

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ABSTRACT

Objective: We sought to systematically review the literature on values and preferences regarding contraception among individuals within selected key populations.

Study design: As part of a larger set of reviews on patients’ and providers’ values and preferences related to contraception globally, we searched ten electronic databases for articles from January 1, 2005 to July 27, 2020. No language restrictions were applied. Data was independently abstracted by two authors and study rigor was assessed using an 8-item measure developed by the Evidence Project for quantitative studies and an adapted CASP checklist for qualitative studies.

Results: We identified 12 studies that met our inclusion criteria examining selected key populations, including sex workers, transmasculine individuals, people who inject drugs, or those living in humanitarian contexts. Seven key themes that spoke to values and preferences emerged related to: autonomy, perceived effectiveness and safety, birth spacing and family outcomes, impacts on sexual experience, hormonal effects (e.g. desire for non-hormonal method or perception that the method is more natural as compared to hormonal methods), physical attributes (e.g. appearance and/or ease of use), and stigma. Six studies were of high rigor, five were of moderate rigor, and one was of low rigor. One study described the values and preferences of two of the selected key populations. The research available on the values and preferences of sex workers regarding methods of contraception was limited to female condoms.

Conclusion: Consideration of the values and preferences of individuals within selected key populations can inform providers, programme managers and policy makers participating in the delivery of contraceptive care. Contraceptive research among sex workers, transmasculine individuals, people who inject drugs, or those living in humanitarian contexts is quite limited; further research is needed to better understand the values and preferences of these populations.

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1. Introduction

Consideration of patient’s values and preferences is a critical component of quality health care [1]. The World Health Organization (WHO) defines quality of care as “the extent to which health care services provided to individuals and patient populations improve desired health outcomes,” which includes ensuring that care

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is people-centered, taking into account the preferences and aspirations of individual service users [2]. In recognition of these important values and preferences, WHO, in line with recommendations by international and regional human rights treaties, as well as national laws, has created a checklist for health care providers to assist them in ensuring that human rights considerations are included in the provision of contraceptive services [2]. The checklist enables providers to deliver reproductive health services, including contraception, in a way that is sensitive to the needs and perspectives of all individuals [2].

Gaining insight into values and preferences is especially important when considering the unique contraceptive needs of individuals. Values and preferences are influenced by a variety of factors, which may include both personal beliefs and experiences, as well as cultural and political contexts. Key populations, as described by the Global Fund, meet these three criteria: (1) an increased risk of poor health outcomes, (2) have less access to care and other relevant services, and (3) face human rights violations, disenfranchisement, marginalization, or criminalization, and because of these intersecting conditions, may have particular needs beyond the general population [3]. With regards to contraception, key populations can include people who inject drugs, transgender people, sex workers, refugees and migrants, people living with HIV, adolescents and young people, and populations of humanitarian concern.

Some of these groups such as people who inject drugs, transgender individuals, or those who engage in sex work may face stigmatizing attitudes from providers when seeking health care generally; such stigma may be compounded when dealing with issues related to sexuality and reproduction. Moreover, competing structural forces, including socio-economic constraints and societal gender norms, may constrain individual negotiating power around family planning [4]. Knowledge of and access to contraception may also be limited in settings with weak infrastructures affecting populations of humanitarian concern [5]; these factors may further impact an individual's ability to access care.

We sought to systematically review the literature to answer the research question: “What are the values and preferences regarding contraception of sex workers, transmasculine individuals, people who inject drugs, or those living in humanitarian contexts?” We focused on these selected key populations, as additional populations are included in our larger series of reviews on values and preferences related to contraception globally [6]. While these key populations may be varied in terms of their risk factors and contraceptive needs, they are all vulnerable groups, which experience multiple barriers to receiving high quality contraceptive care, and therefore are at increased risk of poor health outcomes. The findings of this review will be critical in considering various users’ perspectives to inform WHO’s programmatic guidance in the area of family planning.

