Qualitative Exploration of Fertility-Related Attitudes and Perspectives Among Young Adult Women Diagnosed With Breast Cancer at Periurban Cancer Center in Uganda

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ABSTRACT

PURPOSE Understanding how women navigate fertility-related decisions after a breast cancer diagnosis is critical for patient-centered survivorship care in low-resource settings. This study explored young women's fertility-related perspectives and, importantly, how their experiences point to system-level gaps in oncofertility counseling and access to fertility preservation at a periurban cancer center in Uganda.

METHODS A qualitative phenomenologic study design was used. Twenty young adult women diagnosed with breast cancer were purposively selected from St Francis Hospital Nsambya, in Kampala, Uganda. Data were collected through face-to-face, semistructured, in-depth interviews guided by an interview schedule. Interviews were audio-recorded, transcribed verbatim, and analyzed using thematic analysis to systematically identify themes, subthemes, and illustrative quotes from participants' narratives.

RESULTS Four major themes emerged from the analysis: (1) Cultural and Societal Significance of Motherhood—childbearing held significant personal and cultural importance, affecting participants' identity and relationship decisions; (2) Need for Comprehensive Fertility Counseling—participants expressed the necessity for timely, empathetic, and detailed fertility information from health care providers and self-esteem; (3) Uncertainty about ika Fertility—considerable anxiety was expressed regarding potential infertility and adverse treatment effects on future offspring, resulting in difficult prioritization between survival and reproduction; and (4) Beyond reach—significant barriers, including high costs, lack of health insurance, and limited service availability, restricted participants' ability to pursue fertility preservation.

CONCLUSION Young women with breast cancer in Uganda experience profound fertility-related distress shaped by sociocultural expectations and by health system constraints. Limited integration of oncofertility counseling into routine oncology care, gaps in provider communication, and restricted access to affordable fertility preservation (infrastructure constraints, high out-of-pocket costs, insurance exclusions, and geographic centralization) complicate decision making and highlight priorities for equitable service delivery.

ACCOMPANYING CONTENT

Appendix

Data Supplement

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INTRODUCTION

Breast cancer is a major public health challenge in Sub-Saharan Africa, with age-standardized incidence rates varying widely—from 22.2 per 100,000 women in Uganda to 57.6 per 100,000 in Namibia.[1,2] In Uganda, approximately 35% of breast cancer cases occur in women younger than 40 years.[3] While the 5-year breast cancer survival in high-income countries approaches 90%,[4] the survival in lower-middle income countries ranges from 39% to 50%.[5,6] Although research on patients younger than 40 years is limited, there is evidence suggesting modest improvements in 5-year survival in this group.[7]

Improvements in survival rates bring fertility-related challenges into sharper focus for young adult women. Treatments such as chemotherapy and radiotherapy maybe gonadotoxic and result in a reduced ovarian reserve and impairing

CONTEXT

Key Objective

What fertility-related attitudes and decision-making processes do young women with breast cancer in Uganda describe, and how do these experiences reveal missed opportunities for oncofertility counseling and fertility preservation at a periurban cancer center?

Knowledge Generated

Among 20 women age 26-39 years, participants described the heavy social weight of motherhood, profound psychosocial distress about potential infertility, a strong desire for clear fertility information, and the perception that fertility preservation is beyond reach. Most reported little or no fertility counseling before starting treatment, limited awareness of preservation options, and viewing available services as financially unattainable or potentially unsafe.

Relevance

These findings should be interpreted within Uganda's evolving but inequitable fertility service landscape: Our findings identify a specific oncofertility implementation gap for young oncology patients: the need for routine fertility risk screening, timely counseling before gonadotoxic therapy, documented referral pathways, and financial support mechanisms.

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reproductive potential.[8,9] Furthermore, the mandatory delay in conception often associated with tamoxifen protocols, typically extending 5-10 years post-treatment,[10] adds another layer of complexity for young women striving to balance survival with reproductive aspirations.

