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Acceptability of a resource-oriented approach (DIALOG+) among patients with chronic physical illnesses in primary health care-Uganda, a qualitative study

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Abstract

Background Chronic physical illnesses are often associated with significant psychological distress and chronic mental illnesses are often co-morbid with physical illnesses. Efforts to integrate mental health into primary health care in Uganda are underway. However, there are enormous logistical challenges. Effective resource-oriented and evidence-based interventions such as DIALOG + have the potential to improve treatment outcomes for patients with chronic conditions. We aimed to assess the acceptability of DIALOG + among patients with chronic physical illnesses in Uganda.

Methods This was a qualitative aspect of a mixed methods exploratory non-controlled study conducted in chronic physical illness out-patient clinics at two hospitals in Uganda. We conducted fifteen in-depth interviews with patients, ten key informant interviews with clinicians, and four focus group discussions with patients. Thematic data analysis was done through an iterative process.

Results The results support the acceptability of the intervention as evidenced by willingness to participate, better relationships between patients and clinicians, and improved control of both physical illnesses and psychological distress. Participants also talked about ways in which the implementation of DIALOG + could be improved.

Conclusion DIALOG + is acceptable among patients with chronic physical illness in primary health care settings in Uganda.

Keywords DIALOG+, Chronic physical illnesses, Feasibility, Acceptability, Mental illness

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Introduction

Mental health problems are common globally with about 25% of the population developing one or more mental illnesses in their lifetime [1]. In Uganda, it is estimated that about 30% of the population suffer from some degree of mental illness during their life time [2]. Research has shown that chronic physical illnesses such as hypertension, cardiovascular disease, HIV, and cancer, are often associated with significant psychological distress, hence co-morbid with chronic mental illnesses [3]. Both of these factors call for integrating care for mental and physical illnesses within primary health care (PHC) settings [4] and efforts to integrate mental health into PHC in Uganda are underway [5]. However, there are enormous challenges like inadequate staff, limited funds, lack of skilled personnel, and high patient load [6]. A study done in Northern Uganda showed that PHC providers can be trained to provide mental health services to the community members [7]. It may, therefore, be helpful to train service providers in use of resource-oriented treatment options like DIALOG+. DIALOG+makes use of existing personal and social resources to improve the quality of life of patients with illness-related psychological distress. The use of evidence-based resource-oriented approaches like DIALOG+, could result in tremendous strides in improving the care for patients with comorbid mental and physical illnesses.

Previous studies done in our setting among patients with severe mental illness have found that DIALOG+is a brief non-expensive and flexible psycho-social intervention that structures the clinical interaction between clinicians and patients [8]. DIALOG+intervention has been described in detail in previous publications [9, 10]. It consists of a patient-centred assessment whereby the healthcare professional invites the patient to rate their satisfaction with eight different life domains (mental health, physical health, job situation, accommodation, leisure activities, friendships, relationship with family/partner, personal safety) and three treatment aspects (medication, practical help, meetings with professionals). This is then followed by a four-step solution-focused conversation to identify the patient's resources and develop concrete actions to address the patient's concerns.

Integration of mental health into PHC has been adopted in Uganda as a means of providing mental health care to the general population [11]. Consequently, we targeted common non-communicable disorders such as diabetes, cardiovascular disease, cancer and hypertension, as these conditions negatively impact on quality of life and are highly comorbid with mental distress [12]. Applying an effective evidence-based and resource-oriented intervention such as DIALOG+therefore has the potential to improve outcomes for individuals with chronic conditions as well as save valuable resources for healthcare systems within Low- and Middle-Income Countries (LMICs). However, no studies have been done in PHC for the use of DIALOG+in patients with comorbidity of mental and physical illness within the Ugandan setting.

In this study we set out to assess the acceptability of DIALOG+among patients with chronic physical illnesses in Uganda. The study compliments findings from an exploratory non-controlled study conducted in 3 countries of Uganda, Bosnia and Herzegovina, Colombia. In the exploratory study, results indicated that DIALOG+was a feasible intervention in primary care with over 92% intervention completion rate. The findings also indicated improvement in the quality of life of patients with chronic physical illness and a reduction in anxiety and depression symptoms [9, 10].

Methods

Study design

We utilised qualitative study design nested in an exploratory non-controlled mixed methods study. The exploratory mixed methods study aimed to improve the quality of life and mental distress in patients with long-term physical conditions [9, 10].

