


BMJ Open Development, acceptability and usability of culturally appropriate survivor narrative videos for breast cancer treatment in Botswana: a pilot study

Yehoda M Martei ¹, Lebogang Mokokwe,^{2,3} Ngwao Ngwako,³ Keabaka Kebuang,⁴ Dipho I Setlhako,⁴ Goitsewang Gabaathole,² Bontswanetse Baaitse,⁴ Tumisang Segadimo,⁴ Lawrence N Shulman,¹ Frances Barg,⁵ Babe E Gaolebale⁴

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For numbered affiliations see end of article.

Correspondence to

Dr Yehoda M Martei;
yehoda.martei@penmedicine.
upenn.edu

ABSTRACT

Objectives Narrative communication has demonstrated effectiveness in promoting positive health behaviours, delivering support and coping with complex decision-making. Formal research evaluating this intervention for cancer treatment in Africa is lacking. We aimed to develop, and assess acceptability and usability of survivor video narrative interventions for breast cancer treatment in Botswana.

Design A pilot study design.

Setting Single-centre, tertiary hospital, sub-Saharan Africa.

Participants Eight women, ≥18 years old, with stages I–III breast cancer were enrolled for the video intervention. 106 women, ≥18 years old, with stages I–IV breast cancer viewed the narrative videos and 98 completed the acceptability and usability surveys.

Intervention Survivor narrative videos were developed using the theory of planned behaviour and using a purposive sample of Batswana, Setswana-speaking, breast cancer survivors, who had completed systemic treatment and surgery with high rates of adherence to the prescribed treatment plan.

Primary outcomes We assessed acceptability and usability among prospectively enrolled patients presenting for routine breast cancer care at Princess Marina Hospital in Botswana, using a 13-item survey.

Results Participants expressed high acceptability and usability of the videos, including 99% (97/98) who strongly agreed/agreed that the video presentations were easy to understand, 92% (90/98) who would recommend to other survivors and 94% (92/98) who wished there were more videos. Additionally, 89% (87/98) agreed or strongly agreed that the one-on-one instruction on how to use the tablet was helpful and 87% (85/98) that the video player was easy to use.

Conclusion Culturally appropriate survivor video narratives have high acceptability and usability among patients with breast cancer in Botswana. There is an opportunity to leverage this intervention in routine breast cancer care for treatment support. Future studies will test

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ The single-arm pilot study is inherently limited.
- ⇒ The intervention design was informed by a theory-based framework for promoting positive behavioural intentions and actions.
- ⇒ The use of a multicultural and multidisciplinary expert team ensured that the videos were produced with close attention to cultural sensitivity and relevance while maintaining content accuracy.
- ⇒ The development of the semi-structured interview guides was informed by contextual factors associated with care delivery in Botswana.
- ⇒ Studying women who modelled the behaviour we were trying to promote was an added strength of the study.

the implementation and effectiveness of narrative videos on a wider scale, including for patients being treated for other cancers.

INTRODUCTION

Improvements in breast cancer mortality rates in the USA and other high-income countries in the last 40 years¹ have been partly attributed to screening, evidence-based systemic therapies and other advancements in multimodality treatment, which have informed the implementation of treatment guidelines for breast cancer.¹ However, there are global disparities in breast cancer survival. Sub-Saharan Africa (SSA) has the highest age-standardised breast cancer mortality rate globally,^{2–5} where the mortality to incidence ratio is up to 0.51 compared with 0.14 in countries in North America.^{6 7} Additionally, patients living with HIV who are diagnosed with breast cancer have worse survival outcomes. SSA has

74% of the global population of women living with HIV/AIDS and a concurrent diagnosis of breast cancer.⁸

Reasons for the observed breast cancer survival disparities in SSA are likely multifactorial and have been attributed to health system factors (eg, health system and diagnostic delays, drug stock-outs),^{9,10} patient factors (eg, delays that lead to advanced stage at presentation, limited breast cancer and treatment knowledge, and breast cancer stigma),¹¹⁻¹³ and other social determinants of health (eg, financial toxicity and food insecurity),¹⁴ as well as biology (eg, more aggressive molecular subtypes such as 'triple negative' breast cancer).¹⁵ Some of these factors ultimately lead to breast cancer care that deviates from guideline-concordant therapy.¹⁶⁻¹⁹