Fertility concerns can profoundly affect the psychological well-being of young women with breast cancer, with about one third expressing a desire for future childbearing.[11] Although survival is typically the main driver of treatment decisions, fertility concerns are highly individual, shaped by age, life circumstances, and cultural context.[12] In Uganda, strong cultural emphasis on childbearing can intensify the stigma and emotional burden of infertility, leading to marital instability and distress.[13,14]

International guidelines from ASCO,[15] the European Society for Medical Oncology (ESMO),[16] and the National Comprehensive Cancer Network[17] emphasize the importance of early fertility counseling and access to fertility preservation options for all reproductive-age patients with cancer. For young women with breast cancer, fertility counseling may include discussion of treatment-related infertility risk, reproductive goals, pregnancy timing after treatment, contraception during endocrine therapy, ovarian function assessment, and referral for preservation procedures.[15] Fertility preservation procedures include embryo cryopreservation and oocyte cryopreservation, ovarian tissue cryopreservation before chemotherapy,[15] and ovarian suppression with gonadotropin-releasing hormone agonists.[15]

In Uganda, fertility preservation and related assisted reproductive services (ARTs) are available only in a limited number of facilities which are concentrated in Kampala, the capital, and in the private for-profit sector, with only one public sector facility.[18] Fertility preservation is limited to gamete and embryo cryopreservation which are privately accessed and financed.[18-20]

In addition, major fertility counseling gaps exist; 79% of adolescent and young adult (AYA) cancer survivors reported not receiving satisfactory fertility information before treatment,[20] and one Ugandan study reported that only 15.5% received reproductive counseling despite high desire for future childbearing.[21] By examining patient narratives in this periurban setting, this study provides an implementation-relevant lens by identifying missed opportunities for standardized counseling and referral and delineating barriers related to infrastructure, affordability, provider training, and access that must be addressed to deliver equitable oncofertility care.

METHODS

Research Team and Reflexivity

The research team included clinicians and qualitative researchers with expertise in obstetrics and gynecology, gynecologic oncology, fertility care, oncofertility, and global health. The principal interviewer was familiar with the clinical setting and had interacted with some participants through patient care, which supported rapport but raised potential power dynamics and social desirability concerns. To reduce these risks, he clarified his researcher role, emphasized confidentiality, and encouraged open discussion. The team acknowledged that their clinical backgrounds and commitment to improving oncofertility care could influence interpretation. Reflexive debriefings, memo-writing, and consensus discussions were used to examine assumptions and strengthen analytic rigor.

Study Design

Theoretical Framework

This study used a phenomenologic qualitative design[22,23] to explore young adult women lived experiences and personal interpretations of fertility after breast cancer treatment. This approach was selected to elicit rich, in-depth accounts of the emotional, social, and cultural dimensions that shape women's fertility-related attitudes and decisions after diagnosis and treatment. It is particularly well-suited to understanding how personal experiences intersect with broader cultural expectations and social norms—key elements represented in the study's conceptual framework (Appendix Fig A1).

Ethical Consideration

The protocol was submitted to St Francis Hospital Research and Ethics Committee for review, was approved under number SFHN-2024-143, and received clearance from the hospital administration to proceed with the research.

Study Setting

This study was conducted at the Rotary Cancer Center, St Francis Hospital Nsambya, a private not-for-profit oncology facility in Kampala that receives patients from across Uganda. The center manages about 400 new cancer cases annually, including approximately 80 breast cancer diagnoses, 30% among patients age 18-39 years. Services include diagnostic workup, surgery, chemotherapy, and endocrine therapy. Although some patients are referred for fertility counseling before treatment, the center has no embedded oncofertility clinic, standardized pathway, navigator, referral checklist, or formal documentation system. Fertility concerns are therefore not routinely addressed before treatment initiation. When discussed, oncology clinicians may refer patients to the hospital's obstetrics and gynecology/fertility clinic for counseling on reproductive goals and treatment-related infertility risk. Patients needing fertility preservation require referral to ART-capable services in Kampala.

Participant Selection

Study population. The study focused on young adult women age 18-39 years diagnosed with breast cancer at St Francis Hospital Nsambya between January 2024 and February 2025. This age definition aligns with the AYA oncology guidelines from the US National Cancer Institute, ESMO, which define young adults as those age 15-39 years.[24,25] We restricted enrollment to individuals 18 years and older to ensure that all participants could provide informed consent autonomously in accordance with national ethical and legal guidelines.

Eligibility. Inclusion criteria comprised women age 18-39 years with a histologically confirmed breast cancer diagnosis who provided voluntary informed consent. We excluded critically ill patients and those receiving palliative treatment.

