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Improving measurement of girls and young women's reproductive experiences: qualitative findings from research in Kenyan family planning clinics

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ABSTRACT

Introduction Girls and young women's reproductive health and autonomy are shaped by multiple interconnected factors. Quantitative research, including widely used measurement scales, may overlook or misrepresent key dimensions of girls and young women's experiences, limiting our ability to understand, characterise and advance their reproductive health and rights. Strengthening measurement tools can yield deeper insights and drive more effective policies and programmes.

Methods We conducted a qualitative study exploring girls and young women's (aged 15–19 years) experiences accessing and using family planning services and contraceptive methods in Uasin Gishu County, Kenya. This included reflexive thematic analysis of 35 in-depth interviews and seven focus group discussions (FGDs) with 42 girls and young women, along with five FGDs with 27 family planning clinic providers.

Results We identified three dimensions of girls and young women's family planning experiences that challenge existing reproductive health scales. First, reproductive intentions were complex. Second, with support, girls and women asserted their agency and resisted barriers to autonomy. Third, health policies, clinic infrastructure, cultural, religious and social beliefs, and key institutional actors—such as healthcare providers and teachers—inhibited girls and young women's contraceptive access and use.

Conclusions Qualitative insights can help refine existing scales and guide the development of new ones. Scales should strive to capture diverse reproductive intentions, acknowledge agency and resistance and account for structural and systemic influences. Alongside expanded qualitative research, improving quantitative approaches will yield more person-centred, holistic and context-inclusive insights into girls and young women's reproductive health and lives.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Adapted, validated scales measure reproductive autonomy and contraceptive and reproductive coercion.

WHAT THIS STUDY ADDS

⇒ Existing scales may overlook or misrepresent key dimensions of girls and young women's reproductive experiences.
⇒ Scales should account for complex reproductive intentions, resistance to service restrictions and structural and systemic influences.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Qualitative insights help identify priority areas for quantitative scale development.
⇒ Refined quantitative measures may generate more precise, context-inclusive understandings of girls and young women's reproductive lives.
⇒ Scales cannot fully capture the complexity of girls and young women's experiences; mixed methods are required.

INTRODUCTION

Public health lacks effective quantitative approaches to study the complex, multidimensional nature of reproductive health, particularly the distinct experiences and autonomy of girls and young women.[1–3] This article presents survey-relevant findings from our qualitative study on girls and young women's access to family planning services and contraceptive use in Uasin Gishu County, Kenya. Building on prior research that identifies mixed-methods as the most appropriate approach for scale development and validation,[4 5] we draw on the lived experiences of girls and young women to illustrate how qualitative insights can inform both survey design and refinement. In doing so, we seek to improve the quality of data that informs sexual and reproductive health programmes and policies in Kenya and around the world.

Despite the disproportionately adverse reproductive health outcomes faced by girls and young women under age 18 years, as compared with older women,[6–8] our understanding of their reproductive health and rights remains incomplete. In East Africa, most research on reproductive decision-making has used quantitative methods,[1 9 10] often relying on a narrow set of scales. These scales—mostly developed in the United States and tailored to adult women—are unlikely to capture the distinct life stages and diverse circumstances shaping girls and young women's experiences worldwide.[3 11]

The *Reproductive Coercion Scale* (2011) is a widely used tool for assessing pregnancy coercion, contraceptive sabotage and abortion coercion from intimate partners and close family.[12 13] Created in the United States, it has been adapted and validated in Kenya.[14]

The *Reproductive Autonomy Scale* (2014) measures decision-making power, freedom from partner coercion and reproductive communication.[15] It was first tested outside the United States in Vietnam and found to be invalid for populations with limited reproductive autonomy.[11]

Developed in the United States, the *Sexual and Reproductive Empowerment Scale for Adolescents and Young Adults* (2021) is the only tool explicitly designed for girls and young women.[3] Dagher *et al*[16] found that it was a poor fit for an Arab cultural context, but Zia and colleagues[17] validated their adapted version (*SRE-K*) in Kenya.[18]

Other recent scale developments include more nuanced dimensions: the *Women's and Girls' Empowerment–Sexual Reproductive Health* framework assesses existence and exercise of choice over sex, contraceptive use and pregnancy[19 20]; though not yet validated, Senderowicz's *Contraceptive Autonomy* indicator stands out for framing both autonomous use and non-use of contraception as positive outcomes of family planning programmes[21–23]; the MEASURE Evaluation project validated their reproductive empowerment measure in Nigeria[2] and Swan and Cannon developed a checklist to measure provider-driven contraceptive coercion in the United States.[24]