Improved survival outcomes in SSA will only be achieved if there is adherence to therapy delivery as recommended by guidelines. In a recent study, we identified modifiable patient-level risk factors, including perceived and internalised breast cancer and intersectional HIV stigma, lack of knowledge, and inadequate counselling about treatment, toxicity and anticipated management that are barriers to adherence to multimodality breast cancer treatment in the Botswana context.²⁰ We also identified facilitators which included knowledge and information sharing from peer survivors, social and religious support, and self-acceptance.²⁰

Narrative communication has demonstrated effectiveness in enhancing understanding of health information, promoting positive behaviours, delivering support and coping with complex decision-making and emotions.²¹ Furthermore, previous cancer-related studies involving people from under-represented communities in the USA have shown that narrative health communication was effective in promoting desirable health behaviours, for example, lowering mammography screening barriers for African American women,²² increasing colon cancer prevention behaviours in Latino populations,²³ and increasing cervical cancer screening rates among Mexican American women.²⁴ Formal research evaluating the use of narrative communication for breast cancer treatment is lacking in SSA and has not been previously studied in Botswana. We propose the use of video-recorded breast cancer survivor narratives to address some modifiable patient barriers to breast cancer treatment in the Botswana context. We report on the development process, acceptability and usability of survivor video narratives that are culturally and language matched for newly diagnosed patients with breast cancer in Botswana.

METHODS

Theoretical framework

To develop interventions designed to promote adherence to guideline-concordant treatment, it is important to determine which factors influence patient's intent and ability to perform the desired behaviour. We chose the theory of planned behaviour (TPB) framework, which is an evidence-based framework that has been successfully

used to predict and explain health behaviours. The TPB distinguishes between three types of beliefs, behavioural, normative and control.²⁵ The framework examines personal attitudes, that is, positive or negative beliefs about the behaviour, and perceived behavioural control, the extent to which the behaviour is perceived as easy to be done.²⁵ Importantly, it also evaluates subjective norms, which refer to a person's beliefs about whether peers and people of importance to the person think they should engage in the behaviour. Subjective norms also consider social norms which refer to customary codes of people in a group or larger cultural context.²⁶ Therefore, using the TPB allowed us to address fears and myths framed by the specific social and cultural context as a pathway for promoting understanding and normalising the desirable behaviour of interest. TPB has been used and validated for understanding various behaviours related to health promotion in non-communicable diseases, for example, diabetes self-care,^{27,28} mammography²⁹ and cervical cancer screening.³⁰

Narrative health communication is a form of persuasive communication using fictional or nonfictional representation of health messages to promote health-related behaviours.³¹ Social scientists have shown that narrative health communications using a credible source, in this case, other breast cancer survivors, can increase understanding, model desirable behaviours and serve as effective messengers for positive health promotion behaviours.³²⁻³⁴ The impact of this intervention may lie in viewer's identification with the storyteller and ability to influence behaviour through attitudes, social norms, self-efficacy and intention. Subsequently, narrative health communication has been studied in implementation science as a strategy for promoting positive health interventions, especially in communities that have a cultural history of storytelling and suffer health disparities.^{32,33} Botswana, similar to neighbouring countries in Africa, has a rich culture of storytelling and provides an ideal setting for exploring the development of survivor narrative videos told by Botswana citizens (also known as Batswana) in Setswana (the Botswana national language, spoken by 90% of the population) for breast cancer treatment.³⁵

Country and hospital setting

Botswana is a middle-income country in SSA with a population of 2.2 million.³⁶ This study enrolled participants seeking care at a single institution, Princess Marina Hospital in Gaborone, which is the largest cancer care provider in Botswana with outpatient and inpatient cancer care provisions. Breast cancer is the most common cancer treated in the public sector.³⁷ Patients with breast cancer in Botswana may be treated with any combination of surgery, radiation therapy, systemic chemotherapy, endocrine or targeted therapy. The Ministry of Health and Wellness allocates funding for comprehensive cancer management of more than 90% of the population.³⁸