Sampling. Purposive sampling (maximum variation) was used to obtain data representing differences in age, number of children, and time since diagnosis. Participant screening used Nsambya Hospital's Electronic Health Records. We contacted 57 eligible women, who met the maximum variation sampling criteria, by phone or during follow-up clinic visits. Despite rigorous follow-up attempts, 32 women declined, citing reasons such as lack of time, personal discomfort discussing fertility, or competing responsibilities. Ultimately, 25 participants agreed to take part in the study and completed the informed consent process. Details of the maximum variation recruitment matrix are documented in the Data Supplement.

Sample size. The sample size was guided by the principle of thematic saturation.[26] Interviews were conducted and analyzed iteratively. After 20 interviews, no new themes or insights emerged, indicating that thematic saturation had been reached. Our aim was analytic generalization, to develop concepts and explanations that may be applicable to similar settings, rather than statistical generalizability. We support transferability by detailing the study context and participant characteristics and by providing representative quotations.

Data Collection Procedure

Face-to-face, in-depth semistructured interviews were conducted in English. All participants provided written informed consent before the interview. The interviews lasted 40 minutes followed a pretested semistructured guide covering six thematic areas: (1) demographic details, (2) breast cancer diagnosis and treatment history, (3) fertility and pregnancy-related concerns, (4) emotional and psychological challenges, (5) attitudes toward future pregnancy intentions and decision making, and (6) psychosocial support systems (Data Supplement, for the interview guide). The guide was developed by the research team through literature review and clinical experience and was piloted with five volunteer patients to refine clarity and flow. All interviews were audio-recorded with participant consent using a Panasonic RR-XS350 digital voice recorder. Field notes were taken during interviews to capture contextual details, nonverbal cues, and interviewer reflections. Some participants became emotional during discussions, so interviews were paused until they recovered. Data collection occurred between 15 November 2024 and 20 February 2025. Data analysis was performed iteratively alongside data collection. Recruitment continued until thematic saturation was achieved.

Data Management and Analysis

Audio recordings were stored in secure, password-protected folders on an encrypted Microsoft Windows version 11 system and backed up on a secure external hard drive to

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ensure confidentiality and data integrity. Verbatim transcription of all interviews was conducted by a trained medical officer and the principal investigator within 24 hours of the interview. The data were analyzed using Braun and Clarke's six-phase thematic analysis framework.[27] Analysis began with a phase of immersive familiarization, during which the principal investigator and senior research assistant repeatedly read all transcripts and associated field notes to develop a holistic understanding of the data. Initial codes were then generated inductively, labeling meaningful segments of text relevant to the research question. Coding was performed collaboratively by the principal investigator and two additional team members (including a qualitative methodology expert), enhancing analytical rigor through researcher triangulation. Differences in coding interpretations were discussed and resolved through consensus meetings. Themes were identified by examining relationships among codes and were iteratively refined through team discussions to ensure internal coherence and distinctiveness. Themes were clearly defined, named, and contextualized in relation to the study's objectives and conceptual framework. To ensure analytic transparency, themes were systematically cross-checked against the full data set to confirm that they captured the breadth and depth of participant perspectives.

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RESULTS

Study Flow Diagram

Of the 102 women eligible for inclusion, 57 satisfied the sampling criteria and 25 ultimately participated in interviews. Thematic saturation was achieved after the analysis of 20 interviews (as shown in Fig 1).

Participant Characteristics

A summary of participant characteristics is presented in Table 1, including age (26-39 years), diverse occupations, marital status, parity, time since breast cancer diagnosis, and religious affiliation. Most participants had at least one child, with varying years since diagnosis and no prior fertility preservation treatment.

Themes

Four themes summarized in Table 2 influenced participants' views on future fertility after breast cancer. This highlights how medical, cultural, and structural factors complicate decision making in a resource-limited health care environment. Illustrative quotes are also shown in Table 2, and additional quotes are documented in Appendix Table A1.

Cultural and Societal Weight on Motherhood

Infertility, particularly when influenced by cancer treatments, encompasses emotional, social, and cultural implications. The psychosocial burden reflects distress tied to societal expectations of motherhood, fears of alienation, and marital instability. We explore two subthemes that reveal an intricate relationship between health, societal norms, and personal identity.

Psychosocial burden of infertility. Participants expressed deep concerns regarding their fertility, emphasizing its intrinsic connection to their identity and role within familial and societal structures. For many, the inability to fulfill cultural expectations of motherhood triggered profound emotional distress and fear of marital instability.

Value of childbearing. Respondents highlighted the critical importance of fertility within the context of societal and marital expectations, emphasizing that the ability to bear children often serves as a defining element of marriage in their communities. They further noted that entering a committed relationship typically leads to societal pressures to produce offspring.

