The perceived feasibility and acceptability of integrating depression management in non-communicable diseases clinics in Malawi

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Abstract

Background

Integration of mental health into other health care services is one way of reducing the treatment gap and increasing access to mental health care.

Aim

This study was conducted to explore the perceptions of health workers about the perceived feasibility and acceptability of integrating depression management into diabetes clinics.

Methods

This qualitative study used a descriptive exploratory design; it is the second phase of a mixed methods study aimed at evaluating the effect of integrating depression management into non-communicable diseases (NCD) routine care on patient and service outcomes in Malawi. We conducted in-depth interviews with 8 healthcare workers who provide diabetes care within NCD clinics in three districts in the central region of Malawi. Informed consent was obtained from all participants. An interview guide was used to guide enquiry about perceptions of feasibility and acceptability of integrating depression screening and management. Interviews were transcribed and analysed using deductive and inductive coding in NVivo 12 software.

Results

Depression was acknowledged as a common mental health problem that affects many patients attending NCD clinics. The chronic nature of the diseases seen in the NCD clinics was identified as the cause of depression. All study participants acknowledged the need to screen for and manage depression at the NCD clinics. Additionally, they viewed training and expanding the healthcare workforce involved in NCD care as crucial to effectively integrating depression screening and management in NCD care.

Conclusion

This study demonstrated the acceptability to health workers of integrating depression screening and management in NCD clinics in Malawi. It also highlights the importance of building capacity of NCD healthcare workers in depression screening and management through training and workforce expansion.

Background

The co-morbidity of depression and diabetes is common, and evidence indicates that the presence of diabetes almost doubles the odds of depression (1). The impact of depression on quality of life and its potential negative effect on diabetes management warrant its recognition and treatment in patients with diabetes (2). As such, the presence of diabetes warrants screening for depression (3).

Most low and middle income countries, including Malawi, have a large treatment gap for common mental disorders including depression (4). A recent study on the validation of the Patient Health Questionnaire (PHQ-9) in Malawi showed that depression among health service attendees goes unrecognised and untreated (5). Malawi has inadequate human resources to meet the mental health needs of a population of 18 million people. Some of the cadres of mental health specialist are not trained in the country, and those that are trained are often assigned to non-mental health responsibilities in the health facilities (6). These challenges, which limit access to mental health care, call for integration of mental health into other health care services as one way of reducing the treatment gap (7, 8). Furthermore, research evidence suggests that mental health care and NCD care should be offered together in primary care platforms due to the growing burden of both (9).

Accordingly, we undertook a study to assess the feasibility and acceptability of integrating depression management into diabetes care offered in non-communicable diseases clinics in three districts in the central region of Malawi.

Methods

This study is the second phase of a mixed methods study aimed at evaluating the integration of depression management into NCD routine care on patient and service outcomes in Malawi. In this phase, we used a qualitative exploratory descriptive design to explore health worker perceptions of the feasibility and acceptability of integrating depression screening and management in routine diabetes care in NCD clinics.

Study setting,

The study was conducted at three NCD clinics in Kasungu, Mchinji and Salima district hospitals, Malawi. These sites were selected because they have established NCD clinics and are part of a larger study aimed at integrating depression management into NCDs care in Malawi. The interventions include screening for depression among patients with diabetes using the PHQ-9, prescription of antidepressants and also counseling for those patients found to have depression. PHQ-9 was chosen for this study because it is brief, requires few minutes to administer and has been validated in Malawi for screening depression among patients with diabetes (5). The three sites are all in the central region of Malawi and have been implementing the World Health Organization Package of Essential Non-communicable diseases (WHO PEN) interventions; further details have been described elsewhere (10).

Participants

All health workers of all cadres who provide NCD care and who had been trained in depression management at the three sites were eligible for participation in the study. The selection of the NCD care providers from the three sites was based on the rota of clinicians allocated to the NCD clinic during the period of the study. The interviewer approached staff and NCD coordinators at the clinic to schedule interviews. Our sample size was eight participants with a minimum of two per site.

