

A phenomenological study to explore the experiences of Ugandan women that have undergone transvaginal ultrasound

Aloysius Gonzaga Mubuuke BSc (Med.Rad), MSc, MPhil

Radiology Department, School of Medicine, Makerere University, Kampala, Uganda

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Correspondence

Aloysius Gonzaga Mubuuke, Radiology Department, School of Medicine, College of Health Sciences, Makerere University, P.O. Box 7072, Kampala, Uganda.
Tel: +256 772 616788; Fax: +256 414 532204; E-mail: gmubuuke@gmail.com

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Abstract

Introduction: Transvaginal ultrasound (TVUS) is an important examination of the female pelvis that involves the transducer being inserted into the vagina to obtain more detailed images of the pelvic organs. Unfortunately, this examination has received mixed experiences from the women who have undergone it. This study set out to explore the lived experiences of Ugandan women who have undergone TVUS. **Methods:** It was a phenomenological exploratory study involving 20 women in Uganda that had previously undergone TVUS. Data were collected using in-depth individual interviews. The responses from the women were audio-recorded and later transcribed. Thematic analysis was used to interpret and make meaning of the data collected. **Results:** Analysis of data revealed mostly negative experiences of the women who were included in this study. Key words from the participating women that illustrated the negative experiences included: fear, vulnerability, guilt, anxiety and embarrassment. It was also observed that these initial negative experiences are likely to reduce the women's acceptability and compliance to TVUS even when it is needed for better clinical management. Data were categorised into the following three thematic areas: (1) *broken communication*, (2) *anxiety and discomfort* and (3) *cultural influence*. **Conclusion:** Women in this study portrayed negative experiences of undergoing TVUS. Key suggestions like informed consent are recommended to improve compliance of the women to this type of procedure.

Introduction

Transvaginal ultrasound (TVUS) is an important examination in obstetric and gynaecological management.¹ In many situations, TVUS is preferred over transabdominal ultrasound because it produces better images of pelvic organs and does not require women to fill their urinary bladders to achieve a sonic window.² Due to its superiority over transabdominal ultrasound, TVUS is frequently used to assess the endometrium and ovaries in follicular monitoring as well as assessment of first-trimester pregnancies.³ TVUS is also significant in the later stages of pregnancy to assess cervical changes as well as placenta positions.⁴

The procedure of performing TVUS involves the patient lying on a couch in lithotomy position to expose

the genitals.⁴ The radiologist/sonographer then spreads gel over an ultrasound transducer before covering it with a sheath. Sterile jelly like KY jelly is then spread over the top of the covered transducer for lubrication and the transducer is subsequently inserted into the vagina. During scanning, the transducer can be manipulated in multiple planes from time to time to obtain images in sagittal and transverse views.

Despite its significance, some women may find the procedure of TVUS unacceptable and invasive. Although women as patients most often comply to have TVUS, many would willingly reject it if they were given a choice, concluded Bennett and Richards.¹ Some women find it uncomfortable due to physical or psychological pain that may be involved.⁵ For post-menopausal women, this can be due to vaginal changes as a result of vaginal dryness and

narrowing.⁵ Psychological factors include embarrassment, anxiety and fear of pain.⁶ The psychological and physical effects of TVUS may be analogous to a female pelvic examination. It has been reported that a lot of women undergoing pelvic examination experience significant discomfort and develop negative perceptions towards it as they perceive it as an invasion of their privacy through exposure of their genitals.^{7–10} It has also been reported that when their genitals are exposed, women get a feeling of loss of control of their own bodies and some are anxious that doctors might discover their hidden abnormalities.¹⁰

Like in many other parts of the world and many social settings, in Uganda where this study took place, people still hold their beliefs and values in high esteem. For example many women feel that it is bad luck for old women to expose their genitals to young professionals. The young women also treasure their virginity so dearly such that any practice that is likely to take away their virginity is likely to be loathed. Transvaginal sonography is one procedure that is likely to be perceived as an invasion of privacy as well as a practice that is likely to take away their virginity. Therefore, the context in which this study took place is one in which there is likely to be potential conflict between TVUS and societal beliefs. No single study has previously explored this issue in Uganda.

While there is a wealth of literature exploring women's experiences of pelvic examinations, there is a dearth of literature specifically exploring women's experiences of TVUS. One recent study by Al Inizi et al. about post-menopausal women's attitudes towards TVUS was largely quantitative and did not qualitatively explore their lived experiences.⁵ Additionally, their study was conducted with only post-menopausal women missing out on the experiences of pre-menopausal women. Finally, no literature has emerged out of Uganda discussing this subject.