Study setting

The study was carried out at the medical outpatient clinics of Masaka and Mityana Hospitals in Uganda. Masaka Regional Referral Hospital was started in 1927 as a treatment centre for World War veterans and was elevated to regional referral status in 1996. The hospital has a 330-bed capacity with an annual admission of 23,456 patients. It has outpatient clinics for chronic illnesses like hypertension, diabetes and renal disease. These clinics are run by medical officers with the help of nurses.

Mityana Hospital is a district hospital that was opened in 1940 and has a bed capacity of 100 beds. There is an operating theatre and the wards are split into Female, Male, Obstetrics, and Paediatrics. Medical officers run the diabetes and hypertension clinic.

Study participants

A total of 60 patients with chronic physical illnesses (hypertension and diabetes) and 10 clinicians working in the diabetes and hypertension outpatient clinics were recruited from the 2 study sites of Masaka and Mityana hospitals (30 patients and 5 clinicians from each study site) for the exploratory study.

DIALOG+intervention

DIALOG+is an App based patient-centered assessment in which the patient rates their satisfaction with the eleven life domains (mental health, physical health, job situation, accommodation, leisure activities, friendships,

relationship with family/partner, personal safety, medication, practical help, meetings with professionals). This is followed by a four-step solution-focused approach to identify the patient's resources and develop solutions to address the patient's concerns.

Each session begins with the patient using the tablet to rate their satisfaction on a scale from 1 ("totally dissatisfied") to 7 ("totally satisfied"), and followed by a question on whether the patient needs additional help with that domain. The ratings are summarised on the tablet screen allowing for comparisons with ratings from previous meetings. The patient decides a maximum of three domains they want to discuss in the current meeting with their clinician.

The selected domain is then discussed using the four-step solution-focused approach to identify the patient's existing resources that can be used to address the concerns raised. The four steps are: Understanding (Why is the patient dissatisfied? What nevertheless went well?); Looking Forward (What is the best case scenario? What is the smallest step forward?); Exploring Options (What can the patient, the clinician or others do?); and finally Agreeing on Actions (e.g. homework and referrals). The session is concluded with an agreement on actions to be taken until the next meeting. These actions are reviewed at the beginning of the next meeting.

In the exploratory study, each of the 10 clinicians had 6 patients whom they reviewed monthly for 3 months using the DIALOG+App to review their satisfaction on the 11 domains mentioned above. At the end of the three months, some of the participants and all the clinicians were invited to participate in the qualitative interviews. There was no relationship between the researchers and the study participants before the commencement of the study. The participants had no knowledge of the interviewers. Except for the interviewers being mental health professionals (diploma holders), they had no interests or bias in the research topic.

Study procedure

Participants for the qualitative interviews were selected basing on a pre-determined inclusion criteria which was discussed with the qualitative expert (MWW) on the team. The participants selected for the qualitative interviews reported having benefited from the intervention in terms of improved physical health symptoms, and empowerment for self-reliance. We also involved participants who were enthusiastic about the DIALOG+session and those who attended all three sessions. Participants who had difficulty attending all sessions, those who came late for the sessions, and those who complained a lot about the sessions were also purposively selected according to the inclusion criteria. The inclusion criteria also considered a mix of gender and age among the participants. These participants were purposively selected through face-to-face interaction to provide maximum variation of experience, and written informed consent was obtained from them for participation in the qualitative interviews. All participants approached for the qualitative interviews agreed to participate. Interview guides were drafted by the authors and reviewed by MWW. These were then pilot tested at each of the sites and edited accordingly.

We collected qualitative data from clinicians and patients who participated in the DIALOG+intervention study at the end of the intervention at 3 months. All 10 clinicians were included in the key informant interviews (KII). The total number of participants for the qualitative interviews was determined at the point when there was saturation in the data. At 15 IDIs and 4 FGDs, no new data was being generated from the participants. We conducted two focus group discussions (FGDs) on patient participants at each of the study sites. At each site we had one FGD for males and one FGD for females making a total of 4 FGDs of 6–8 participants each. We also collected data using in-depth interviews (IDIs) on 15 patient participants (7 from Mityana site and 8 from Masaka site). Qualitative data was collected at the respective hospitals by research assistants who were trained and supervised by a qualitative data expert (MWW). The research assistants were two male psychiatric clinical officers (Diploma holders in psychiatry) who had worked with the team on a previous DIALOG+study in patients with severe mental illness where they also conducted qualitative data collection after being trained by experts. Only the researchers and participants were present for the interviews. Each interview was audio recorded, transcribed then translated into English (because they were conducted in Luganda which is the commonly spoken local language in the region) and supplemented by notes taken during the interviews. The IDIs lasted between 45 minutes and 1 hourwhile the FGDs lasted between 1 hour and 1.5 hour. The transcripts were proofread and compared to the audio recordings by the research assistants and also checked for accuracy by the study coordinator but they were never returned to the participants. The audio and the transcripts were kept in locked cabins and password-protected computer only accessible to the study team. After the transcription and checking, the audio recordings of the interviews were deleted. Details of the methods are explained in the study protocol and the exploratory study paper published elsewhere in the BMC pilot and feasibility studies and BMC primary care as referenced in references 9 and 10 [9, 10].