Data Collection

We conducted in-depth interviews of health care workers between February and March 2020. Each interview lasted approximately 45 minutes. Interviews were conducted by the Principal Investigator (PI). He is experienced in both mental health and NCD care in Malawi which enabled him to elicit in-depth information regarding integration of depression management in NCDs care. The PI used an open-ended interview guide in the study. The interview guide was developed based on the study objectives. The interview guide consisted of a semi-structured questionnaire that covered the feasibility of integrating screening and management for depression into diabetes care. All interviews were conducted in quiet and private rooms within the three hospitals. All in-depth interviews were conducted in English and were audiotaped. We recorded any significant observations during interviews soon after data collection.

Data management and analysis

The interviews recorded on audiotapes were transcribed verbatim. The PI listened to all audio recordings and verified the transcripts. Analysis was done by using deductive and inductive coding on NVivo 12 software. The PI familiarized himself with the data through reading and re-reading to look for patterns and important issues. The PI then created a coding framework and also used the interview guide to add codes to the framework. After that the PI started coding the data by using the codes that were in the coding framework but also those that emerged as the PI was coding. Finally, the PI organised the data according to the broad ideas that were emerging and informed by the research questions.

Ethical approval

Ethical clearance was obtained from the College of Medicine Research and Ethics Committee (COMREC). Permission to conduct the study was obtained from District Health Offices (DHO) of Kasungu, Salima and Mchinji. Information sheets, containing study aims, expectations, benefits, possible risks and risk mitigation were read out to the participants and an opportunity to ask questions was granted to the participants for clarity. Written informed consent was obtained from the participants before commencement of the interviews.

Results

Sample characteristics

The study sample consisted of eight health care workers. All were NCD care providers; one female and seven males (See Table 1). Professionally, all participants were clinical officers and three were specialized

in mental health. Two were NCD coordinators and six were general NCD care providers.

Table 1: Sample description of NCD care providers (n=8)

Demographic	Number
Age – 21 – 30	1
31 – 40	3
41 – 50	4
Sex	
Female	1
Male	7
Occupation	
General Clinical Officer	5
Mental Health Clinical Officer	3
Years of work experience	
1-10	5
11-20	1
21-30	2
Years of NCD care experience	
1-5	4
6-10	4

Main Findings

Six major themes were identified from the in-depth interviews: (1) the relationship between depression and NCDs; (2) feasibility and experiences of screening; (3) acceptability of using the screening tool (PHQ-9); (4) challenges of using the PHQ-9; (5) patients' reactions to screening and treatment for depression; and (6) recommendations for integration. The data are presented in a narrative format following the themes with supporting quotes.

Relationship between depression and NCDs

Almost all NCD care providers recognised the relationship between depression and NCDs. The respondents reported that having NCDs and taking medicine for life causes "thinking a lot" (the literal translation of the most commonly used term for depression in Chichewa, the local language), depression causes patients not to adhere to healthy lifestyle advice as well as not to take medicine as prescribed, and depression causes poor outcomes for NCD patients.

"Sometimes because of depression, the patient cannot comply with lifestyle changes. If you advise the patient to have strict diet observation sometimes they cannot do those observations in diet because of depression. So it can have a huge impact on the improvement of non-communicable disease". (NCD care provider # 1, Kasungu)

"The clinical impact of depression on the clients with NCDs, usually the treatment outcome is not good because those patients with depression are on long time treatment, they lose interest in doing social things or taking treatment so usually we find out that those who are depressed their symptoms may not be resolving because possibly they are not taking their medication as routinely or they stop medication as well, so usually the outcome is bad for those who are depressed as well as on NCD treatment". (NCD care provider # 3, Kasungu)

"Because non-communicable diseases are chronic diseases, so people with these chronic diseases will tend to have so many worries as to why they are having conditions. They worry much because of the medication they are taking it's just so long. So the conditions themselves will put someone at risk of having depression". (NCD Coordinator #2)

Feasibility of and experiences of screening for depression

The feasibility of integrating depression screening and management into diabetes care was evaluated from the perspectives of NCD care providers by identifying potential factors that would either facilitate or hinder the integration. Some of the respondents reported improving patient management as one of the issues that was not being addressed before but was now highlighted by the PHQ-9.