The purpose of this study was twofold. First, the study aimed at exploring the lived experiences of Ugandan women who have undergone TVUS and utilise these lived experiences to suggest feasible recommendations that can possibly improve acceptability and compliance to TVUS for better clinical management. Second, the study aimed at generating feasible recommendations needed to change medical practice which are ethically sound while remaining culturally sensitive.

Methods

It was a phenomenological exploratory study that took place at Mulago Hospital, Radiology Department in January 2013. Exploratory phenomenology was chosen because the study sought to gain a deeper insight into the subject from people with experiences.¹¹ In this study, the

researcher wanted to explore the lived experiences of women who had previously undergone TVUS in their lives. The study being exploratory in nature, in-depth individual interviews were used to collect data from women who had undergone TVUS. The women were recruited from among out-patients reporting to the radiology department. The department receives about 100 women per day. Information about the study was disseminated to potential participants verbally through the early morning health talks to women by a nursing officer. The information included the details of the study, purpose and that it targeted women with a previous experience of TVUS. It was emphasised by the nurse that participation would include being interviewed and was totally voluntary.

After addressing concerns of potential participants, those willing to be interviewed were requested to approach the nursing officer to consent and thereafter attend the interview. Consent was verbal. Interviewing took place shortly after obtaining consent. Purposive convenience sampling was used to recruit participants into the study. Ten talks, one each day, were conducted by the nursing officer to disseminate information about the study to potential participants. This is because potential participants were out-patients and each day new women would report to the radiology department, hence the need to repeat the talk.

Each day, two women were recruited for interviewing. Information about the study was disseminated at 8:00 AM in the morning and consent and subsequently interviewing were done at 12:00 PM in the afternoon, giving potential participants a time lag of 4 h to reflect over the information provided by the nursing officer. It was not possible to give participants longer times to reflect over their willingness to participate because they were out-patients and access to them days after would be difficult. The consent obtained was to participate in the interviews to explore experiences.

There were 20 women recruited into the study. All women who had undergone TVUS were eligible to participate in the study regardless of age, occupation, background or any other clinical characteristics. The final number of women to be included in the study was not predetermined, but was arrived at by the principle of data saturation. Data collection was terminated at the 20th woman since no new data were emerging. A quiet place was chosen for the interviews. The responses were audio-recorded and later transcribed by the researcher, each interview transcription taking place immediately after carrying out the interview.

Interview questions explored participants' demographic information as well as topics about their experiences of TVUS before, during and after the procedure. The topics

explored during the interviews included knowledge about the ultrasound scan, feelings of undergoing the TVUS, relationship and interaction with the health professional within the ultrasound room and feelings after undergoing the procedure. Open-ended semi-structured questions were used to explore these topics and responses were probed to clarify meaning and obtain additional detail.

The interview questions were developed and emerged from a critical review of the literature from previous studies on the subject. The questions were first piloted with two women and corrections were made. The corrections that were made included re-wording the questions clearly and removing one question that required women to describe how the actual procedure was done. The women who participated in the pilot declined to answer this question, deemed it invasive and advised the researcher to remove it. It was subsequently withdrawn from the set of questions to be asked. All interviews were conducted by the researcher in a quiet place.

At the end of each interview, the recording would be played before the participant leaves, in order to clarify any issues regarding the responses. Thematic analysis was used. The themes were generated manually by the researcher. The process of generating themes involved constantly reading through the raw data and employing the technique of open coding to generate key representative words of the responses called codes. The coding process was also carried out manually by the researcher. These codes were also read and compared to original data for clarification and then compared and related to each other to generate broader patterns of meaning through a process of axial coding.¹¹ This led to the emergence of broader categories of data which were also related to each other and grouped into major thematic areas that were used to report findings.

All the interviews were conducted by the researcher in his office at medical school which is outside the main hospital. This was done to provide a calm environment away from the busy hospital that would influence participants' opinions. During interviews, the researcher was not wearing a medical uniform as this would also indirectly influence responses received because some women might fear sharing responses with a medical person especially if such responses are viewed as an attack to the medical personnel.

The researcher practised reflexivity to minimise bias during data collection and analysis. This involved bracketing off any pre-conceived ideas about the subject and structuring the interview questions to ensure that the same questions are asked to each participant. Researcher and interviewer bias during data collection and analysis were minimised through constant comparison of data

and emerging themes. Data were securely kept and only the investigator had access to it for purposes of confidentiality. Approval to conduct this study was granted by Makerere University, School of Medicine Ethics and Research Committee.

