Emma R Lawrence[1], Hannah R Lawrence[2], Adu Appiah-Kubi[3], Ruth Owusu-Antwi[4], Thomas Konney[5]

Assessing and responding to suicide risk in health research in low-resource settings: implementation of a suicide response protocol in Ghana

1 University of Michigan, Department of Obstetrics and Gynecology, Ann Arbor, MI, USA.
2 Oregon State University, School of Psychological Sciences, Corvallis, OR, USA.
3 Ho Teaching Hospital/University of Health and Allied Sciences, Department of Obstetrics and Gynecology, Ho, Ghana.
4 Komfo Anokye Teaching Hospital, Department of Psychiatry, Accra, Ghana.
5 Komfo Anokye Teaching Hospital, Department of Obstetrics and Gynecology, Accra, Ghana.

*email: emmarl@umich.edu

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Abstract

Objective: Risk for suicide is high in low and middle-income countries (LMICs) where over 75% of deaths by suicide occur. So, assessing for suicidal ideation and behaviour and intervening appropriately when conducting research in LMICs is a critical step toward lowering risk for suicide among at-risk research participants. This is important even when conducting non-psychiatric research, especially when evaluating high-risk populations such as those experiencing bereavement. In this paper, we address questions that commonly arise as researchers in LMICs consider assessing for suicide risk.

Key Considerations: Using expert opinion and review of the literature, we discuss factors to consider when establishing an interdisciplinary research team and effectively assessing for and responding to suicide risk. We pose key questions and responses, using examples from a case study in which our team implemented a suicide assessment and response protocol as part of a research study on maternal mortality in Ghana, a LMIC. Through discussion of this case study, we demonstrate the feasibility and importance of (1) an interdisciplinary research team involving providers from the local community, (2) a practical framework for assessing suicide risk among study participants, and (3) a protocol to respond when risk is indicated. Assessing for suicidal ideation and behaviour and intervening appropriately when conducting research in LMICs is a critical step toward lowering risk for suicide among at-risk research participants.

Conclusion: By assessing for risk, appropriate care and follow-up can be provided with the goal of ultimately reducing the likelihood of suicide. To optimise impact, suicide risk protocols should be individualised to the specific setting, language and available resources.

Keywords

Suicidal risk, Suicide protocol, Suicide assessment, Suicide intervention, Ghana, Low and Middle income country

INTRODUCTION

The risk for suicide is high in low- and middle-income countries (LMICs), with over 75% of deaths by suicide occurring in LMICs. (World Health Organization 2021). Assessing for suicide risk in LMIC research contexts is therefore vital, even when conducting non-psychiatric research. This is especially important when evaluating high-risk populations such as those experiencing medical conditions or bereavement (Stroebe, Schut, and Stroebe 2007; Druss and Pincus, 2000). By assessing for risk, appropriate care and follow-up can be provided to ultimately reduce the likelihood of suicide. Despite this clear need for suicide assessment, many researchers conducting research in LMICs opt to exclude items asking about suicidal thoughts and behaviours. Often noted reasons are the fear of mental health stigma or that asking about suicide will increase the risk for suicide, a lack of knowledge regarding how to respond when risk is indicated, and the real or perceived lack of infrastructure in LMICs to routinely respond to suicide risk.

The objective of this paper is to respond to questions that commonly arise as researchers in LMICs consider

assessing for suicide risk. Specifically, we discuss factors to consider when establishing an interdisciplinary research team and effectively assessing for and responding to suicide risk. To illustrate responses to each question, we provide examples from a case study in which our team implemented a suicide assessment and response protocol as part of a research study on maternal mortality in Ghana. For the case study described in this paper, ethical approval was granted by the Komfo Anokye Teaching Hospital IRB (KATH-IRB/AP/003/20). Written informed consent was obtained from all participants.