"I remember one time I was administering the questions to one of our fellow health worker who works in a remote health centre and I was not expecting that she was having depression but after administering that questionnaire to her I extracted responses which indicated that she is depressed and also she had suicide ideation. So for me I regarded it as a positive situation where if I was not going to administer that tool, I could not even think that she has depression or she is having suicide ideas. So because of that tool, it assisted me a lot". (NCD care provider # 1, Kasungu)

"Previously the clinic was already running except for the PHQ-9 tool so it's not difficult in incorporating it because the system is already there now it's just introducing the tool to depict some of the psychosocial problems". (NCD care provider # 2, Kasungu)

"*Now we are able to look at the patient from a broader prospective. Usually previously we were missing some of these components like when the patient is depressed but we are concentrating on the disease that we are treating at that moment without thinking that there are other conditions or things that have an effect on the treatment that we are giving so we have an improvement".* (NCD care provider # 3, Kasungu)

"So now there is this new component we are screening depression in those patients with non-communicable diseases. So the role is to screen in as far as depression is concerned looking how they

are adhering to their drugs as well as looking if the treatment we are giving them is working or if there is need to do any other interventions". (NCD care provider # 1, Salima)

"Looking at the PHQ-9, that tool has made screening of depression very easy. In the past it was quite difficult, with the PHQ-9 it has simplified everything as far as depression is concerned because there are steps which we are supposed to follow so for such you can't miss a patient with depression". (NCD care provider # 1, Salima)

The NCD care providers perceived the PHQ-9 as a useful tool to have, despite increased workload and described the time required to screen for depression using the PHQ-9.

"Mostly it is about planning ourselves and just dedicating ourselves to see each and every one to be screened, so we make sure on our daily clinics to be as a routine that each one should be screened for depression no matter how busy we may be or how many patients they may be that day". (NCD Coordinator #2)

"If the patient has responded negatively on the first two questions, it may take 2 to 3 minutes; but if the patient has responded yes to the first two questions it takes may be 5 to 7 minutes to administer the whole PHQ-9 questions". (NCD care provider # 1, Kasungu)

"Sometimes it depends on the patient in terms of the understanding but 5 minutes it's enough to screen on average". (NCD care provider # 1, Salima)

Acceptability of using the screening tool (PHQ-9)

Providers also reported that they perceived the PHQ-9 to be a useful tool, easy to use even for non-clinicians. The providers also reported that use of the PHQ-9 supported comprehensive treatment in NCD care. The selected quotes demonstrate the acceptability for NCD providers of integrating depression care into NCD care and how they perceived the importance of screening for depression. The providers indicated that screening allows clinicians to get a current diagnosis of depression and to understand why some patients had poor NCD outcomes, as well as to help improve the patients' NCD outcomes.

"Now we are able to look at the patient from a broader prospective. Usually previously we were missing some of these components like when the patient is depressed but we are concentrating on the disease that we are treating at that moment without thinking that there are other conditions or things that have an effect on the treatment that we are giving so we have an improvement". (NCD care provider # 3, Kasungu)

"Like I said the time we were having sessions on depression, it looked not that easy to do it but with the PHQ-9 doing it over and again, I think now it's easier". (NCD care provider # 1, Salima)

"My clinical practice has changed because am actually able to see these patients and make a decision". (NCD care provider # 4, Kasungu)

Challenges of using PHQ-9

Although NCD care providers expressed that the PHQ-9 is easy to use, our study also found that most NCD care providers had experienced some challenges in using the PHQ-9. The NCD care providers indicated challenges in relation to patients as well as NCD care providers.