Data analysis

Qualitative data was analysed using thematic analysis following the guidance of Miles & Huberman [13] and was

Table 1 A matrix for the participant IDI from Mityana

Patient: 03-02-006 -	Patient: 03-20-010 -	Patient: 03-02-001	Patient: 03-02-012	Patient: 03-02-024 -	Patient: 03-02-027	Patient 03-02-030
Overall what was you experience with dialog+? The experience was a good generally	***Overall what was you experience with dialog+?***. . It did not treat me badly at all. . it was good because even the counselling was good.	**Over*all this approach of dialog+, what can you say about it?*** It. . has not been bad; I find I have benefited. . I started up a stall selling tomatoes, onions things like foods stuff from the money I got	***Over all what has been your experience with dialog + interventions?***. . well my experience was that I realized a concern for my health by the interviewer according to the guidance she was using and a concern she had over that issue. I felt someone is caring for my life, in the improvement of my life. . .	***The dialog + program where you talk to your doctor using the computer, how have you found it?***. . there isn't any problem. . I have found with it because what I am asked, I answer and without being rushed. .	***What was your experience with dialog + intervention?***At first I was not sure of myself and I feared. Later on, I developed confidence in the way the questionnaires were put across. They were helping me to prepare myself to improve on my medication	***How did you find dialog+?***I find no problem. . I am not like the way I was before, back then I would get a problem and worry a lot then my pressure and diabetes would rise. . the doctor has been counselling me … I feel better,. . .

conducted using ATLAS.ti software. All interviews and FGDs were audio-recorded, transcribed (supplemented by notes taken during the interviews), and then translated into English. The research assistants removed all identifying information from the transcripts, including any references to the names of patients, clinicians, and local services.

An inductive approach and thematic content analysis [14] was used to provide new insights and richer understanding of the data without using preconceived categories. Two members of the research team first familiarised themselves with the transcripts. Open coding was used (making notes and headings in the text to describe the content). Similar codes were grouped under themes, and the identified themes and sub-themes were then checked and refined. Below is an example of a matrix for the participant IDI from Mityana as indicated in Table 1.

Findings

The qualitative interviews comprised of 40 patient participants categorized as follows; 2 females only FGDs each with 6 participants; 2 males only FGDs with 6 and 7 participants. 10 females in IDIs and 5 males in IDIs.

The chronic illnesses diagnoses of the patient participants were as follows; 12 with hypertension only, 14 with both hypertension and diabetes and 14 with diabetes only.

The 4 males and 6 females KII were of clinicians who comprised of nurses, clinical officer (diploma holders of clinical medicine) and medical officers.

Two main themes were identified in the data. The first related to the acceptability of DIALOG+and the second related to how the implementation of DIALOG+could be improved.

Theme 1: acceptability of DIALOG+

Acceptability was defined as the extent to which people delivering or receiving a healthcare intervention considered it appropriate and this was measured through willingness to participate, ability to complete treatment, convenience and effectiveness in addressing the clinical problems [15, 16].

Table 2 Session attendance by patients

Site	Session 1	Session 2	Session 3
Masaka	30	29	30
Mityana	30	30	25
Total	60	59	55

The analysis revealed 7 main subthemes speaking to the overall theme of acceptability. These subthemes are elaborated upon below;

Subtheme: willingness to participate and the intervention was interesting

Both clinicians and patients were willing to participate in the DIALOG+intervention and they found it interesting. Table 2 below shows the session attendance for each of the 3 DIALOG+sessions by the patients.

Both patients and clinicians were willing to attend the DIALOG+sessions. Clinicians reported that their *". . patients were not having a biased mind. . they accepted to participate. . ."*

A female nurse from Mityana reported that she had an interest in the DIALOG+App and was willing to navigate the challenges of the App and administer it. Another clinician from Masaka noted that he enjoyed the DIALOG+experience as echoed in the quote below;

> *". . I enjoyed the experience; I did a lot of clinical work while doing less of the writing and the tedious work and I think from that its good start. . ."**(31-year old Male medical officer, ID 03-01-003 Masaka)*.