Results and Discussion

The demographic information of participants collected included age, marital status and educational background. Majority of the women were married and majority belonged to the age range of 25–35 years. All the women in the study had received some formal education. The last time when TVUS was done varied from one to more than 12 months with majority of the women having had the last TVUS between 6 and 9 months at the time of carrying out this study in January 2013. These data are summarised in Table 1. It can be observed that the population from which the participants were recruited is a literate population and within the reproductive age. There were three thematic areas identified: (1) *broken communication*; (2) *anxiety and discomfort*; (3) *cultural influence*.

Broken communication

Analysis of data revealed a lack of communication between women and health professionals performing TVUS. All the 20 women in this study regardless of age bracket said there was a lack of proper communication between them and the health workers. This breakdown in communication could partly account for the negative

Table 1. Demographic data of participants.

| Demographic characteristic | Frequency |
|---|---------------|
| Marital status | |
| Married | 75% (n = 15) |
| Single | 25% (n = 5) |
| Age distribution (years) | |
| 25–29 | 25% (n = 5) |
| 30–34 | 15% (n = 3) |
| 35–39 | 25% (n = 5) |
| 40–44 | 30% (n = 6) |
| 45–49 | 5% (n = 1) |
| Education status | |
| Formal education | 100% (n = 20) |
| No formal education | 0% (n = 0) |
| The last transvaginal ultrasound experience | |
| 0–3 months ago | 5% (n = 1) |
| 3–6 months ago | 15% (n = 3) |
| 6–9 months ago | 50% (n = 10) |
| 9–12 months ago | 20% (n = 4) |
| >12 months ago | 10% (n = 2) |

experiences women encountered that were a common thread in the responses as illustrated:

'I did not know that these things involve opening up my legs wide open for the doctor. Some of us need time to prepare for such examinations and they should tell us what it involves before it is performed' (P684).

'When am going to hospital to deliver, I know exactly what to expect. However for this examination, I did not know about it and I felt guilty. Even when I tried to ask the doctor to explain to me what it will be like, he simply said he has many patients to work on' (P685).

While both responses illustrate limited communication, they also demonstrate a lack of information given to women to obtain informed consent. The negative experiences and consequences expressed by women in this study due to inadequate communication also seemed to be influenced by age. The response below from a young lady in age bracket 25–29 was typical of women in this age bracket.

'I was shattered beyond repair. Much as I had a medical problem, I deserved to know how this procedure was going to be carried out. As I talk now, this procedure made me lose my cherished virginity. I would never have done it if I had known' (P686).

Three of the five women in age bracket of 25–29 expressed the above sentiment of losing virginity in their responses.

Although TVUS is an important examination of the female pelvis, more needs to be done especially by health workers to make it acceptable to all women. It appears like one important aspect to consider is to thoroughly explain to the women what TVUS is all about, its intended use and how it will be performed. Both referring clinicians and radiologists/sonographers have a role to play in this situation. Referring clinicians should give an explanation to women what they are referring them to do and the perceived advantages of the procedure. Radiologists/sonographers should explain to the women how the TVUS will be carried out and reassure them as a way of gaining rapport, consent and some acceptability to the procedure.

For example, young ladies in this study regretted not knowing that the procedure might lead to loss of virginity. In their study, Kew et al. reported that women need reassurance and an explanation that TVUS is safe, significant and not painful.¹² The first step for radiologists/sonographers is to reduce tension and create rapport with their patients through constant communication. This is more likely to yield confidence and a degree of acceptability from the women. If such communication barriers are not broken, women are likely to dread or even reject the

procedure even in situations where it is justifiably needed for effective patient management. It is important for health workers to consider and respect cultural norms and beliefs in any social setting when working on patients like women undergoing TVUS. Although constant communication and a thorough explanation of such procedures may not necessarily eliminate cultural beliefs, they provide a starting point through which women and health workers can work out a flexible measure of carrying out the procedure, but respecting culture as well.

Anxiety and discomfort

Although there was some overlap between the preceding theme on broken communication and the one on anxiety and discomfort, anxiety and discomfort was a strong presence in the data that it needed to be presented as an independent theme. Additionally, this anxiety and discomfort was not only due to communication issues, but also other factors came into play. During TVUS, women experienced anxiety and discomfort, albeit in various ways. Some common words in the responses to express this included fear, embarrassment, vulnerability, guilt, pain, regret, tension and loss of dignity. The expression of anxiety and discomfort was observed across all 20 women regardless of age bracket.