In relation to patients, the providers stated that some of the patients could not understand the questions while others were responding quickly to questions from the PHQ-9 to get done with the consultation.

"I remember on two occasions there were two clients, when you ask the questions which are on the PHQ-9 tool, they responded to almost all questions. They were responding positively but after probing more it showed that they were just responding positively because they just wanted to answer in that way but they were not having depression neither did they have suicide ideation but they just wanted to answer everything yes yes yes". (NCD care provider # 4, Kasungu)

"On the recipient of care, when we are administering the PHQ-9 they also try to bring in things which are not related to the PHQ-9. So it's like they interrupt unknowingly but mostly it does work well". (NCD care provider # 1, Salima)

In relation to health care workers, they reported that administering the PHQ-9 adds extra time to the consultation (an extra task). They described that this is made worse by the fact that there is high workload due to limited staffing and many patients that attend the clinic; as such, some clinicians do not administer the PHQ-9 or they do it with haste.

The following quote emphasizes how shortage of staff impacts the administration of the PHQ-9;

"*As a district usually in our clinics we have very long queues and as I said earlier on that we have patient who possibly come before we open the clinic around 6 o'clock they are already at the hospital so they stay long and we have a long queue so to go through the master card, to go through the PHQ-9 possibly sometimes it takes a bit of time so the only challenge is time consuming though we just ask the first two questions when its less than zero we proceed but at times when we have long queues it's a challenge in our institution*." (NCD care provider # 4, Kasungu)

Patients' reactions to screening and treatment for depression

NCD providers reported on patients' reactions to screening and treatment for depression in a mixed way. The NCD care providers described the reactions as mostly positive, with a perception that the screening is helpful. However, some patients perceive that it entails spending more time at the clinic. For some patients, it increases the burden as it may entail more medicines as well as appointments at the hospital. The following quotes from the NCD care providers illustrate the patients' reactions towards screening and treatment for depression in NCD clinics.

"Most of the patients, we don't have problems with our patients in terms of administering that tool because most of the times they accept". (NCD care provider # 2, Kasungu)

"Most of the patients may be because they know, usually they take whatever we do at the hospital as the true gospel so we haven't seen much resistance, and they are always comfortable". (NCD care provider # 3, Kasungu)

"It was twofold, first there was a resistance as people could see we were taking much time screening them but after telling them the goodness of it people realized that we were really managing them well and they are proud of it". (NCD Coordinator # 2)

"As I have already said that some patients say it's tiresome and complain about the long time they spend at the NCD clinic before they get the medications. Some patients feel that it's not useful". (NCD care provider # 1, Mchinji)

Recommendations for integration

The respondents also suggested possible solutions that could be used to address identified challenges to integration. The NCD care providers suggested that due to the relationship between depression and NCDs, all patients should be screened for depression. Furthermore they proposed training of HCWs in health centres as well as in other districts. Another suggestion was that of increasing the number of staff in the facilities so that screening is done appropriately or alternatively to consider that screening should be done by other health care workers such as clerks while taking vitals rather than by clinicians. They further described that when using the PHQ-9, there is a need to observe how patients are responding and probe accordingly, and that the providers should be conducting quarterly meetings to evaluate screening.