Overview

A mixed-methods study was conducted at the Komfo Anokye Teaching Hospital in Ghana to evaluate the impact of maternal mortalities on families. This study site was selected given the high rate of maternal mortalities. All maternal deaths were reviewed over 12 months. Relatives were contacted for study recruitment, resulting in 51 participants who were husbands or heads-of-households of a woman who died during childbirth. Participants first completed self-report surveys followed by semi-structured interviews. Surveys included two scales assessing psychological well-being: the Patient Health Questionnaire-9 (PHQ-9) and the Inventory of Complicated Grief (Prigerson and others, 1995). Both surveys have been used in Ghana (Ben-Ezra and others, 2020; Weobong and others, 2015) and validated in LMIC settings (Weobong and others, 2009; Barthel and others, 2015; Rodríguez and others, 2021). Semi-structured interviews were conducted by trained research personnel. During interviews, participants discussed the impact of maternal deaths on their family and personal well-being, mental health, physical health, and financial security.

KEY CONSIDERATIONS

Who should be included in a research team that assesses suicide risk?

It is well-established that best practices in global health research prioritise perspectives of community stakeholders and local researchers (Stephen and Daibes 2010). For research specifically incorporating suicide risk assessment, community-based healthcare providers are likely the best source for evaluating potential assessment tools and modifying them to fit specific setting needs, identifying barriers and facilitators of effective suicide risk assessment and response, and generating a list of individuals who can provide support and/or mental healthcare should risk be indicated. It is important that these identified individuals are not only available and accessible, but also trusted by community members. Having local researchers and providers administer suicide risk assessments and provide follow-up care as needed also may increase the likelihood of honest responses to potentially sensitive questions about suicide and engagement in mental health treatment. Finally, enhancing buy-in from providers and members of the community increases the sustainability of suicide risk assessment and safety protocols beyond the completion of a given research project.

Case study: research team

Our research team was a collaboration between a Ghanaian and an American obstetrician/gynaecologist in partnership with a Ghanaian psychiatrist and an American clinical psychologist. Specifically, consultation with an American clinical psychologist focused on the appropriate selection of measures to assess suicide risk, depression, and complicated grief. Involvement of a Ghanaian psychiatrist focused on the review of measures for local relevance, supervision of translation of measures into local languages, and development and supervision of a response plan should suicide risk be high. The Ghanaian psychiatrist provided field-specific, expert training to the research assistants on the administration of the two psychological scales and execution of safety planning.

How should a study team screen and assess for suicide risk?

Integrating screening for, and assessment of, suicide risk of medical research participants in LMICs is critical to ensuring participant safety. Screening can be brief, lowering demands on both researchers and research participants, especially when integrated into research protocols that may not be primarily focused on mental health. An often-used approach is to screen for risk using single-item measures (e.g., the suicide item on the PHQ-9) followed by a more comprehensive assessment when risk is indicated. Cultural responsiveness should be considered throughout the screening and assessment processes, including the use of measures that are available in the local language and have been validated in the population studied, and when possible, having local providers administer these measures. Although there are frequently expressed concerns that screening and assessing for suicide risk may increase the risk for suicide, this is not supported by research evidence (Polihronis and others, 2020) In fact, the assessment itself may reduce suicide risk (Blades and others, 2018).

When screening identifies potential risk, gold-standard approaches to suicide risk assessment uses established, validated measures that independently assess suicidal ideation and behaviour. Questions should directly ask

research participants whether they have thought about suicide or killing themselves. One evidence-based exemplar frequently used in health settings that captures these domains is the Columbia-Suicide Severity Rating Scale (C-SSRS) (Posner and others, 2011). The C-SSRS may be especially useful in LMICs, given that it is available in 116 languages, is freely available and relatively brief, and has been implemented in LMICs (Yershova and others, 2016; Posner and others, 2014; Pumariega and others, 2020; Adiukwu and others, 2020).