Development of the survivor narrative videos

The narrative film was developed using a purposive sample of Batswana breast cancer survivors, recruited to represent Setswana speakers who had completed systemic treatment and surgery with high rates of adherence to the prescribed treatment plan. High adherence rate for systemic chemotherapy was defined as patients who completed treatment with a relative dose intensity (RDI) ≥ 0.85 .³⁹ RDI is a composite measure of cumulative dose of chemotherapy received and duration of treatment received (reflective of adherence to treatment schedule), expressed as a proportion of standard dose and duration, and chemotherapy RDI ≥ 0.85 is associated with higher survival outcomes.^{39 40} Eligible participants were invited to participate in the study. A Setswana-speaking research assistant provided information of the study, outlined the procedures, including the restricted use of the video for study purposes only, that is, for viewing by other patients enrolled in this pilot study. All the patients enrolled in the video development provided informed written consent. We ensured the confidentiality of the video by uploading to a tablet with 'viewing' privileges only. The videos included in this pilot were not uploaded online and downloading capabilities were disabled so the video

could not be downloaded or edited by viewers. All tablets were password protected and stored in a locked cabinet in a secure research office in Gaborone, Botswana. We developed ~15 min videos where survivors told their stories in semi-structured one-on-one interviews. We recruited and trained a bilingual Batswana research assistant to conduct interviews in Setswana using a script that addressed fears, myths, questions of diagnosis, treatment and survivorship. A collaborative team of experts from the University of Pennsylvania and Princess Marina Hospital in Botswana met to review materials including semi-structured interview guides for the film. Additional questions and topics covered in the interview were informed by prior qualitative research on patient-level contextual barriers to breast cancer treatment adherence.²⁰ Completed videos were reviewed and edited iteratively by a collaborative team of experts for accuracy of the content and to inform subsequent interviews.

Usability and acceptability

We assessed acceptability and usability among prospectively enrolled patients with stages I–IV breast cancer presenting for routine breast cancer care at Princess Marina Hospital in Botswana. A trained research