Subtheme: trust and better relationships built between clinicians and patients

Patients and clinicians reported that there was better relationship in the treatment duo with patients gaining more trust in the clinicians. Patients reported

better insight into their chronic illness and had improved adherence to their medication. Likewise, the clinicians reported a better understanding of their patients with an improved clinical engagement as evidenced by the fact that the patients were freer and more open to discussion with the clinicians. Male patients from the FGD held in Mityana attest to this in the quote below.

> *". . the way DIALOG + was organized. . I think that we had never had this interaction of the patient and the clinician interact like this. . there had been a gap that the clinicians were the ones who went to school and they would think for us. . but when we sat with clinicians,. . we became one person and we got to know each other's importance. . ."**(Male patients FGD, Mityana)**.*

Subtheme: psycho-social support given was helpful

The participates noted that through DIALOG + sessions, they received psychosocial support which enabled them to improve their physical and mental wellbeing. Females from an FGD in Masaka reported that the counselling received from clinicians during the DIALOG + sessions had helped reduce their anxiety about their health. The male FGD in Masaka echoed these thoughts as elaborated upon below.

> *". . we saw that the counseling we got was enough. . our clinicians knew how to educate us well and they were good advisors. . the questions they used to ask us, the way they treated us; we would also love whatever we would discuss and put it into our minds. . ."**(Male patients FGD, Masaka)**.*

Subtheme: the DIALOG + intervention was comprehensive and had good outcomes

Patients found that the DIALOG + intervention provided more than medication for their illness. It tackled both the physical and psychological aspects of their illness making it more comprehensive. They also reported that the intervention facilitated an in-depth discussion between patients and clinicians. The intervention helped with their broader social issues like family relations and living situations. A 50-year-old female nurse from Mityana reported that she was able to know more about her patients than just their medical illnesses. She was able to discuss with her patients at length, get to know them more, and also know their social challenges. She also observed that the patients reviewed with DIALOG + tended to improve more than her other patients with whom she did not have comprehensive discussions as with the DIALOG+. Males from an FGD in Mityana revealed that talking with the clinicians felt like getting medicine and they were able to do physical exercise as part of their action points from the DIALOG + sessions which helped them feel good.

> *"...in DIALOG+. . I came to know that family involvement plays a big role. . family, friends, my living conditions. . those things. . what I initially thought about was only tablets. . but from DIALOG+, I came to understand that there are more other parties that play a big roll towards my health and being better."**(36-year-old Female patient ID 03-02-006, Mityana)**.*

Subtheme: better control of the physical illness and psychological distress symptoms

Many participants reported that their physical illness improved with better control of their blood sugar and blood pressure, for example. They also reported improvement in the psychological distress. A 58-year-old male clinical officer from Masaka noted that DIALOG + taught him to look beyond the physical illness of the patients since some of them have underlying psychosocial issues that need to first be addressed for better physical health. Patients from Mityana FGD for females reported this improvement in the quote below.

> *". . DIALOG + gave us peace because way back we were badly off, we would be worried, they. . gave us medicine and the sickness would not go away or reduce. . sugar levels used to rise every time. . blood pressure would rise but ever since we got this intervention, we have had peace and even sugar levels started going down. . ."**(Female patients FGD, Mityana)**.*

Subtheme: open and in-depth discussion with the clinicians

Participants reported that DIALOG + enabled them to have an open and deep discussion with the clinicians about the stressors in their lives and this improved their physical health as well. Seeing the same clinician at the reviews also reinforced the openness of the discussion for the patients. A 55-year-old female patient from Mityana reported that seeing the same clinician on all their reviews during DIALOG + enabled her to open up to the clinician about her difficulties. A male patient in Mityana had more to discuss about this openness as noted in the quote here.