As attention to reproductive autonomy and oppression grows, measurement scales are improving. However, the field of social science still faces challenges in mixed-methods scale development, including—as we illustrate here—translating the qualitative exploration of phenomena into scale items.[4] Within reproductive health, there remains a critical need for more person-centred measures of contraception and abortion use that capture individuals' own assessments of their decision-making, knowledge and access.[21] Another key challenge is adequately accounting for structural factors and systemic enablers of reproductive oppression while distinguishing these from interpersonal acts of violence.[1 19]

METHODS

To explore girls and young women's reproductive autonomy and oppression, we conducted 35 in-depth interviews (IDIs) and 7 focus group discussions (FGDs) with 42 girls and young women (aged 15–19 years). The samples for these IDIs and FGDs were distinct: girls and young women who participated in interviews did not take part in focus groups and vice versa. In addition, we conducted five FGDs with 27 family planning clinic providers. We refer to girls and young women collectively as 'participants' and use 'interviewees' to encompass both participants and providers.

Participants were recruited in March and April 2023 from four county government-run clinics using convenience sampling. Nurses facilitated recruitment in person or over the phone, with one contact attempt per client. Participation was voluntary, with details explained in Kiswahili, and written consent obtained. Participants received travel reimbursement and 500 Kenyan Shillings (KSH) (approximately £3.00 Great British Pounds). Online supplemental Annex A summarises participant details.

Clinic providers were invited to participate by their supervisors, and study details were communicated in English. All invited providers (ie, 15 nurses, 3 clinic supervisors, 6 nursing students, 2 community health workers and 1 psychologist) agreed to participate.

First author EAH conducted FGDs with providers in English, and Kenyan research assistants, authors EA, WO, and FT, conducted IDIs and FGDs with participants in Kiswahili.

All IDIs and FGDs were conducted in private clinic rooms. Participants shared their experiences with family planning, pregnancy and pregnancy prevention, while providers discussed their care experiences and clients' stories. Topic guides are in online supplemental Annexes B–D.

Discussions were audio-recorded, transcribed and, if in Kiswahili, translated into English. Translations were carried out by the same bilingual Kenyan research assistants who conducted each IDI and FGD. They also co-analysed the data and co-wrote this paper. To ensure accuracy, a random sample of transcripts was double-transcribed and translated.

All data was uploaded to NVivo 17[25] and analysed together using a reflexive thematic approach.[26] Codes and themes were refined during stakeholder and research team workshops, in Kenya, throughout February and March 2024.

PATIENT AND PUBLIC INVOLVEMENT

Family planning providers, health managers and youth advocates in Uasin Gishu helped design, conduct and share this research, with patients actively involved in dissemination of the findings.

In June 2021, we facilitated collaborative meetings to align research objectives with county priorities and plan data collection logistics. In March 2023, we convened 48 stakeholders—county health and education leaders, service providers and supervisors—for a workshop to

translate preliminary findings into actionable research outputs and policy recommendations.

We partnered with local videographers and actors to produce a short film highlighting key findings in November 2024. The film was screened for all clinic attendees at three county clinics and at a local family support organisation, ensuring wide accessibility and meaningful community engagement. The film was made publicly available online.[27]

RESULTS

Below, we explore three dimensions of girls and young women's family planning experiences that may complicate existing scales measuring reproductive interference, decision-making and autonomy: (1) the complexity of their reproductive intentions and contraceptive needs, (2) their resistance to barriers and the support they received and (3) the influence of key institutions and their actors.

The complexity of girls and young women's reproductive intentions and contraceptive needs

As participants described how their reproductive autonomy was undermined, their narratives revealed the complexity of girls and young women's reproductive intentions—many sought contraceptive methods and abortions, others wished to conceive and some had no interest in contraception at all.

A girl told us she wanted to have an abortion, but her partner had refused:

> [My partner said] I was going to give birth to his child, even if I didn't want to live with him. […] He would not allow me to have an abortion. […] Had I terminated mine, I would be in school as we speak! […] I would not be here nursing a baby, but that man refused. (Aged 15-17 years, FGD 3, Participant 3)

Yet, other participants said girls and young women were forced to use contraception or to have abortions:

> [My school friend's] mother told her to choose between aborting, and going back to school, or going to the man who impregnated her to marry her. The girl accepted, to have an abortion, so to go back to school. (Girl Aged 15-17, FGD 2, Participant 2)

Participants' accounts also illustrated how girls and young women's contraceptive needs evolved over time in response to shifting personal circumstances, such as partner preferences, economic stability or the age of their other children.