Need for Comprehensive Fertility Counseling

The diagnosis of breast cancer in young adulthood thrusts women into a complex intersection of survival and future

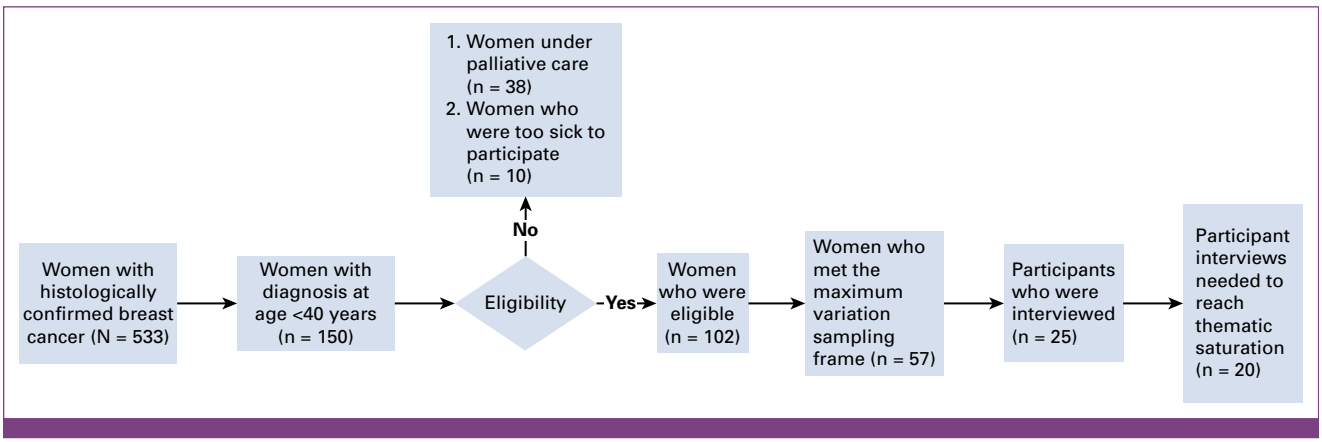


FIG 1. Of 533 electronic health records screened, 102 patients were eligible. Fifty-seven women were contacted; 25 consented and completed interviews. Analysis included 20 interviews, with five excluded after thematic saturation was reached.

TABLE 1. Demographic and Clinical Characteristics of Participants

ID No.	Age, Years	Occupation	No. of Children	No. of Years Since Diagnosis	Marital Status	Religion
001	37	Businesswoman	1	2.0	Married	Muslim
002	39	Farmer	6	4.0	Cohabiting	Anglican
003	33	Accountant	1	2.0	Married	Anglican
004	36	Businesswoman	2	5.0	Married	Catholic
005	39	Midwife	3	1.0	Married	Catholic
006	36	Mobile money agent	2	14.0	Cohabiting	Catholic
007	39	Nursing assistant	2	9.0	Married	Muslim
008	37	School cashier	1	2.0	Married	Catholic
009	37	Poultry farmer	4	3.0	Married	Anglican
010	29	Teacher	1	1.0	Married	Muslim
011	34	Banker	3	1.0	Cohabiting	Anglican
012	34	Event manager	1	2.0	Cohabiting	Catholic
013	37	Coffee farmer	3	1.0	Married	Catholic
014	39	Sales and marketing	1	1.0	Married	Born-again
015	31	Mobile money agent	0	2.0	Single	Catholic
016	32	Unemployed	0	3.0	Single	Born-again
017	37	Teacher	2	4.0	Married	Born-again
018	26	Unemployed	1	0.7	Single	Born-again
019	36	Sales agent	3	3.0	Cohabiting	Anglican
020	39	Hairdresser	4	1.0	Cohabiting	Anglican

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family planning. In these scenarios, timely, empathetic fertility counseling becomes a lifeline. Three subthemes emerged, as shown in Table 2.

Timely fertility counseling. Participants reported that the breast cancer diagnosis raised major concerns about future fertility, noting the importance of early, comprehensive counseling to reduce anxiety and support psychological adjustment.

Provider communication gaps. Several participants reported that fertility preservation options were not clearly introduced before treatment, including referral for fertility consultation, discussion of oocyte or embryo cryopreservation, expected timelines for ovarian stimulation and egg retrieval, timeline for cryo-storage, and the costs associated with these services. This left participants to seek information independently and contributed to uncertainty, fear, and delayed decision making.