The following quotes emphasize the proposed solutions to facilitate the integration of depression into NCD care:

"*Manage them as a whole*" (NCD Coordinator 2)

"So I observed that the in administering the PHQ-9 questions you have to be very observant with how the client is responding and also his position, his gestures, if really what he is responding is really what is showing you and also you have to probe more to identify what is really deep in his or her heart". (NCD care provider # 1, Kasungu)

"The integration is a good idea, as we are starting this I felt like there should be a time where we should be able to evaluate it together to see how we are faring for example on quarterly basis we can meet and see what we are doing so that we can be making improvements in due course. Issues of integration have come to stay". (NCD care provider # 5, Kasungu)

"The challenges like I have already told you will be like another task added on. So if we are to say the way our hospital setup is, talk about the human resource so it means we will need someone to be screening so that there should be an easy of workload". (NCD care provider # 1, Salima)

“The screening can be done by anyone who has undergone the training or may be has undergone the orientation in as far as screening is concerned because PHQ-9 is just a tool. So those who are oriented or trained on the PHQ-9 then those ones can screen, can be involved in screening not necessarily only the nurse or the clinician. But like may be the patient attendants who have been trained and we feel that they are conversant with PHQ-9. Those ones can screen as well”. (NCD care provider # 1, Salima)

Discussion

In this qualitative study, we found that NCD care providers recognized the relationship between depression and NCDs and the impact of depression on diabetes outcomes. They also reported the feasibility and acceptability of integrating depression care into NCD care. However, NCD care providers reported some challenges including shortage of NCD care providers and increased workload that affect screening and management of depression in the NCD clinics. Furthermore, the NCD care providers suggested possible solutions that could be used to address identified challenges to integration.

Integrating depression screening and management in existing services has been shown to narrow the treatment gap (4). Similarly, in our study, we found that NCD care providers were of the view that integrating depression screening and management in patients with diabetes improves management of patients. Our findings showed that integration of depression care into NCD care is feasible and accepted by the NCD care providers. This is similar with findings of other studies in Sub-Saharan Africa regarding integration of depression management into chronic care where it has shown that it is feasible and acceptable (11, 12).

A previous study in Malawi on integration of depression in HIV care identified workload and shortage of staff as some of the challenges(13). This is consistent with our findings in the current study where the NCD care providers reported that shortage of NCD care providers and increased workload affected screening and management of depression among patients with diabetes. From these findings it is evident that challenges might affect sustainability in the use of the PHQ-9 in routine practice. Hence, this highlights the significance and need for training of other health care workers such as nurses, clerks and patient attendants in administering the PHQ-9 as suggested by the NCD care providers, as one way of overcoming the identified challenges. The idea of task shifting to nurses, clerks and patient attendants in administering the PHQ-9 has to be considered carefully in relation to its feasibility in Malawi but it may be a potentially effective and affordable strategy for improving access to healthcare for NCDs (14). This may also be a reflection whereby patient attendants or nurses might incorporate the first two (PHQ-2) questions as the screening tool in their routine vital check and let the NCDs care providers complete the PHQ-9, depending on the PHQ-2 scores. However, issues of privacy will need to be considered to explore how this can be done without compromising privacy in the waiting area. Furthermore, clinics will need to reinforce health education so that patients understand the comorbidity of depression and diabetes and its impact on outcomes as well as the need for screening of depression.

Limitations

Our study had several limitations that need to be considered when interpreting the findings. We only interviewed 8 health care workers, though they were from 3 different clinics and included both supervisors and general clinicians, and we felt that we reached data saturation with this sample size. However, it is possible that those health care workers who agreed to be interviewed were the most enthusiastic about the program, and that the views of those who were less enthusiastic are under-represented in this sample. We largely drew on the experiences of the NCD care providers as we did not interview the patients to get their perceptions, although we asked the health workers to describe patients' reactions to the screening process. The participants had taken part in training in mental health as part of the main study so they may not be representative of NCD workers in general. Further, as the main objective of this qualitative study was to explore the perceptions of health workers about the perceived feasibility and acceptability of integrating depression management, it is possible that participants' responses were subject to social desirability bias. Our study was conducted in only one region of Malawi, in public-sector NCD clinics, and, as such, some findings may not be applicable to other settings.