> *"The experience is openness because you see someone is concerned and you speak your mind very freely. I think that is a big yard stick in health improvement..."**(65-year-old Male patient, ID 03-02-012, Mityana)**.*

Subtheme: the intervention enabled participants to be self-reliant

Patients reported that they had become self-reliant as a result of the DIALOG+sessions. They were able to engage in income generating activities and many have used income from these activities to buy their medications when the hospitals do not provide enough medicine. A 58-year-old clinical officer from Masaka testified that many patients were helped *". . to exploit their potential as far as improving their livelihood is concerned because patients to some extent would be having some potential or some capacity of carrying out some way of living and all I did was to help them see the solution. . ."*. Female patients from an FGD conducted in Mityana had this to say;

> *". . we talked with the clinician. . he advised us to look for something else because we were not going to be asking for drugs. . when we went back, we thought about it and we started stitching bags, shirts and since then we are expecting it but even if I come and we don't get drugs, it doesn't bother us. Some of us can get 30,000/= and buy drugs, it helped us that our blood pressure went down now. . ."**(Female patients FGD, Mityana)*.

Theme 2: how well DIALOG+can be improved or implemented

DIALOG+intervention being an App based interaction between a clinician and a patient requires some level of training for the clinicians to master its delivery. However, it also requires a lot of time hence a need for more human resource which is limited at these primary care centres with high patient numbers. Participants proposed some improvements in the delivery of the intervention including training more clinicians in its use, decentralizing it to lower-level health facilities. The participants also suggested modifications in the 11 domains of the App in terms of their arrangement and also introducing a domain on complications of physical illnesses.

Subtheme: involvement of more clinicians in DIALOG+

Participants recommended that there should be more clinicians and different medical cadres to provide the DIALOG+intervention due to high patient numbers. Some clinicians suggested that every clinician who interacts with patients should be trained to use DIALOG+. Participants from the male FGD in Mityana echoed these suggestions in the quote below. *". . we need more personnel staff because this intervention needs the workers to increase in number because the patients are also many, could be from top to bottom so that we don't be there waiting for doctor so and so because he is the one who knows about it. ."**(Male patients FGD, Mityana)*.

Subtheme: additional of a domain on complications of physical illnesses

Because of the complications of physical illness, patients reported the need to add a domain to the already existing 11 domains in the DIALOG+App. They suggested that the new domain would directly tackle these complications especially sexual function/dysfunction and issues on feeding/ nutrition.

> *". . all in all, that question is technical but the truth is that the diabetes patients, the time we have taken seeing the patients, the diabetes patients get the impotence problem most especially the men; especially those who have aged but this DIALOG + treatment, we didn't tackle that much. . we didn't ask the patients about their marital life. . but they need to include it because it is very significant, especially for the diabetic patients. . .it needs to be tackled because people sometimes reach an extent of using Viagra and it brings issues with a person's body, you include it. . ."**(Male patients FGD, Mityana)*.

Subtheme: implementation of DIALOG + at lower-level health facilities

Participants echoed the need to have DIALOG+administered at lower-level health facilities like the health centres and not only at the hospitals. Some also suggested the use of VHTs (village health teams) who are lay community workers since these operate within the villages and refer patients to the health centres so these would make the DIALOG+more readily available to the patients.

> *". . if this treatment is taken to the parish level, there are health centers there; it would reduce on the persons coming to the main hospital. . it is easier for them to utilize the clinician who is nearby and also the medicine could be there. . not coming to the main hospital. . . because it doesn't need fridge. . services should be nearby instead coming back often. . ."**(Male patients FGD, Mityana)*.

Subtheme: modifications to the DIALOG + app to ease administration

Participants proposed adjusting the order of the domains to ease administration of the DIALOG+and the also making changes in the scoring scale to a total of 10 instead of the score of 7. A 31-year-old male medical officer from Masaka submitted that *". . putting mental status as first alternative to ask was a bit stronger... we should have first asked about a bit friendly thing. . but to ask about mental status,. . . I thought it was bit sensitive; a bit strong. . some patients thought that we were insinuating that may be the are mad. . maybe they had some sort of psychosis. . ."*

*". . the ratings, were so academic saying 1–7, in our society, literacy is low and they do not easily understand the 1–10 or 1–7 scaling. . you could find someone telling you it is 50–50. . I think that scale should have been 1–10 not 1–7 for easy understanding. . ."**57-year-old Male nurse ID 03-01-005*, **Masaka)**

Discussion

This study set out to assess the acceptability of a resource-oriented approach (DIALOG+intervention) in patients with chronic physical conditions in the PHC setting in Uganda.

The acceptability of the DIALOG+intervention was demonstrated through the ease of its use, access to health care services and convenience of its use in PHC. Its acceptability speaks to the fact that the intervention can be integrated smoothly into existing healthcare practices.

Patients reported that the In-depth discussions with their clinicians during the DIALOG+sessions provided an opportunity for open discussion about their concerns hence improving the clinician / patient relationship. This improved clinician/ patient relationship contributed to improved patient satisfaction with increased engagement in their own health care. Moreover, the patients reported that the agreed-upon action points resulting from the discussions were easy to implement, further emphasizing that the intervention provided practical solutions for their problems.