Case study: suicide risk assessment

Suicide response procedures were explained to participants during the informed consent process. Surveys included evaluation of depressive symptoms using the PHQ-9, which is widely used globally and has been validated in Sub-Saharan Africa (Sweetland, Belkin, and Verdeli, 2014). The PHQ-9 includes a question on thoughts of suicide and self-harm; responses indicating thoughts of suicide and self-harm in the past two weeks triggered a suicide response protocol. Figure 1 displays the flow-chart of steps of the suicide response protocol in our study, and could be adapted for use in other LMIC research settings. Our approach was reinforced by an automatic branching logic alert in the electronic survey that prompted the research assistants (RAs) to take action. RAs were trained to deliver a script to participants explaining the course of action and to immediately contact the Ghanaian psychiatrist via telephone. The Ghanaian psychiatrist then performed a rapid telephone assessment to determine if immediate in-person mental healthcare was indicated using the C-SSRS. Given potential financial and transportation barriers to seeking immediate care, the RA was trained to remain with the participant until after the telephone assessment by the Ghanaian psychiatrist and to provide cost-free transportation to the local hospital if needed.

How should a study team respond to elevated suicide risk?

Once suicide risk is indicated, a protocol must be in place to immediately respond to increase research participant safety.

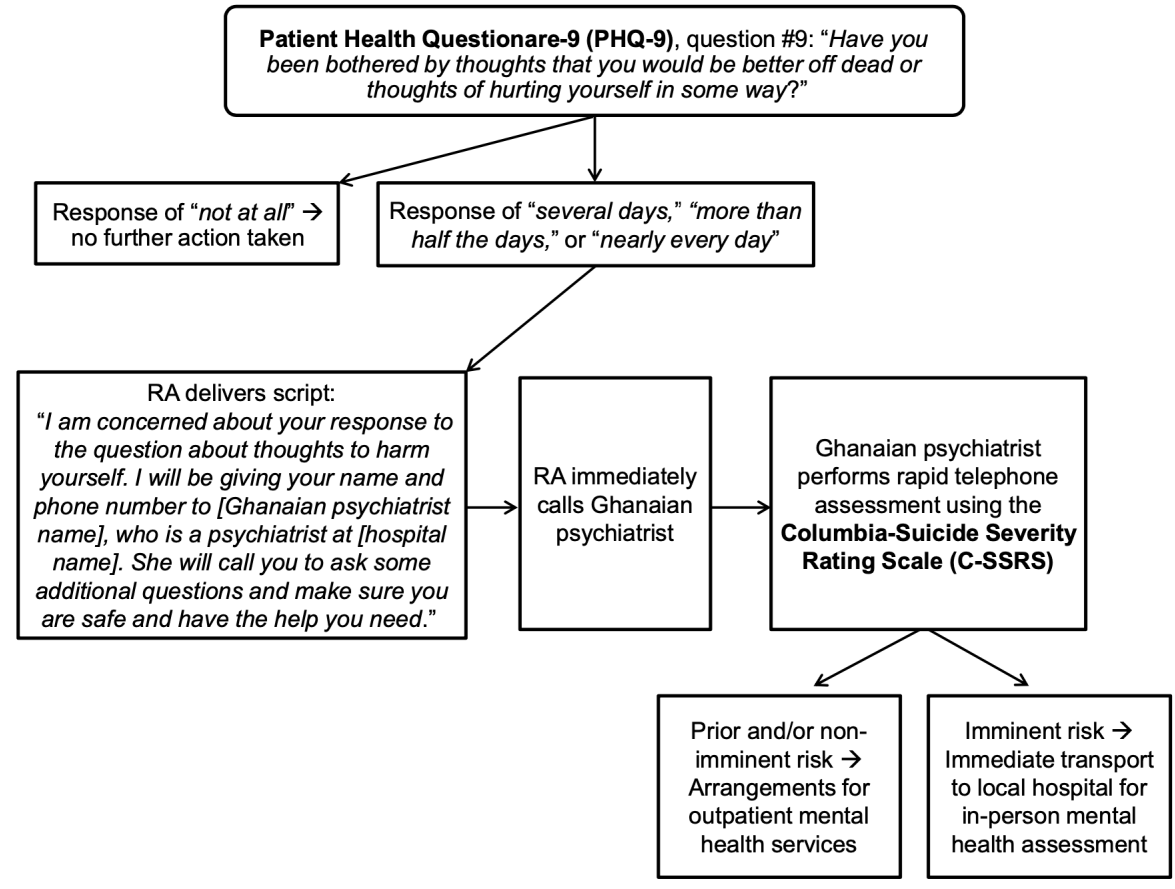

Figure 1: Suicide risk assessment and response protocol.