2. Methods

We searched ten electronic databases for peer-reviewed studies including qualitative or quantitative information about patients’ and providers’ values and preferences for contraceptive methods covered under the WHO’s Medical Eligibility Criteria (MEC) and Selective Practice Recommendations (SPR) guidelines [7, 8]. The search dates were from January 1, 2005 to July 27, 2020. We had no language or setting restrictions. A detailed description of the methods for the larger review is available elsewhere [9]. We report this review according to PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) [10] and ENTREQ (Enhancing Transparency in Reporting the synthesis of Qualitative research) guidelines [11].

We defined “values and preferences” broadly, adapted from Guyatt et al. to be: “[t]he collection of goals, expectations, preferences, dispositions, and beliefs that individuals have for certain decisions and their potential outcomes” [12]. We included studies from the larger review on contraceptive values and preferences [9] if they asked participants directly how they felt about contraceptive methods and excluded studies that did not specifically report patient perspectives from the selected key populations. This review focused on patients’ values and preferences among selected key populations where substantial external constraints may influence their contraceptive choices differently than the general population. Two research assistants extracted relevant study data into standardized evidence tables. Two reviewers utilized an inductive, data-driven approach to identify themes. The themes were organized and reorganized until consensus was reached.

Study rigor was assessed separately for quantitative and qualitative studies. For quantitative studies, we used an 8-item measure developed by the Evidence Project [13] documenting the presence or absence of several features of study design or study data. We used an adapted version of the Critical Appraisal Skills Programme (CASP) qualitative 9-item checklist [14] for qualitative studies. We used both scales for mixed-methods studies. The number of items present were then summarized into categories of low, moderate, or high rigor.

3. Results

The search identified 423 studies for the larger review, of which 12 met our inclusion criteria examining the values and preferences of sex workers, transmasculine individuals, people who inject drugs, and those living in particular humanitarian contexts (Fig. 1). One study described the values and preferences of two of the selected key populations (sex workers and people who inject drugs).

3.1. Contraceptive values and preferences of selected key populations

3.1.1. Values and preferences of sex workers

Table 1 Six studies [15-20] included participants working as sex workers; all studies described values and preferences related to the female condom. All but one study [20] were of moderate rigor. Common themes included feelings around perceived effectiveness and safety, and perceptions and concerns about impacts on the sexual experience.

In Brazil, sex workers [19] expressed the following values and preferences: they appreciated that the female condom allowed for vaginal intercourse during menstruation; they valued the strength of the female condom’s material, increasing their belief that it would adequately protect them from both pregnancy and disease; they liked that the female condom enhanced sexual pleasure; and they felt that the option of a female condom increased their negotiating power with regard to safe sex. The female condom also allowed for discretion, because sexual partners were often not aware that the woman had inserted the condom, allowing for the woman to have safe sex, regardless of the partner’s feelings. Similar impressions were expressed by sex workers participating in a study in El Salvador and Nicaragua [16] and Swaziland [17], who valued the discretion of being able to insert the female condom ahead of time, empowering them to choose safe sex practices.

All but one study [17] described difficulties related to physical attributes of the female condom’s flexible rings, which are meant to secure positioning internally and externally, including issues with size and ease of use, as well as issues with misdirection and slippage. All studies described values and preferences related to the impacts on the sexual experience, with some participants expressing concerns related to interference with sexual intercourse due to noise and discomfort [15, 19, 20]. Others noted sex as more enjoyable because they did not have to worry about disease or
### Table 1
Summary of study characteristics and findings: values and preferences of sex workers