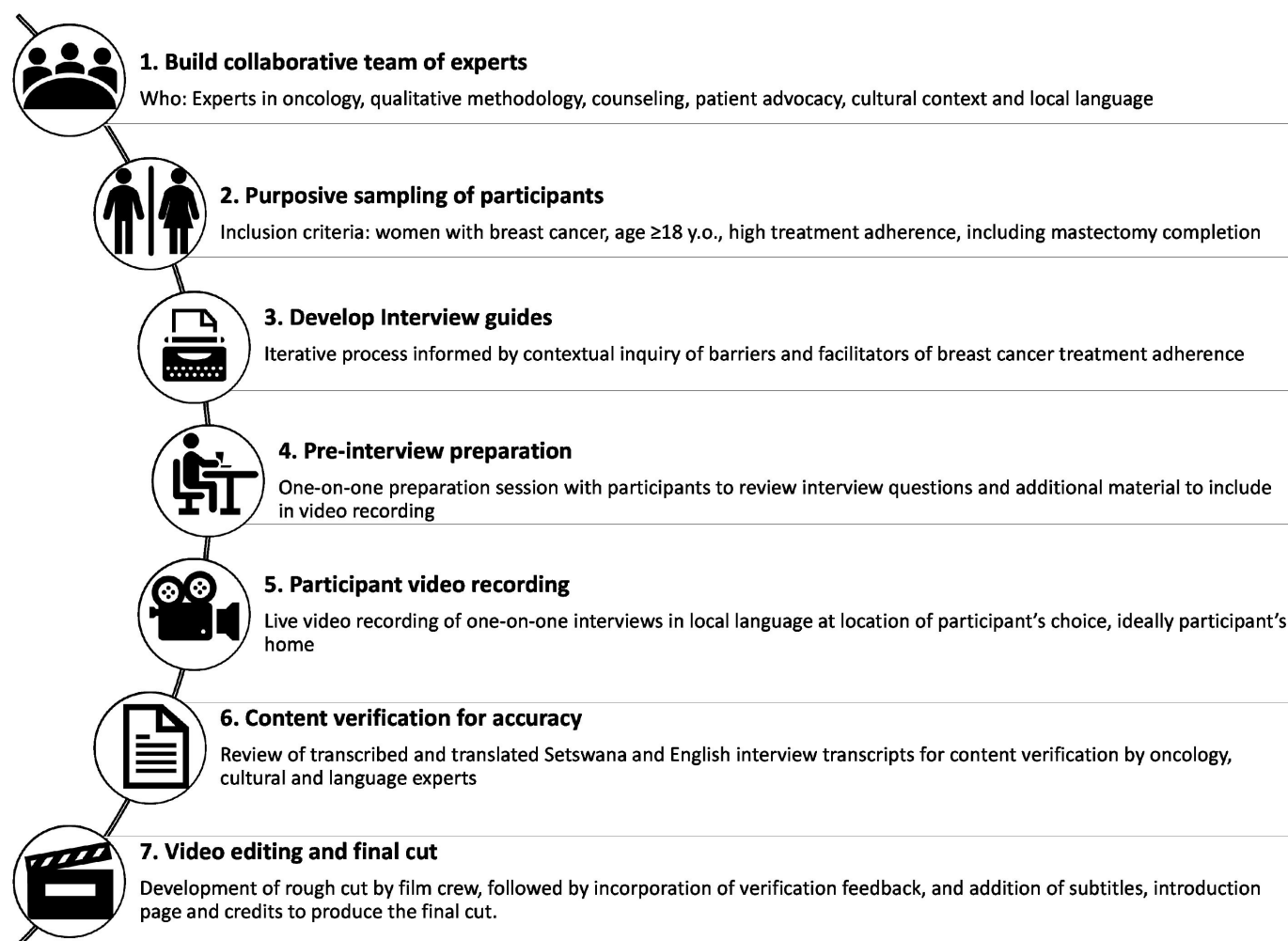


Figure 1 Overview of stepwise development of breast cancer survivor video narratives.

Table 1 Summary of participant clinical and demographic characteristics

Demographic characteristics	N=8 (%)
Age	
30–39	2 (25)
40–49	3 (37.5)
50–59	2 (25)
60–69	1 (12.5)
Breast cancer stage	
2	2 (25)
3	6 (75)
HIV status	
Positive	3 (37.5)
Negative	5 (62.5)
Place of residence	
Kanye	2 (25)
Lobatse	1 (12.5)
Molepolole	2 (25)
Mogoditshane	2 (25)
Tsolamosese	1 (12.5)
Marital status	
Single	5 (62.5)
Married	3 (37.5)
Employment status	
Employed/self-employed	6 (75)
Unemployed	2 (25)

assistant administered a face-to-face questionnaire survey to consenting participants after watching at least one of the videos. The survey included a 13-item assessment using a Likert scale from 1 to 5 with the following response options: 1=strongly agree, 2=agree, 3=neither agree nor disagree, 4=disagree, 5=strongly disagree. The survey was adapted from a previously published study by Pérez *et al*, which assessed similar outcomes evaluated in this study.⁴¹ The results of the usability and acceptability responses were summarised using proportions of responding participants.

Patient and public involvement

A community advisory board including patient advocates and a breast cancer survivor were involved in synthesising qualitative study data that informed the design and prioritisation of patient needs in the pilot study design.

RESULTS

Survivor narrative video development

The results of the survivor narrative video development process are reported using a stepwise approach, summarised below and in [figure 1](#).

Step 1: build collaborative team of experts

The project leveraged the expertise of a multidisciplinary team of experts to develop the survivor narrative videos. The core team included an oncologist, a palliative care and counselling specialist, qualitative study methodology experts, Botswana research personnel who were bilingual in Setswana, a breast cancer patient advocate and a Botswana-based film crew. We ensured that more than half of the project team members were from Botswana and fluent in Setswana.

Step 2: purposive sampling of participants

Participants were purposively sampled to represent patients with breast cancer, including those with HIV, with high adherence to cancer-directed treatment. For this pilot, we included women with early stage breast cancer who were treated with curative intent. Patients who met inclusion criteria were provided with information about the study procedures and consenting patients were enrolled. The informed consent included clear information on the target audience for this resulting video, that is, for research purposes only. We included participant compensation for the pre-interview session and hourly compensation rates for the duration of the video shooting session. The pilot included eight women. Participant characteristics are summarised in [table 1](#).

Step 3: develop interview guides

A semi-structured interview guide was developed using open-ended questions informed by a recently completed contextual inquiry of barriers and facilitators of breast cancer treatment in Botswana.²⁰ Questions were developed to address specific knowledge gaps, fears and myths and other barriers reported in the study.²⁰ [Table 2](#) lists examples of barriers, questions and participants answers. The initial interview guide was developed in English, then translated to Setswana and pilot tested with three patients to ensure the intended meaning of the questions were retained after translation.