One young woman said that after providers refused to remove her implant, her relationship ended. This prompted her decision to continue using the implant:

> I had gotten a man in Nairobi who wanted to marry me, and he wanted me to have a baby with him. […] The man thought I had refused to get pregnant with him, yet the problem was just the providers' refusal to remove the 5-year implant. […] Removing the method will not help me now that I have lost the man. Let me just continue having it. (Aged 18-19, FGD 7, Participant 6)

Girls and young women confronting and overcoming barriers to reproductive autonomy

Girls and young women's accounts highlighted how they resisted barriers to their use of family planning services.

Participants overcame cost barriers. For instance, they did 'manual work, such as weeding or plucking tomatoes, during school breaks' (young woman aged 18–19, FGD 1, Participant 4) to earn money to pay for family planning clinic services.

They described how they remained steadfast in their reproductive choices, despite opposition:

> If I have decided to use contraception, and you are not agreeing with it, '*Wewe kanyaga tu kubwakubwa* [you just take wide footsteps out of my life].' Find your way out if you are not agreeing with my decision. Just leave me alone. (Young Woman Aged 18-19, IDI 28)

One young woman, acknowledging the unequal burden of unintended pregnancy, said she ended her relationship with her partner who challenged her use of contraception:

> If I don't use family planning [contraception], I am the one who will be affected. […] I will keep on staying at home, while he is continuing with his education. So we will part ways, and maybe afterwards, he will come back to his senses, and see that I was doing the right thing. (Aged 18-19, IDI 7)

Participants also detailed how girls and young women relied on allies to overcome these barriers.

They said their partners, sisters and friends provided monetary contributions to help cover transport and service costs. They told us they accompanied each other to clinics:

> [My friend] told me that she was afraid of going to buy [condoms] or even to go to the hospital for family planning [contraception]. […] I offered to take her with me when I go to the hospital for the post-natal clinic. (Young Woman Aged 18-19, IDI 7)

Providers also sometimes acted as allies, helping girls and young women access services:

> I saw her at the door standing and asked her what was wrong with her and why she had been standing there for a very long period of time. She told me, 'I can't speak here, let's get in [to the family planning room].' That is when I got to know that she needed family planning [contraception], but she couldn't sit out there because of the age difference with the other clients. (Nurse, FGD 2, Provider 1)

The influence of key institutions and their actors

Health-related laws, clinic infrastructure, cultural, religious and social beliefs, and institutional actors shaped girls and young women's reproductive autonomy.

For example, participants' accounts shed light on the impact of abortion's legislative restrictions. They

described abortions in Uasin Gishu as inaccessible, unaffordable, underground and unsafe:

> A woman may tell a girl to just give her 1,000 KSH, and this woman will help the girl to abort the fetus, so that the girl can go back to school. The problem with an such arrangement is that you can bleed a lot and even lose your life. (Young Woman Aged 18-19, FGD 1, Participant 4)

A young woman attributed her unintended pregnancy to clinic inaccessibility:

> That challenge of distance to the health facility is the reason I have this second baby [laughing]. Otherwise, this baby would not be here now. (Aged 18-19, IDI 2)

Other participants said they did not use contraception because it conflicted with their religious beliefs:

> When you start using family planning [contraception], then you have started straying away from God, and I didn't want to do anything that would go against our beliefs. So, I never used family planning. (Young Woman Aged 18-19, FGD 5, Participant 5)

One young woman told us she did not use contraception since it was a 'Western idea', linking its promotion to a legacy of colonialism and eugenics:

> There are times we are told not to use 'Western ideas.' That 'they' are after reducing the African population. (Aged 18-19, IDI 22)

Participants' reports also highlighted how providers and teachers obstructed their efforts to prevent pregnancy.

One young woman summarised how nurses' treatment affected girls and young women:

> When it comes to family planning, you will be asked a lot of questions [by providers] like they are shocked by what you are asking for. This makes you feel like you are making a mistake. So the kind of approach that they have is what puts you off [from contraception]. (Aged 18-19, FGD 5, Participant 5)

DISCUSSION

Our findings yielded survey-relevant insights that can be used to refine existing scales and inform future approaches to measuring girls and young women's reproductive autonomy and the reproductive oppression they face. Their narratives described an array of powerful forces that, collectively, shape their health and lives.