Self-guided information acquisition. Participants' information seeking was not limited to formal medical sources. Some described relying on peers, friends, online sources, and community narratives to interpret the fertility implications of cancer treatment. Although religion and family expectations shaped fertility concerns, traditional healers and religious leaders were not commonly identified as direct sources of cancer-related fertility information.

Uncertain About Future Fertility

This theme delves into the complex intersection of fertility concerns and cancer treatments, highlighting the emotional and physical dilemmas faced by individuals. Three key subthemes emerged, as shown in Table 2. Together, they illustrate the profound challenges and decisions that intertwine personal identity, societal expectations, and medical treatment paths.

Difficulty with conception. Respondents voiced significant apprehensions regarding the potential effects of chemotherapy drugs on their fertility. This was often influenced by unverified information and rumors circulating within their communities.

Survival versus motherhood. There was a recuring misconception that fertility preservation inherently conflicted with the effectiveness of cancer treatment, thus posing a risk to survival. This perceived dichotomy influenced decision making among respondents, leading them to prioritize immediate treatment for cancer over the prospect of maintaining fertility.

Concerns about safety. Respondents articulated profound concerns regarding the potential implications of cancer treatment on the health and well-being of future offspring, including fears about genetic abnormalities and other unforeseen complications. These apprehensions were often compounded by the lack of comprehensive information provided by medical professionals, leaving individuals to grapple with uncertainty and anxiety.

Beyond Reach

This theme outlines the gap between the existence of fertility-related services and participants' practical ability to

TABLE 2. Emerging Themes, Corresponding Categories, and Illustrative Quotes

Themes	Categories	Illustrative Quotes
Cultural and societal weight on motherhood	Psychosocial burden of infertility	One respondent narrated: *"I don't have a child, and as a woman, I believe that I should have children from my womb. I am so worried, and my friends keep asking when I will give birth."* (31-year-old, no child, 2 years since diagnosis. p15)
	Value of childbearing	One respondent shared: *"The challenge often arises for those diagnosed with cancer and undergoing treatment who have not yet had children. In many African marriages, the true validation comes through having children."* (37-year-old, mother of three, 1-year since diagnosis. p13)
Need for comprehensive fertility counseling	Timely fertility counseling	One respondent narrated: *"Is it the treatment or the disease? It would be helpful if we were counseled on these matters before treatment….you know!… to reduce our anxiety and help us adjust psychologically to such life-altering realities."* (33-year-old mother of one, 2-years since diagnosis. p03)
	Provider communication gaps	One respondent narrated: *"When I was diagnosed, my doctor rushed through treatment options but never mentioned how chemotherapy could affect my ability to have children. It wasn't until I asked—weeks later—that I learned about fertility preservation. By then, I felt scared and alone in making such a big decision. Why wasn't this discussed from the beginning? I want to try and have more children."* (37-year-old mother of one, 2 years since diagnosis. p01)
	Self-guided information acquisition	One respondent narrated: "*Much of the vital information about fertility and cancer treatment was something I had to seek out on my own, often relying on online sources like Google. It felt frustrating and isolating.* (34-year-old mother of one, 2-years since diagnosis. p12)
Uncertain about future fertility	Difficulty with conception	One respondent shared their perspective: *"I fear that the drugs might stay in my system for a long time, making it difficult to conceive again. People say you need consultations with fertility doctors and specialized care, but no one has explained why or how this process works."* (36-year-old, mother of two, 5 years since diagnosis, p04)
	Survival versus motherhood	One respondent expressed this sentiment: *"Though I want children, and even if I didn't have one, I would prefer to save my life. How would you conceive when sick or on a death bed? I wouldn't change my mind…"* (37-year-old mother of one, 2 years since diagnosis p01)
	Concerns about safety	One respondent expressed this dilemma poignantly: *"I want to have more children. But will I be able to conceive healthy children? I keep wondering—will they be safe and without any complications? It's daunting to maintain hope while fear consistently overshadows any optimism."* (29-year-old, mother of one, 1-year post-diagnosis p10)
Beyond reach	Financial disparity	One participant articulated this sentiment with profound emotion: *"I wanted a second child badly. It was devastating to realize that the available options exist but remain inaccessible due to financial constraints."* the respondent broke down in tears, *"I need a child for my husband; the first child isn't his, but we cannot afford the costs associated with fertility preservation."* (34-year-old, mother of one, 2 years post-diagnosis p12)
	Insurance limitations	One respondent shared their experience: *"I attempted to use my insurance, only to discover that it does not cover fertility treatments or cancer therapies…"* (37-year-old, mother of three, 1-year post-diagnosis p13)
	Inaccessible fertility care	One respondent elaborated on the challenges posed by this concentration of facilities: *"I wish to secure my ability to have a child, but accessing a fertility specialist necessitates traveling to Kampala. The journey is lengthy and financially draining."* (37-year-old, mother of three, 1-year post-diagnosis, p13)