'I saw the doctor getting a condom and jelly. At first I feared for rape, but then he put the condom on a long stick. I was just speechless wondering whether to scream...' (P687).

'Am a little old now. I cannot imagine a young doctor fit to be my son ordering me to undress and open my legs wide open. I felt embarrassed and since I had no choice, I just closed my eyes' (P690).

'Am a young lady and quite attractive. There I was opening my private parts for an equally young gentleman. I felt vulnerable because I have heard that some doctors can rape their patients' (P693).

'Spare me the embarrassment because I do not want to talk about this. In fact I pray to God it gets out of my memory' (P688).

However, the expression of anxiety and discomfort was also observed to be influenced by gender of the health worker performing TVUS as exemplified in the responses below:

'I think young doctors should never work on old women like me for certain examinations. How can I expose my private parts to a young man for over twenty minutes? On my part, I totally feel guilty because I cannot look straight at that young man even if I meet him on the street' (P699).

Sentiments expressed in the above response were observed in four of the six women in age bracket of 40–44 and the one woman that fell in age bracket of 45–49 years. From the responses above, it is evident that the TVUS procedure was not readily acceptable to these women. It also appears like the health workers put in limited effort to make it a positive experience for their patients. In their study exploring a similar issue with post-menopausal women, Al Inizi et al. reported low levels of anxiety and discomfort because they were counselled and reassured before and during the procedure.⁵ Additionally, the level of experienced anxiety was significantly reduced during and after the procedure through constant communication with the women. This is contrary to what this study discovered.

In this study, women were anxious and tense. The plausible explanation for this observed difference largely lies in communicating with the women and creating rapport with them as well. In this study, women never received any prior explanation, counselling or any information about the procedure. Additionally, there was a communication gap between the women and personnel performing the TVUS procedure. The implication of this is that all health workers performing TVUS need to communicate with their patients, constantly providing that re-assurance and confidence to the patient and willing to explain any issues that may arise.

Additionally, some women in this study expressed tension, vulnerability and fear during the procedure of probably being sexually abused. This could have happened to those women who were attended to by male health workers. Abusing patients sexually by health workers has been reported elsewhere.^{13–15} The practice of the health worker putting KY jelly and a condom on a transvaginal transducer most likely invoked the fear of a potential sexual abuse that was observed in this study. This poses a serious challenge for all health workers most especially those carrying out transvaginal sonography as was observed. Although women in this study did not explicitly prefer any gender to work on them, this observation should not be overlooked. One way of addressing this challenge is to thoroughly explain the procedure of transvaginal sonography to the patient, addressing all patient concerns and obtaining informed consent before carrying out the procedure. This could be the starting point in partly addressing women fears and ethical issues of sexual abuse during transvaginal sonography.

Additionally, it would be advisable for radiologists/sonographers to have a third party of appropriate gender during TVUS if the patient, unless the patient rejects such a chaperone. Before the examination starts, one would consult with the patient if she would like a third party

like a nurse to be present. Such an act does not only instill confidence into the patient, but also is likely to avert any ethical implicational that may arise during the examination.

In support of the above observation, the Royal College of Radiologists (RCR), the Royal College of Obstetricians and Gynaecologists (RCOG), and the General Medical Council (GMC) recommend the use of chaperones of suitable gender during intimate examinations including TVUS.^{13–15} However, the third party or chaperone should not be imposed on to the patient if they do not wish to have one around.²

Cultural influence

The experiences of women were also observed to be influenced by cultural values, norms and beliefs. These experiences seemed to be further influenced by age. This is because cultural values were explicitly referred to by all the five women in the age bracket of 40–44 and the one woman in age bracket of 45–49 years. Women in lower age bracket (below 40 years) did not raise issues with cultural values and norms. All women above 40 years of age felt TVUS impacted on them negatively since it conflicted with some of their cultural beliefs and values. The responses below attest to this.

'I felt ashamed and did not want to look straight into the young doctor's eyes. She was of the same age like my daughter and in my culture, it is an embarrassment for an old woman to expose her most private parts to young ones' (P689).

'When I was told to get in the room, I saw a young man ordering me to get off my clothes and sleep on the bed. I felt uncomfortable, but had nothing to do. In our culture, when an old woman like me exposes her nakedness to young people, it is like a curse to them. I pray the young man does not get bad luck' (P691).