| Author, Year Location [ref] | Study design N for the selected key population | Contraceptive Method(s) | Key Results influencing contraceptive values and preferences | Study Rigor |
|-----------------------------|-----------------------------------------------|-------------------------|---------------------------------------------------------------|-------------|
| Hou, 2010 China [15]        | Cluster-randomized controlled trial N = 291   | Female condom           | Effectiveness/Safety – prevention of unwanted pregnancies and STIs<sup>a</sup> Impacts on sexual experience – interference with sexual intercourse due to inner and outer rings Physical attributes – appearance; difficulties with use due to misdirection (when male penetration occurs between the condom and the vaginal wall), slippage, and invagination (when the condom turns inside out) | Moderate    |
| Mack, 2010 Multi-country: El Salvador, Nicaragua [16] | Cross-sectional; focus group discussions, observations N = 115 | Female condom | Autonomy – self-initiation and reliance, use without notice, improves negotiating power Effectiveness/Safety – perception of strength as compared to male condom, can be inserted prior to sex, prevention of unwanted pregnancies and STIs<sup>a</sup> Impacts on sexual experience – enhances sexual pleasure Physical attributes – appearance; difficulties with insertion and removal, discomfort | Moderate    |
| Mathenjwa, 2012 Swaziland [17] | Focus group discussions; in-depth interviews N = 25 | Female condom | Autonomy – self-initiation and reliance, use without notice, improved negotiating power Effectiveness/Safety – perception of strength as compared to male condom, can be inserted prior to sex, prevention of unwanted pregnancies and STIs<sup>a</sup> Hormonal effects – non-hormonal method perceived as more natural, fewer side effects Impacts on sexual experience – enhances sexual pleasure, reduces anxiety related to improved protection Stigma – association with disease and illicit sex | Moderate    |
| Smit, 2006 South Africa [18] | Randomized crossover trial N = 276          | Female condom           | Autonomy – self-initiation and reliance, use without notice Effectiveness/Safety – perception of strength as compared to male condom, prevention of unwanted pregnancies and STIs<sup>a</sup> Impacts on sexual experience – enhances sexual pleasure | Moderate    |
| Telles Dias, 2006 Brazil [19] | Cross-sectional; in-depth interviews N = 61 sex workers | Female condom | Autonomy – self-initiation and reliance, use without notice, improves negotiating power Impacts on sexual experience – enhances sexual pleasure, reduces anxiety related to breakage, allows for intercourse during menstruation; interference with sexual intercourse due to noise, stuff Effectiveness/Safety – perception of strength as compared to male condom, can be inserted prior to sex, reducing disruptions and providing protection where impaired by drugs Physical attributes – appearance; difficulties with use related to large size, insertion and positioning | Moderate    |
| van Dijk, 2013 Dominican Republic [20] | In-depth interviews N = 40 | Female condom | Autonomy – self-initiation and reliance, use without notice, improves negotiating power Effectiveness/Safety – perception of strength as compared to male condom, can be inserted prior to sex, prevention of unwanted pregnancies and STIs<sup>a</sup> Impacts on sexual experience – enhances sexual pleasure; interference with sexual intercourse due to noise Physical attributes – appearance | High        |

<sup>a</sup> STIs – sexually transmitted infection
pregnancy and viewed the method as more natural as compared to hormonal methods [17] or because partners did not feel restricted by the use of a male condom [20]. However, some participants in Swaziland [17] noted the existence of stigma because of the condom's association with disease and illicit sex.

### 3.1.2. Values and preferences of transmasculine individuals

Table 2

| Author, Year Location                  | Study design N for the selected key population | Contraceptive Method(s)                                                                 | Key Results influencing contraceptive values and preferences                                                                 | Study Rigor |
|---------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------|
| Agénor, 2020 United States of America | In-depth interviews N = 21                    | Implant Intrauterine device Male condom Oral contraceptive pill (combined and progesterone-only) | Effectiveness/Safety – prevention of unwanted pregnancies Hormonal effects – allows for menstrual management; desire to avoid feminizing hormones, improved gender dysphoria Physical attributes – discomfort Stigma – discrimination from health care providers, gender bias | High         |

Table 2 One study included transmasculine individuals [21] and was of high rigor. Participants expressed values and preferences about various contraceptive methods. While some valued estrogen-containing contraceptive methods as a method to manage menses, those taking testosterone often avoided estrogen secondary to concerns of possible interactions; for some, this also meant avoidance of condoms due to thinned vaginal lining. Participants also expressed preference for methods like the implant, as such methods did not remind individuals of their bodies, thus reducing gender dysphoria. Individuals described stigma often related to experienced discrimination from health care workers and gender bias and noted that this could deter them from seeking contraceptive methods like oral contraceptive pills, as filling prescriptions is an
activity considered by providers to be most commonly performed by women.