Step 4: preinterview preparation with participants

A pre-interview preparation session was scheduled with each patient at the patient's home. This usually occurred a few days before the actual interview and filming day. The research assistant met with the patient to review the interview guide and make sure the patient was comfortable answering all the questions. It was also an opportunity for the patient and research assistant to familiarise themselves with each other. The meeting was also used as an opportunity to inquire if participants wanted to include additional individuals, materials, for example, photographs or locations, for example, participant's farm or a workplace, in the video. These sessions lasted 1–2 hours on average.

Step 5: participant video recording

The research assistant and film crew travelled to the patient's home on the scheduled day and time of the recording. The research assistant interviewed the patient

Table 2 Examples of patient-level treatment barriers and questions and responses addressing this in the survivor narrative videos

Barrier	Interview question	Participant response (English translation)
Breast cancer stigma—shame/fear associated with mastectomy	What were your concerns when you were faced with the decision to have a mastectomy?	As a woman it is not an easy decision to make, to undergo breast removal surgery. As women we believe that breasts make us be human, be beautiful and be sexy. How our partners will react—for both married and unmarried women. Is the partner going to feel the same way he used to feel and if we are going to be sexy as before. Women ask themselves such questions. For a woman to undergo the surgery is a choice again—between life and their breast. When diagnosed with cancer and being told you are to be operated on, one must condition themselves to let go of the breast if it contains something that threatens their health. Doctors will never recommend something that is not important for curing your cancer. I have lost people that I personally know because of this issue, if you believe that indeed the cancer will go with the breast, let go of the breast.
	How do you think removing your breast affected your view of your sexuality and ability to nurture as a woman in Tswana culture?	My views on that one is that it is always about asking the right person, who will understand you and where you are coming from. That person will love you regardless of one breast. When it comes to having kids we have women who underwent surgery, chemotherapy and the conceived with just one breast and still breastfed. It will not really affect anything but is dependent on the partner—the right person.
Parallel health systems for cancer and HIV	How do you manage appointments for both your breast cancer and HIV?	Having a relationship with service providers is very important. There are times I get home and realise the follow-up are almost on different dates, I call them so they can be scheduled to be on the same day as both of them are at Marina-Baylor clinic and Oncology clinic. Both service providers know me due to frequenting the health facilities so that also makes it easier on my side. I communicate well in advance so they can schedule, I don't just show up at either clinic without prior communication. I am usually done before lunch.
Limited knowledge of intent of chemotherapy and anticipated toxicity	What were the challenges you had during chemotherapy treatment?	In most cases I experienced fatigue where my body needed to rest and after 2–3 days I will be fine and back on track with no body pains. I'm one that didn't react badly to chemo. Other patients I met during my check-ups complained about severe effects such as vomiting. For me, I vomited after the first and the second cycle. Thereafter nothing bothered me.

using the semi-structured interview guide. The film crew directed the recording session. The assistant took notes of any challenges and patient feedback, and provided all updates to the rest of the team. All interviews were audio-recorded and transcribed in Setswana and translated to English for content verification. The approximate duration of the video recording session, including crew set up and breakdown, the interview portion and postsession debriefing, was 4 hours.

Step 6: content verification for accuracy

The research team analysed both Setswana and English transcripts for content verification. Impactful statements were highlighted and forwarded to the video team, and inaccurate clinical statements were omitted. This review step was conducted iteratively by at least two members of the team, which included at least one Setswana speaker and cultural expert to ensure cultural sensitivity and authenticity while ensuring clinical accuracy.

Step 7: video editing and final cut

The video crew incorporated transcript notes and provided the first assembly and rough cut of the video. These were approximately 20 minutes long. The project team reviewed the first cut and provided detailed feedback. All videos, except for one, were in Setswana with English subtitles, which were verified for accuracy. The final cut of the video was sent to the research team and uploaded onto tablets for patient use. The final narrative video interventions contained participants being

recorded telling their breast cancer stories, in response to prompts from the research assistant. It also included participant voice-over narration over fillers included in the video. For instance, a participant referring to her Christian beliefs may have a voice-over narration focusing on a picture of her with a church community. The videos varied in length and were approximately 15–20 min long. Additional slides and audio with introductory remarks and credits were developed and added to each video. The introductory remarks included a brief statement in Setswana describing the burden of breast cancer in Botswana and available resources for diagnosis and treatment. The credits included acknowledgement of study participants, funding information, contact information for the research team and additional resources for breast cancer treatment support. We ensured acceptable video quality by hiring a professional video crew that had extensive experience producing high-quality health promotion and advertisement videos for international organisations, including United Nations-related agencies. The quality of the final videos was reviewed on the tablet to ensure the study team was satisfied with the final video resolution quality.