Participants highlighted the duality of their reproductive intentions. For some, abortion was a desired choice, while others were coerced into it. However, the *Reproductive Autonomy Scale* has only been tested among individuals seeking to prevent pregnancy,[10 15] and of the seven scales mentioned earlier in this paper, only two ask about abortion.[3 15]

Our findings underscore the importance of accounting for forced abortion, forced contraception, the prevention of both, and ambivalence towards contraceptive use and pregnancy intentions. They also illustrate how contraceptive needs and preferences can shift over time in response to changing personal circumstances. Tarzia and Hegarty note, however, that the *Reproductive Coercion Scale* is neither applicable to experiences of forced abortion nor to forced contraception.[1 12]

Our findings reveal key dimensions of experience that prevailing measurement approaches may overlook, putting populations at risk of being overlooked—such as the girls and young women in our study who were forced to have abortions or who preferred to avoid contraception, just because. It is crucial to develop scales that (1) capture diverse intentions and ambivalence—in all of their evolutions, (2) acknowledge the role of coercion in shaping either reproductive pathway and (3) explicitly incorporate abortion as a fundamental component of reproductive autonomy.

Measurement scales' wording should also be sufficiently inclusive to reflect how girls and young women themselves define contraception and family planning. For example, a 2015 qualitative study in Kenya revealed that some young women using condoms did not identify as family planning users, because they associated condoms primarily with sexually transmitted infection prevention rather than pregnancy prevention.[28]

Our work, in common with other Kenyan research,[29] showed how girls and young women actively resisted barriers to their reproductive autonomy. They disregarded others' opinions, left unsupportive partners, used covert methods or sought support from friends. While the *Sexual and Reproductive Empowerment Scale for Adolescents and Young Women* includes questions about supportive actors,[3] future scales could additionally capture how girls and young women overcome service barriers—such as working during school breaks to afford contraception. This would deepen our understanding of the relationship between resistance and autonomy, position girls and young women as active agents, and identify opportunities to strengthen grassroots efforts already advancing reproductive autonomy.[19 23]

The *Reproductive Coercion Scale*, one of the most common measures of reproductive interference, asks about the actions of partners and family members.[1 12 13] Consistent with other studies in Kenya, we found that girls and young women's reproductive autonomy is frequently determined as much—or more—by restrictive laws, limited support structures, unsupportive healthcare providers and teachers, and harmful cultural, religious and social beliefs.[28 30–33] In addition to context-specific scales (ie, those that have been adapted to fit local needs[14 17]), context-inclusive scales—that account for broader structural and systemic forces—can enhance our understanding of girls and young women's reproductive oppression.

In our study, many girls and young women cited cost and safety concerns as barriers to obtaining abortion care, reflecting the broader complications of abortion access in Kenya. However, none directly attributed these barriers to specific laws or policies. Therefore, measurement

Table 1 Proposals to improve measurement of girls and young women's reproductive experiences

Dimension	Considerations in scale design	Questions to ask for further exploration
1. Diverse reproductive intentions and contraceptive needs	► Ensure scales reflect the full spectrum of reproductive desires—including the desire to conceive, avoid or delay pregnancy, and the possibility of being undecided (ie, about contraception, pregnancy and/or abortion). ► Questions should account for diverse contraceptive methods, including ones that users may not themselves identify as contraception (eg, condoms). ► Include abortion-related experiences. ► Avoid assuming that all respondents using contraception wish to prevent pregnancy. ► Be aware that the same question may have different answers at different time points—reproductive desires evolve and fluctuate.	► 'Have you ever wanted to become pregnant but were prevented from doing so?' ► 'Have you ever wanted to keep a pregnancy, but were forced to terminate it?' ► 'Have you ever been pressured to prevent pregnancy (eg, use pills, condoms, injections) when you did not want to?'
2. Resistance to barriers	► Ask how girls and young women actively navigate and resist constraints to reproductive autonomy. ► Include questions about agency, resourcefulness and support networks—eg, informal support systems (friends, siblings) and self-driven strategies (saving money, travelling alone). ► This is a domain where mixed-methods approaches are particularly useful, to explore the myriads of resistance/support.	► 'Have you taken steps to access contraception despite opposition or obstacles?' ► 'What have you had to do to keep using contraception?' ► 'Who has helped you access reproductive health services?'
3. Influence of institutions and structural forces	► Include items that assess the impact of, for example, laws, clinic policies and religious norms. ► This domain might need to be age-adjusted for girls and/or young women—who might be denied services on behalf of a law/policy but are not told the reason. ► Consider asking about the role of institutional actors (eg, teachers, providers). ► This domain would also suit a mixed-methods approach.	► 'Have you ever been unable to access contraception or abortion because of a law or clinic policy, such as an age restriction?' ► 'Has abortion felt acceptable, accessible and affordable for you?' ► 'Have religious beliefs influenced your reproductive decisions?' ► 'Have you ever felt judged or denied reproductive health services by a provider?'

scales should employ broad, age-appropriate language to capture structural and systemic barriers, regardless of how participants articulate or understand these forces.