Conclusion

This study demonstrated the feasibility and acceptability to health workers of depression screening and management as part of diabetes care in NCD clinics in Malawi. It also highlights the importance of building capacity of NCD healthcare workers in depression screening and management through training and workforce expansion. Furthermore, it provides support for plans to integrate depression screening and its management in diabetes care in NCD clinics in Malawi and similar resource-constrained health care systems.

Declarations

Ethics approval and consent to participate

The ethical approval for the study was obtained from the College of Medicine Research and Ethics Committee (COMREC). All participants were provided with the necessary information of the study. We obtained written informed consent from the participants prior to data collection.

Consent for publication

Not applicable.

Availability of data and materials

The data used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

MU, ASM and BWP were involved in the conceptualization of the study. MU, ASM, BWP and RCS supported the study implementation. MU analyzed the data and drafted the manuscript. ASM, RCS and BWP edited the manuscript. All authors read and approved the final manuscript.

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References

1. Anderson RJ, Freedland KE, Clouse RE, Lustman PJ. The Prevalence of Comorbid Depression in Adults With Diabetes. A meta-analysis. 2001;24(6):1069–78.
2. Gavard JA, Lustman PJ, Clouse RE. Prevalence of depression in adults with diabetes. An epidemiological evaluation. Diabetes Care. 1993;16(8):1167–78.
3. Rotella F, Mannucci E. Depression as a risk factor for diabetes: a meta-analysis of longitudinal studies. J Clin Psychiatry. 2013;74(1):31–7.
4. Patel V, Maj M, Flisher AJ, De Silva MJ, Koschorke M, Prince M, et al. Reducing the treatment gap for mental disorders: a WPA survey. World Psychiatry. 2010;9(3):169–76.
5. Udedi M, Muula AS, Stewart RC, Pence BW. The validity of the patient health Questionnaire-9 to screen for depression in patients with type-2 diabetes mellitus in non-communicable diseases clinics in Malawi. BMC Psychiatry. 2019;19(1):81.
6. Kakuma R, Minas H, van Ginneken N, Dal Poz MR, Desiraju K, Morris JE, et al. Human resources for mental health care: current situation and strategies for action. The Lancet. 2011;378(9803):1654–63.

7. Patel V, Thornicroft G. Packages of care for mental, neurological, and substance use disorders in low- and middle-income countries: PLoS Medicine Series. PLoS medicine. 2009;6(10).
8. Group LGMH. Scale up services for mental disorders: a call for action. The Lancet. 2007;370(9594):1241–52.
9. Ngo VK, Rubinstein A, Ganju V, Kanellis P, Loza N, Rabadan-Diehl C, et al. Grand challenges: integrating mental health care into the non-communicable disease agenda. PLoS Med. 2013;10(5):e1001443.
10. Udedi MM, Pence BW, Kauye F, Muula AS. Study protocol for evaluating the effectiveness of depression management on gylcaemic control in non-communicable diseases clinics in Malawi. BMJ Open. 2018;8 (10) (no pagination)(021601).
11. Kaaya S, Eustache E, Lapidos-Salaiz I, Musisi S, Psaros C, Wissow L. Grand challenges: Improving HIV treatment outcomes by integrating interventions for co-morbid mental illness. PLoS Med. 2013;10(5):e1001447.
12. Freeman M, Patel V, Collins PY, Bertolote J. Integrating mental health in global initiatives for HIV/AIDS. Br J Psychiatry. 2005;187:1–3.
13. Pence BW, Stockton MA, Mphonda SM, Udedi M, Kulisewa K, Gaynes BN, et al. How faithfully do HIV clinicians administer the PHQ-9 depression screening tool in high-volume, low-resource clinics? Results from a depression treatment integration project in Malawi. Global Mental Health. 2019;6:e21.
14. Joshi R, Alim M, Kengne AP, Jan S, Maulik PK, Peiris D, et al. Task shifting for non-communicable disease management in low and middle income countries - A systematic review. PLoS ONE. 2014;9 (8) (no pagination)(e103754).