Acceptability and usability

A total of 106 participants consented and enrolled between October 2021 and May 2022 to watch at least one survivor narrative video uploaded on a tablet. All eight videos were viewed by at least one participant.

Table 3 Demographic and clinical characteristics of participants who assessed usability and acceptability of survivor video narratives

No of patients (sample size)	N=106 (%)
Age	
<50	53 (50.0)
≥50	53 (50.0)
Stage	
Stage I	3 (2.8)
Stage II	28 (26.4)
Stage III	58 (54.7)
Stage IV	9 (8.5)
Missing	8 (7.5)
HIV status	
Positive	36 (34.0)
Negative	70 (66.0)
Highest education level attained	
Tertiary	24 (22.6)
Senior secondary	18 (17.0)
Junior secondary	29 (27.4)
Primary	27 (25.5)
None	8 (7.5)
Location	
Gaborone and surrounding areas	28 (26.4)
Kanye	3 (2.8)
Kweneng	30 (28.3)
Kgatleng	7 (6.6)
Kgalagadi	7 (6.6)
Francistown	1 (0.9)
Serowe	2 (1.9)
Mahalapye	2 (1.9)
Marital status	
Married/partnered	37 (35.0)
Single	53 (50.0)
Divorced	4 (3.8)
Widowed	12 (11.3)

Each participant was not required to watch all eight videos. Participant characteristics are summarised in [table 3](#). Of 106 participants, 98 completed the usability and acceptability questionnaire survey. The results are presented in [figure 2](#). Overall, the vast majority of participants favourably rated the survivor narrative videos. Almost all participants strongly agreed/or agreed to the following statements: ‘the video stories were presented in a way that was easy for me to understand’ (99%), ‘it was easy to understand the storytellers’ (98%), ‘would recommend to other survivors’ (92%) and ‘wish there were more videos’ (94%).

DISCUSSION

This study is one of few studies to describe a theory-based framework that leverages contextual barriers that influence breast cancer treatment adherence, to design survivor narrative video interventions for breast cancer treatment in SSA. Our results show that this intervention that leveraged peer breast cancer survivors within the country context has very high acceptability and usability. Previous studies have focused primarily on peer-led interventions to increase cervical cancer screening uptake and breast cancer early detection in SSA.^{42 43} However, the primary focus of this peer intervention was to develop videos to promote treatment adherence in patients with a confirmed diagnosis of breast cancer who are planning to or have initiated breast cancer-directed treatment. Our focus on this portion of the cancer care continuum ensures that programmes to promote breast cancer screening uptake and early detection are coupled with interventions and strategies to ensure high-quality care delivery for patients who are eventually diagnosed with breast cancer. Addressing this portion of the cancer care continuum is critical in addressing recently released key performance index by the WHO Global Breast Cancer Initiative, which recommends receipt of at least 80% of multimodality breast cancer-directed therapy.⁴⁴ Additionally, our prior data from Botswana indicates that the majority of patients received low-dose intensity of therapy, which is associated with poor survival outcomes and underscores the importance of addressing the barriers that influence the adherence to guideline-concordant breast cancer therapy in this context.

Importantly by addressing contextual factors and using credible peer breast cancer survivors, the narratives provided by the survivors addressed subjective norms, which refer to a person’s beliefs about whether peers and people of importance to the person think they should engage in the behaviour.^{45–47} Subjective norms also consider perceived social norms which refer to customary codes of people in a group or people or larger cultural context.^{26 48–52} Therefore, using this approach allowed us to address fears and myths framed by the specific social and cultural context as a pathway for promoting understanding and normalising the desirable behaviour of initiating breast cancer-directed therapy and adhering to guideline-concordant care plans.⁴⁶ The use of credible sources, presented in a comprehensible language to participants in the study, likely explains the high acceptability of these narrative videos in the Botswana context.