In a forthcoming publication from this larger study, we introduce a framework for conceptualising how reproductive oppression is organised.[34] Our framework has four intersecting, interacting dimensions: (1) how reproductive oppression is built into laws and policies, (2) how it is enforced by providers and teachers, (3) how it is justified in the name of cultural, religious and social norms and (4) how it is misused by others for personal gain. These four dimensions could serve as a roadmap for examining girls and young women's reproductive experiences, within the systems they navigate and the institutions they belong to, which in turn, could feed into scale construct.

For example, we could ask how the unequal burden of pregnancy—described by the young woman above who was forced to stay at home while her partner continued his education—is built into county education and social policies and norms. We also may consider, more explicitly, the ways providers enforce or resist clinic policies (eg, on mandatory consent for minors), how harmful gender norms are used to justify contraceptive sabotage, and if providers may personally benefit from opposing contraception.[34]

In a similar vein and also in Kenya, Onono *et al* analysed the factors shaping the political prioritisation of adolescent sexual and reproductive health,[35] and Mutea *et al* examined the barriers and facilitators to adolescents' access to health information and services across individual, interpersonal, organisational, community and policy levels.[36] We further suggest that the questions posed in these studies be evaluated for suitability and leveraged to develop and validate measurement scales, advancing generic tools into context-sensitive and -inclusive instruments.

In summary, our findings highlighted three dimensions of girls and young women's family planning experiences that should be considered in refining current or developing future scales measuring their reproductive health. We summarise these dimensions and offer suggestions for improvement in table 1.

This study is not without limitations. We took considerable care with the translations and their interpretations for this study (ie, co-produced by the bilingual research assistants/authors who conducted them) and are confident that our conclusions fairly reflect the material. Nevertheless, there is always a possibility that some nuance may have been lost in the translation process. Additionally, conducting research in clinics may have inhibited girls and young women from sharing openly due to concerns about how their participation could affect their access to services, despite our assurances during informed consent that participation would not influence their care.

Participants' accounts illustrated how reproductive oppression is experienced and internalised: some resisted partners' demands and ended relationships, while others reluctantly abandoned contraception after facing harsh treatment. Failing to capture and centre family planning users' voices risks misjudging the impact of these forces. At the same time, quantitative scales—particularly those used in clinical settings—must balance depth with brevity; accounting for every nuance is impossible, and we acknowledge that existing scales often have little room to incorporate additional dimensions.

This paper demonstrates how qualitative insights can contribute to the development and enhancement of reproductive health scales, creating measures that honour diverse reproductive intentions, recognise acts of resistance and meaningfully incorporate structural and systemic influences. While this work aims to advance our measurement capabilities, it also reveals a deeper truth: the complexity of girls and young women's reproductive lives and desires demands methodological pluralism. Only through the deliberate integration of qualitative depth with quantitative breadth can we generate the nuanced, person-centred and contextually grounded insights necessary to truly understand their reproductive experiences. Quantitative scales—however sophisticated—remain incomplete tools when used in isolation.[4 5] The path forward requires embracing this methodological interdependence, recognising that our commitment to understanding reproduction must be as multifaceted as girls and young women themselves.

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Contributors Conceptualisation and design: EAH, MC, NSS, AMB, and CM. Data collection: EAH, JN, EA, WO and FT. Analysis and interpretation: EAH, EA, WO and FT. Supervision of analysis and interpretation: MC, NSS, AMB and CM. Draft of manuscript: EAH. Review and editing of manuscript: EAH, MC, JN, EA, WO, FT, NS, AMB and CM. EAH is responsible for the overall content (as guarantor). During the preparation of this manuscript, EH used ChatGPT in order to proofread the manuscript (ie, for grammar and spelling) and improve its readability. After using this tool, EAH reviewed and edited the content as needed and takes full responsibility for the content of the published article.

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