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access them within a time-sensitive cancer-treatment pathway. Participants described fertility preservation as technically possible but functionally difficult to pursue because counseling was inconsistent and referral pathways were unclear.

Financial disparity. Among respondents who had some knowledge of fertility preservation and expressed a desire for future childbearing, the anticipated costs of ART-based services were described as prohibitive. Participants were referring to a bundle of expenses that could include fertility-specialist review, diagnostic testing, ovarian stimulation medications, ultrasound monitoring, egg retrieval, oocyte or embryo cryopreservation, annual storage, and potential future ART procedures.

Insurance limitations. Participants expressed concern that insurance did not cover fertility treatments and, in some cases, did not sufficiently cover cancer-related care. This meant that fertility preservation costs were largely out-of-pocket, including referral consultations, diagnostic tests, ART procedures, cryo-storage, and time away from income-generating activities.

Inaccessible fertility care. Participants, particularly those residing in rural areas, described advanced fertility preservation as geographically and financially difficult to access. In their accounts, services such as fertility specialist consultation, ovarian stimulation, egg retrieval, oocyte or embryo cryopreservation, and cryo-storage were associated with Kampala and required travel, additional appointments and substantial out-of-pocket costs.

DISCUSSION

This study explored fertility-related perspectives among young adult women with breast cancer at a periurban cancer center in Uganda. While several expressed concerns mirror those reported in higher-resource settings, our analysis

demonstrates how these concerns are shaped and compounded by structural features of care delivery in this context.

Young women diagnosed with breast cancer in Uganda, much like their counterparts in high-income settings, place significant emphasis on future fertility.[28,29] The prospect of losing the ability to have children causes substantial psychological distress, not only because of personal desires for motherhood but also because of prevailing sociocultural expectations.[20] For women without children, a breast cancer diagnosis and associated infertility elicit deep fears of marital dissolution and social ostracism, given the cultural importance of childbearing in sustaining family and social bonds. The intersection of gender norms and fertility creates unique challenges for young breast cancer survivors in Uganda, where infertility is highly stigmatized and often viewed as a personal failing, especially for women.[30,31] In Uganda's patriarchal society, a woman's social value and marital security are closely linked to her ability to bear children, whereas masculinity is often associated with lineage continuation and proof of virility.[32,33] Infertility, regardless of cause, frequently leads to women being disproportionately blamed, facing threats of separation, divorce, emotional abuse, or even physical violence.[30,31,33] These sociocultural pressures make fertility counseling and preservation discussions particularly complex as infertility can carry as much, or greater, psychosocial weight than the cancer diagnosis itself.

Participants consistently highlighted the critical need for timely and empathetic fertility counseling, given their strong desire to preserve fertility. Numerous accounts indicated that initial consultations often prioritized treatment options, frequently at the expense of discussions regarding fertility implications. Such findings align with similar experiences among young adult cancer survivors in Uganda[20] and other various contexts.[34-38] This lack of anticipatory guidance frequently compelled patients to seek information independently, relying on unverified sources such as the internet, peers, or anecdotal community knowledge. Similarly, studies in high-income settings reveal that the absence of professional guidance on fertility matters intensifies patients' anxiety and feelings of isolation.[39] Although health care providers are perceived as authoritative sources of information, their reluctance to address fertility considerations exacerbates distress, as corroborated in prior studies.[37,40]

Fertility decision making in Uganda occurs within a broader social and pluralistic care context. Partners, in-laws, extended family, peers, religious communities, and community narratives shape how women understand infertility, motherhood, cancer treatment, and acceptable reproductive choices.[33] Reports of patients with cancer using traditional or complementary therapies and consulting traditional health practitioners are also well documented.[33,41-43] In our study, fertility concerns were shaped not only by clinician counseling but also by partners, friends, family expectations, peers, and community knowledge; however, traditional healers and religious leaders did not emerge as major direct sources of cancer-related fertility advice.