Additionally, the survivor video narratives leveraged the following intervention functions and techniques from the ‘capability’, ‘opportunity’, ‘motivation’ and ‘behaviour’/behavioural change technique (BCT) framework: modelling (provide an example for people to aspire to or emulate), disease education, (increase knowledge or understanding) and persuasion (use communication to induce positive or negative feeling to stimulate action).^{34 53} The BCTs used for the intervention functions were credible source, demonstration of the behaviour

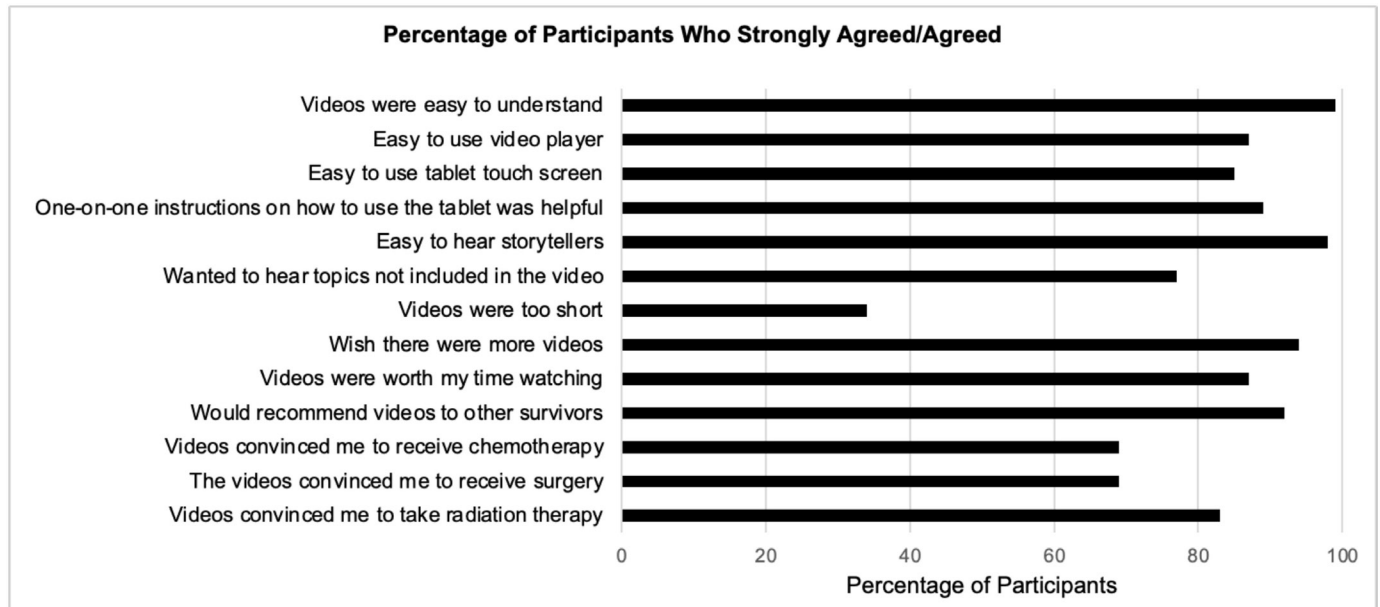


Figure 2 Proportions of participants who strongly agreed/agreed with specific acceptability and usability assessments.

and information about social, health and emotional consequences, which may be leveraged in future studies to promote specific behaviours and improve breast cancer outcomes. Similar approaches have been used to address cervical cancer in underserved populations in the USA: The Tamale lesson used a narrative health communication intervention for Mexican-American women to promote cervical cancer screening, they reported an increase in cervical cancer screening and reduction in baseline disparities in their cohort enrolled in this pilot study.²⁴ These results suggest that the use of the survivor narrative videos in the Botswana context has the potential to increase adherence to guideline-concordant therapy, however, will need to be tested formally in a randomised study assessing the impact of the videos on mediators and therapy delivery outcomes.

Previously published data in the SSA region have demonstrated the effectiveness of different peer-led interventions for breast and cervical cancer screening: In Nigeria, an intervention using more than 100 peer female adolescents to deliver educational content was effective in promoting knowledge about breast cancer and self-breast examination.⁵⁴ Another study in Tanzania using community healthcare workers (CHWs) as peer navigators increased the uptake of cervical cancer screening among urban women in Tanzania by increasing knowledge and intention.⁴² The training manual for the CHWs in the study was informed by supporting evidence from the literature. In contrast, we developed the intervention primarily relying on non-fictional storytelling of culturally and language-matched participants who were perceived as credible sources of information by our target population. Additionally, our approach was strengthened by the development of semi-structured interview guides informed by contextual factors associated with cancer care delivery in Botswana. Using the video platform

also allowed us to achieve more widespread dissemination with a small number of breast cancer survivors, as opposed to one-to-one in-person matching of survivors to participants.