The participants reported the positive impact of DIALOG+on both physical illnesses and psychological distress, further highlighting on its acceptability [17]. There was better control of the patients' physical conditions, suggesting that the intervention had potential to enhance physical disease management with better treatment outcomes [18]. The results also pointed to the fact that DIALOG+had a positive effect on psychological distress, which is particularly relevant given the high co-morbidity between chronic physical illnesses and mental health problems [19].

The results of this study speak to the acceptability of DIALOG+in patients with chronic physical illnesses in low resource setting and hence adds on the literature for integration of mental health services within the primary care setting. The participants reported improvement in treatment out comes for their physical illness [18].

The results from this study on the acceptability of DIALOG+provide further to earlier results from the exploratory non-controlled study on patients with chronic physical illness [10] and studies conducted in patients with severe mental illness about the efficacy, feasibility and acceptability of the intervention in low resource limited settings [8].

However, despite these positive findings on the acceptability of the intervention, it is key to put into consideration existing challenges in PHC settings like limited staff, technology inadequacies coupled with high patient numbers [2] which can hinder implementation and affect sustainability. More research needs to be conducted to address these challenges like training lay health workers to deliver these interventions.

However, one key limitation of the study is it specifically focused on patients with chronic physical conditions hence further research is needed to explore the acceptability of DIALOG+in other patient populations.

Conclusion

This study demonstrated that DIALOG+is an acceptable resource-oriented intervention among patients with chronic physical conditions within PHC settings in resource limited areas like Uganda. The intervention's ease of use, access to health services, in-depth discussions, and practical action points contribute to its acceptability. Integration of mental health into primary care through evidence-based interventions like DIALOG+could result in improved treatment outcomes for individuals with comorbid mental and physical illnesses.

Recommendation

Further fully powered randomized controlled studies which assess the effect and implementation barriers are needed to address the challenges associated with resource limitations and ensure the sustainability of such interventions in PHC settings.

Abbreviations

FGD	Focus Group Discussion
KII	Key Informant Interview
IDI	In-Depth Interview
PHC	Primary Health Care

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12875-024-02681-1.

Supplementary Material 1: Topic guide for clinicians' experiences (KII) with DIALOG+

Supplementary Material 2: Topic guides for FGDs

Supplementary Material 3: Topic guide for patients' experiences (IDI) with DIALOG+

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Author contributions
AR: Made significant contributions in the design of the study, data collection, analysis and interpretation of results. She was involved in the drafting and revision of the manuscript. NN: Contributed to the conceptualisation of study design, data collection, analysis and interpretation. She has also been pivotal in the drafting and revision of the manuscript. BOH: was involved in the design of the study and data collection. She played an exceptional role in interpretation of the data, drafting and revision of the manuscript. AD: Participated in the conceptualisation of the study design and data collection. He played a fundamental role in interpretation of the data, drafting and revision of the manuscript. LvF: Contributed to the study design, data analysis and interpretation of results. He was also involved in the drafting drafting and revision of the manuscript. MWW: Made exceptional contributions in data collection, analysis, interpretation of results. He has also made a fundamental role in the writing and revision of the manuscript. SM: Contributed to the design of the study and interpretation of results. He also made tremendous contributions in the writing and revision of the manuscript BV: Was involved in the conception and design of the research, the data analysis and interpretation. Her contribution was invaluable in the drafting and revision of the work. PS: Participated in grant acquisition. He also significantly contributed to the conceptualisation and design of the study. He played a pivotal role in the interpretation of the results and has also contributed to the revision of the manuscript for intellectual content. SN: He contributed greatly in the process of grant acquisition for the study. His contribution was invaluable during the conception and design of the study. He provided critical appraisal of the manuscript for intellectual content.

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Data availability
The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate
We received ethical approval from the Makerere University College of Health Sciences (#REC REF 2020 – 195) and Queen Mary University of London (QMERC 2018/67) Research Ethics committees. This Qualitative study was part of an exploratory non-controlled study conducted in 3 countries of Uganda, Bosnia and Herzegovina, Colombia and the protocol was published elsewhere [9]. All participants provided written informed consent to participate in the study, which included consent for the recording of the sessions. The research was conducted in accordance with the Declaration of Helsinki following ethical principles for medical research involving human participants.

Competing interests
The authors declare no competing interests.

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