From the above responses, it can be observed that older women found exposing their genitals to young health professionals unacceptable. Although every health worker can attend to any patient, some concerns from patients should not be ignored. In Uganda, for example, where this study took place, women value their beliefs dearly. An example manifested in this study is the belief that elders cannot expose their genitals to young ones as it can lead to bad luck. Such beliefs might unfortunately influence compliance to important investigations like TVUS. Additionally, such beliefs may also exist in many other social settings and they ought to be respected. One feasible mitigating measure in the case of elders, for example, could be having older health professionals work on older women.

The practical implication of the above is that women are even most likely to reject TVUS when they perceive it as directly conflicting with their cultural values. This is true especially in situations where women are ignorant of the advantages of doing TVUS when indicated as compared to what they accrue from observing cultural values. Unfortunately, this does not only affect clinical management of such patients, but is also likely to influence their health seeking behaviours. When they envisage that TVUS might be requested, they might decide to shun visiting health facilities. Sensitisation of women is therefore crucial.

However, like has been discussed earlier, there is need for health workers to constantly respect women's cultural beliefs and fears even when informed consent and proper communication have been done. Perhaps health workers need to stop taking patients for granted and engage them in meaningful dialogue such that a common flexible consensus that addresses both professional ethics and is at the same time sensitive to cultural beliefs is reached when planning to perform procedures like TVUS. It is only through this engagement that some significant degree of compliance and acceptance will be achieved for procedures like TVUS.

This study has key implications for practice. Despite the numerous advantages of TVUS in health care, women in this study mostly recalled negative experiences. The study reveals that most of the negative experiences women had are indeed preventable. One way of doing this is to improve communication between health workers and the women undergoing TVUS. There is need to offer an explanation to women what TVUS is all about, benefits, technique of the procedure and seek their informed consent. This was clearly not done by most examining radiologists/sonographers. It is therefore suggested that if done, this would alleviate some fears women have. The communication about TVUS should not only be left to imaging professionals, but also referring clinicians should participate in this by giving an insight into the women what the procedure they are referring them to do is all about.

Second, there is need for creation of rapport between the women and imaging professionals before and during the procedure. Counselling and giving health talks to women for example by a radiology nurse can be beneficial especially in situations where TVUS is likely to create anxiety and conflict with cultural values. While respecting patients' cultural values, health professionals need to explain the need for doing TVUS and how the procedure will not conflict with cultural beliefs. Additionally, TVUS should ideally be performed in presence of a chaperone unless the patient refuses to have one.

This study also raises a key direction for future research in this area. The issue of old women exposing their genitals to young health workers was observed to be in conflict with women's beliefs. Even when informed consent has been obtained, it still remains as an attack on cultural beliefs. More studies are thus needed investigating the issue of potential conflicts between culture and medical procedures such as TVUS. There is need to come up with suggestions of how health professionals can do their work while at the same being sensitive to culture. How does culture influence health seeking behaviour? How can health workers effectively manage patients while at the same time remaining sensitive to their beliefs and values? These and many more questions provide some direction for future research in this area.

Additionally, the study sought responses from women some time after they had done the transvaginal sonography. This time ranged from 1 month to over 12 months. Time lag could have prevented these women from recalling some useful experiences. The author thus recommends more studies on this subject where women are interviewed immediately after undergoing the transvaginal sonography.

One major limitation of this study is that it is context specific to Uganda and conducted with women in one hospital. Therefore, the findings of this study may not necessarily fully apply in other settings where cultures and transvaginal sonography practice may be different. Even women in other settings may have quite different experiences of transvaginal sonography because of contextual differences. However, this study provides useful findings that can be used for comparisons with other settings.

Another limitation for this study was the use of a small sample size and non-probability purposive sampling which could limit generalisability of the findings. Experiences of women in this study may therefore not necessarily reflect the experiences of all women who have done TVUS. However, more exploratory studies are encouraged with other groups of women in many other contexts. In this type of study, there is a component of researcher bias. In this study, the researcher conducted the interviews and analysed the responses. This coupled with the fact that the researcher is an imaging professional and practices TVUS, could have introduced some bias. Finally, the researcher was a male interviewing female patients. This is likely not to allow total reflexivity and the responses from women could have been shaped and influenced by the fact that the interviewer was a male. Conducting similar studies with a number of interviewers of mixed gender is thus recommended.

Conclusion

This study has demonstrated that despite its obvious advantages, many women could have negative attitudes towards TVUS. This unfortunately may compromise its utilisation as a good number of women may not accept to do it another time. However, thorough explanations of what TVUS entails, re-assurance, getting informed consent from the women and remaining sensitive to cultural beliefs, norms and values are likely to increase compliance to the procedure.

Conflict of Interest

The author declares no conflict of interest.

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