The study has several strengths: The intervention design was informed by a theory-based framework for promoting positive behavioural intentions and actions. The TPB has been shown in numerous studies to explain behaviour and promote positive screening behaviour. Additionally, this study was complemented by a qualitative study that had previously identified barriers and facilitators that influence behaviour, and we leveraged this information to specifically address knowledge, social norms and other modifiable factors that influence adherence to breast cancer treatment in Botswana. We also provided a step-wise report of the development process that can be easily replicated for other disease areas and country contexts. The use of a multicultural and multidisciplinary expert team ensured that the videos were produced with close attention to cultural sensitivity and relevance while maintaining content accuracy. Given the predominance of breast cancer stigma, using actual survivor non-fictional stories was important for promoting credibility. Studying women who modelled the behaviour we were trying to promote was an added strength of the study.

In spite of the strengths of this approach, this study has few limitations. The small sample size of this pilot limits generalisability of this study to all patients with breast cancer in Botswana or patients with other cancer types being treated in this setting. However, [table 1](#) shows broad age and geographical distributions of the patients enrolled in this study. We also included patients living with HIV to ensure that insights from the narrative content also addressed specific issues related to breast cancer treatment among people living with HIV, for example, intersectional stigma. There was also the potential for



selection bias by only selecting patients with high treatment adherence, as these participant interviews may yield socially desirable answers. However, the interview guide was reviewed multiple times by qualitative experts to ensure authenticity of the narrative content. Additionally, this intervention only addressed some factors associated with adherence and will have to be used in a multicomponent intervention bundle to promote breast cancer treatment adherence. Finally, although this approach is supported by the TPB theoretical framework, the effectiveness of this intervention will have to be tested in a trial to assess its effectiveness on the mediators of treatment adherence. A recent review noted that the most effective educational strategies for promoting cancer screening used peer or community health educators.^{55 56} We, therefore, anticipate that this intervention will augment existing efforts to support breast cancer treatment for patients diagnosed in Botswana by using peer survivors as peer educators.

In summary, this study conducted by a multidisciplinary team of local and US-based investigators, used a validated theoretical framework that leveraged contextual patient barriers and facilitators in Botswana to design eight survivor narrative videos intended to promote breast cancer treatment adherence by leveraging modifiable factors identified in a qualitative study in Botswana. Ninety-eight patients with breast cancer provided very favourable ratings of usability and acceptability of this intervention. This strategy can be applied to other disease areas and other countries to create tailored content for improving care delivery among populations that suffer health disparities. Ultimately, it will be critical to use the videos with newly diagnosed patients with breast cancer and to assess whether their use results in higher rates of treatment adherence, and improved quality of life and survival outcomes.

Author affiliations

¹Department of Medicine (Hematology - Oncology Division), University of Pennsylvania, Philadelphia, Pennsylvania, USA

²Botswana University of Pennsylvania Partnership, Gaborone, Botswana

³University of Botswana, Gaborone, Botswana

⁴Princess Marina Hospital, Gaborone, Botswana

⁵Department of Family Medicine and Community Health, University of Pennsylvania, Philadelphia, Pennsylvania, USA

Twitter Yehoda M Martei @ymartei

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Contributors YMM and BEG conceptualised the study design. YMM drafted the manuscript. NN and GG contributed to data collection. LM, NN, KK, DIS, GG, BB, TS, LNS, FB and BEG contributed to the design of the work and interpretation of the data. All authors revised the manuscript critically for important intellectual content and approved the final version of the manuscript to be published. YMM is responsible for the overall content as guarantor.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants and was approved by Botswana Ministry of Health HRDC (Protocol #: UBR/RES/IRB/BIO/184; HPDME:13/18/1) University of Pennsylvania, IRB Protocol#: 842894. Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

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ORCID iD

Yehoda M Martei <http://orcid.org/0000-0002-5631-1567>

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