3.1.3. Values and preferences of people who inject drugs

Table 3 Two studies [19, 22] included people who inject drugs: one was of high rigor [22] and the other of moderate rigor [19]. Participants in both studies valued effectiveness and safety, expressing negative concerns linked to side effects [19, 22], and appreciating methods that provide dual protection against unwanted pregnancies and sexually transmitted infections. Although concerned about side effects, people who inject drugs in Australia [22] valued fertility regulation and viewed contraception as a tool to delay childbearing until a more stable time in their life.

| Author, Year Location [ref] | Study design N for the selected key population | Contraceptive Method(s) | Key Results influencing contraceptive values and preferences | Study Rigor |
|-----------------------------|-----------------------------------------------|-------------------------|-------------------------------------------------------------|------------|
| Olsen, 2014 Australia [22]  | In-depth interviews N = 90                   | Injection Intrauterine device Male condom Sterilization | Effectiveness/Safety – reversible, assists with prevention of unwanted pregnancies and STIs*, results in desired amenorrhea; concerns related to future fertility and side effects Birth spacing and family outcomes – desire for controlled pregnancy outcomes Physical attributes – forgettable method Effectiveness/Safety - concerns related to side effects Impacts on sexual experience – enhances sexual pleasure | High |
| Telles Dias, 2006 Brazil [19] | Cross-sectional: in-depth interviews N = 42 drug users | Female condom | | Moderate |

* STIs – sexually transmitted infection

The ability to space births was also described as important in a mixed-methods study in a post-conflict setting in Uganda [24]. Women specifically described the autonomy that discrete methods like injectable contraceptives provided, meaning that partners did not have to be involved in their decision-making. Afghan refugees in Australia expressed decreased negotiating power with condom use [26], and self-stigma and shame attached to contraceptive use linked to culture and patriarchy, feelings that were exacerbated with the use of an in-person interpreter. Some, however, perceived contraceptive use as ‘modern’ and more progressive. Participants valued the potential benefits of deferring pregnancy, including to pursue educational interests. Individuals also noted that using contraceptive methods saved costs and meant that with fewer members of a family unit, focused efforts could be made to transfer important cultural values.

4. Discussion

This review describes values and preferences related to contraceptive care among sex workers, transmasculine individuals, people who inject drugs, and those living in particular humanitarian contexts focusing on seven thematic areas linked to key values and preferences within these selected key populations. Overall, key populations’ values and preferences were linked to: autonomy, perceived effectiveness and safety, birth spacing and family outcomes, impacts on sexual experience, hormonal effects (e.g. desire for non-hormonal method or perception that the method is more natural as compared to hormonal methods), physical attributes (e.g. appearance and/or ease of use), and stigma. While perceived effectiveness and safety, including concerns related to side effects, was the most reported theme, values related to impacts on sexual experience, autonomy, physical attributes, and birth spacing and family outcomes were also common.

Considerations beyond safety and side effects, including for factors linked to interference with sex, partner acceptability, and religious beliefs are not unique to individuals in this review [27]. Patients desire providers who are compassionate and responsive, paying close attention to their unique needs and difficulties [1]. This may be particularly relevant for sex workers, transmasculine individuals, and those living in humanitarian contexts, who may be interested in the benefits of hormonal contraceptive methods but have concerns about the stigma associated with their use. For transmasculine individuals, it is also important to consider the impacts of testosterone therapy on decision-making.

Members of these selected key populations may face particular vulnerabilities, especially where “gender inequalities reinforced by political, economic and social structures” lead to lack of information and autonomy, as well as coercion [28]. These issues are apparent in this review, as evidenced by the expressed concerns of
those living in humanitarian contexts related to impacts on sexual experience, desire for autonomous decision-making, and the desire for birth spacing and family related outcomes. However, others, including transmasculine individuals, may be alienated by normative expectations of pregnancy planning [29].