Furthermore, ambiguity regarding the optimal timelines for attempting conception further contributed to apprehensions. For some, the urgency to initiate oncologic treatment created a perceived conflict between the prioritization of survival and the possibility of preserving fertility, often resulting in decisions that might have limited their reproductive options. These findings highlight a strong desire for clear fertility information during the cancer care continuum, supported by recent data from the POSITIVE trial.[44] This study found that temporarily pausing adjuvant endocrine therapy to try for pregnancy did not worsen short-term disease outcomes in young women with hormone receptor–positive breast cancer.[44] Such evidence offers important options for patients, emphasizing the need for tailored risk-benefit discussions and collaboration among care teams. The absence of consistent guidance and structured information amplifies uncertainty and complicates decision making, highlighting ethical tensions between respecting patient autonomy and adhering to nonmaleficence.[45,46]

Finally, even when fertility preservation options are technically available, the costs and organization of care render these services unattainable for many young women with breast cancer. For perspective, approximate costs of ART procedures are $30 US dollars (USD) for a consultation, $1,000 USD for an intrauterine insemination procedure, $4,000 USD-$5,000 USD for in vitro fertilization, and $800 USD-$900 USD for annual cryopreservation.[47,48] Furthermore, the national labor data report median monthly earnings of $53 USD overall and $37 USD among women in paid employment, whereas national household data report average monthly household expenditure of approximately $150 USD. For patients already managing the costs, uncertainty, and urgency of breast cancer treatment, separate fertility referral, travel, consultation fees, procedure costs, and storage costs compound the emotional and financial burden of potential infertility.

This small qualitative study sought depth rather than population-level estimation, prioritizing transferability over statistical generalizability. Because the study was conducted at a single private facility, the findings may be less applicable to public sector or rural populations with fewer resources and more limited access to specialized services. However, the observed patterns of gendered expectations, stigma, and limited structured fertility counseling are consistent with reports from other low-resource settings. We also did not collect detailed income, asset, insurance, or out-of-pocket expenditure data; consequently, we could not estimate participant-level affordability. To contextualize cost, we relied on published national wage, household expenditure, health financing, and fertility service cost data.

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Future practice improvement should establish a tiered oncofertility pathway within Uganda's health service structure. At all oncology entry points, reproductive-age patients should receive documented fertility goal and fertility risk screening before chemotherapy or endocrine therapy, followed by same-day counseling on infertility risk, pregnancy timing, contraception, ovarian suppression where appropriate, and preservation options. A designated oncology nurse or clinician should document counseling and coordinate referral for patients who desire future fertility or are uncertain. Programs should also provide targeted subsidies, charitable support, or public-private partnerships to reduce on the cost impact from these procedures.

Further research should move beyond descriptive accounts to prospective implementation studies in oncology clinics and referral fertility services. Priority questions are whether structured pretreatment counseling, a designated referral focal person, and documented referral pathways increase the proportions of reproductive-age patients who are counseled before treatment, attend fertility consultation, and complete fertility preservation and whether these interventions reduce decisional conflict and cost-related nonuptake.

In conclusion, in this periurban cancer center in Uganda, fertility concerns were inseparable from treatment decision making, social identity, and future family plans. Young women described major gaps in pretreatment counseling, limited referral for preservation, and substantial financial and geographic barriers to ART-based services concentrated in Kampala. These findings support a concrete service response: routine fertility risk screening at oncology entry points, same-day counseling, rapid referral to ART-capable centers, and targeted financial support for consultation, stimulation, cryopreservation, and storage.