When faced with negative experiences, individuals may be deterred from seeking health care; thus, it is important to empower individuals as autonomous decision makers and involve them in shared decision-making [1]. Additionally, while this review focused on values and preferences surrounding contraceptive care specifically, for key populations who may already be facing vulnerabilities and marginalization, even the decision to either use or not use contraception must center and empower the individual. Providers, programme managers and policy makers should consider these issues and individual values and preferences so that individuals can meaningfully and actively participate in choices about their sexual and reproductive health.

This systematic review primarily identified qualitative and cross-sectional studies that could be considered less rigorous study designs; however, these reflect the preferred methodology for describing nuanced issues such as values and preferences. Additionally, we focused on selected key populations, which have very different characteristics, resulting in heterogeneous results that apply to only certain populations, demonstrating existing gaps in existing evidence. It is important to note that research funding often reflects societal values, and by definition, these key populations are victims of disenfranchisement, marginalization, or criminalization. In this case, a lack of data, or a singular focus (e.g. only studying female condoms among sex workers), reflects the stigma and expectations for key populations. There was no research available on the values and preferences of sex workers regarding methods of contraception other than female condoms, and very limited research on transgender or gender non-conforming populations and people who inject drugs. Values and preferences around emergency contraception, sterilization, contraceptive patches, spermicides, and barrier methods such as diaphragms and cervical caps need to be further explored among these selected key populations. While the generalizability of these results may be limited, we were able to identify key themes that can help inform the contraceptive care of members of these selected groups.

Table 4
Summary of study characteristics and findings: values and preferences of those living in humanitarian contexts

| Author, Year Location [ref] | Study design N for the selected key population | Contraceptive Method(s) | Key Results influencing contraceptive values and preferences | Study Rigor |
|-----------------------------|-----------------------------------------------|-------------------------|-------------------------------------------------------------|-------------|
| Davidson, 2016 Ethiopia [23] | Focus group discussions; in-depth interviews N = 117 (Eritrean and Somali refugees) | Combined oral contraceptive pill, Implant Injection, Intrauterine device, Lactational amenorrhea, Male condom, Rhythm method | Effectiveness/Safety - concerns related to reversibility, future fertility, lack of confidence in method to prevent pregnancy, experience of side effects. Birth spacing and family outcomes - improves control related to family size and birth spacing. | High |
| Nattabi, 2011 Uganda [24]   | Cross-sectional; in-depth interviews N = 26 (Internally displaced individuals) | Combined Oral contraceptive pill, Emergency contraception Female Condom Implant, Injection, Intrauterine device, Lactational amenorrhea, Male condom, Periodic abstinence, Sterilization Withdrawal | Effectiveness/Safety - concerns related to side effects. Birth spacing and family outcomes - improves control related to family size and birth spacing. Impacts on sexual experience - concerns related to impacts on sexual performance. | Moderate |
| Verran, 2015 United Kingdom [25] | In-depth interviews N = 10 (Chinese asylum seekers or refugees) | Male Condom Implant, Intrauterine device, Oral contraceptive pill (combined and progesterone-only) Withdrawal | Hormonal effects - method perceived as less natural with impacts on menses. Birth spacing and family outcomes - desire for male children, large family; control related to family size and birth spacing. | High |
| Russo, 2020 Australia [26]   | Focus group discussions; in-depth interviews N = 57 (Afghan refugees) | Male condom Oral contraceptive pill (combined and progesterone-only) Withdrawal | Autonomy - decreases negotiating power. Effectiveness/Safety - concerns related to side effects. Birth spacing and family outcomes - control related to family size and birth spacing. Impacts on sexual experience - decreases sexual pleasure. Stigma - deconstructing traditional beliefs around contraceptive use; associated with traditional cultural beliefs and patriarchy, experienced with use of interpreter. | High |

5. Conclusion

Consideration of an end-user’s values and preferences is a key component of WHO’s programmatic guidance. This review demonstrates that personal beliefs and cultural experiences influence values and preferences related to contraception. In addition to informing guidelines, appreciation of these values and preferences may better equip providers, programme managers, and policy makers to assist sex workers, transmasculine individuals, people who inject drugs, and those living in specific humanitarian contexts in their ability to “decide freely and responsibly the number and spacing of their children and to have the information, education and means to do so” [30].
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