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APPENDIX

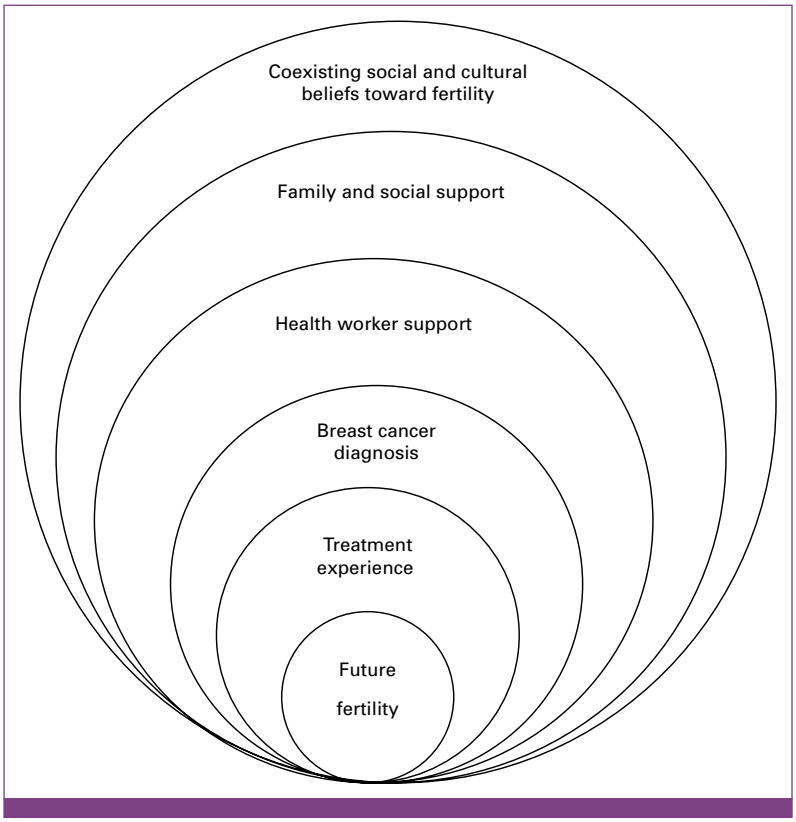


FIG A1. This framework illustrates how various factors shape young adult women's attitudes and perspectives on future fertility after a breast cancer diagnosis. Diagnosis and treatment—encompassing chemotherapy regimens, doses, and associated side effects—directly affect fertility and influence reproductive decision making. Patients must navigate concerns about fertility preservation, the risk of treatment-induced infertility, and their broader reproductive choices. The threat of fertility loss is a central challenge, particularly in African contexts where cultural and social norms often strongly associate a woman's value with childbearing. Such expectations can intensify anxiety and social stigma for women facing potential infertility. Social support from family, friends, and the wider community plays a crucial role in shaping patients' concerns and decisions, offering emotional, psychological, and financial assistance that informs fertility planning. In addition, health care provider support is vital. Beyond delivering diagnosis and treatment, health care workers have a responsibility to counsel patients on fertility preservation.

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TABLE A1. Supplementary Illustrative Quotes

Theme	Subtheme	Illustrative Quote
Cultural and societal weight on motherhood	Psychosocial burden of infertility	Another participant revealed her apprehension over her husband's potential actions because of her fertility challenges: *"It also broke my heart because I have fears that my husband will remarry to have children. We want more children, especially my husband who wants six."* (29-year-old, mother of one, 1 year since diagnosis. p10)
Need for comprehensive fertility counseling	*Provider communication gaps*	Some participants highlighted their preference for connections with cancer survivors who could provide insights grounded in lived experiences, as narrated by this respondent: *"It is every woman's desire to have children; they should bring survivors who have had children to talk to us because they have real-life experience compared to the doctors. Doctors, treat but have not experienced it……"* (39-year-old, mother of one, 1 year since diagnosis. p14)
	Value of childbearing	One respondent also poignantly expressed this sentiment: *"I have only one child. I got a new husband who is planning to perform a traditional marriage ceremony, so it may be challenging for me to be in an unproductive marriage as a woman."* (37-year-old mother of one, 2 years since diagnosis. p01)
Uncertain about future fertility	*Survival* versus *motherhood*	Another respondent highlighted the overwhelming pain of cancer as the decisive factor in opting for treatment over fertility preservation, reflecting: "*The pain is a lot; therefore, you choose cancer treatment over fertility. Though I really want to have one more child to try and balance the sex of the children I have…*" (39-year-old mother of six, 4 years since diagnosis p02)
	Concerns about safety	Interestingly, respondents who already had children appeared to reconcile their choices more readily than those without, as illustrated by the following statement: *"…At least I have one child, so I am at peace. I just feel terrible for those who have none because the chance of being parents is at risk…"* (34-year-old mother of one, 2 years since diagnosis p12)
		Another respondent underscored the ambiguity surrounding the safety of conception during and after treatment, reflecting: *"Why is it that conception is discouraged while on treatment? What are the specific risks to the baby and are these risks permanent? They tell us that postponing parenthood is necessary for a short time, but we are left with lingering uncertainties about the long-term outcomes. It's a lot to process, particularly when you wish to have more children."* (36-year-old, mother of three, 3 years postdiagnosis p19)

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