This protocol should be individualised to the specific setting and population, but generally accepted safety protocols should be followed where feasible. In the case of non-imminent risk, individuals should be connected with mental healthcare to both continually assess for changes in suicide risk and to provide ongoing mental health support (e.g., psychotherapy or psychiatric medication as indicated). Ideally, mental health providers should be trusted members of the local community. These may be formally trained providers such as therapists or psychiatrists, but also could be local community or spiritual leaders depending on access to medical providers, trust in formal healthcare systems, and the needs and wishes of individual research participants. One role researchers may play is providing these important paraprofessionals with training on appropriate assessment and response to suicide risk as detailed in this paper. In the case of imminent risk (one or more of the following: suicidal intent, having a suicide plan, and/or having access to lethal means), individuals should be immediately connected to care – ideally any transfer of care should be in front of the patient or patient's family. Depending on the LMIC and specific community, this may include admission to psychiatric inpatient care or if not feasible, ensuring a family member or other adult continuously stays with and monitors the individual until the suicide risk lowers. In any case, where the suicide risk is high, a safety plan should be collaboratively developed with the research participant. Safety planning involves identifying triggers or situations that tend to precede or accompany suicidal urges and steps to take when the individual experiences suicidal urges. Figure 2 demonstrates an example safety plan, outlining each element that should be included in a comprehensive safety plan.

Warning signs (thoughts, images, mood, situations, behaviours) that a suicide crisis may be developing.
Steps to take if suicidal urges are present: 1) Identify activities to help regulate emotions and/or provide distraction from suicidal thoughts (e.g., relaxation techniques, physical activity) 2) Generate a list of, and contact information for, people who can provide distraction or support (e.g., friends or family members) 3) Generate a list of, and contact information for, trained professionals or paraprofessionals who can provide mental health services (e.g., therapist, psychiatrist, religious leader) 4) If available in a given setting, list phone or text hotlines that can provide mental health support 24/7
Actions to take to keep one's environment safe and to reduce access to lethal means (e.g., locking or removing pesticides and firearms from the home, reducing access to potentially lethal medications and any items that the individual may use to hurt themselves, and making a plan to go to a public place if suicidal urges are high).
Individuals' reasons for living to remind them of their own motivations not to engage in suicidal behaviour when urges are high.
What to do should suicidal urges persist after following all safety planning steps (e.g., call a local emergency number, go to the nearest hospital emergency room, or go to the nearest facility that provides mental health services as identified by the research team).
Note: Effective safety planning is done in collaboration with the individual at risk, such that the activities and people listed on their safety plan are those the individual deems to be most helpful in moments of distress. It is important to develop the safety plan ahead of time, such that the plan can be used when the individual experiences suicidal urges without the need to generate ideas in the moment. For a quick guide to safety planning visit: https://www.sprc.org/sites/default/files/SafetyPlanningGuide%20Quick%20Guide%20for%20Clinicians.pdf For a safety plan template visit: https://suicidepreventionlifeline.org/wp-content/uploads/2016/08/Brown_StanleySafetyPlanTemplate.pdf

Figure 2: Items to include in a safety plan.

In addition, website links are provided for resources including a safety plan template and a guide to planning a safety visit.

Case study: suicide risk response

A protocol for increasing safety when suicide risk was indicated was developed under the guidance of our team's Ghanaian psychiatrist and American clinical psychologist. Responses to the suicide item on the PHQ-9 triggered our outlined safety protocol for 23.5% of participants. After evaluation via telephone by the Ghanaian psychiatrist and being administered the C-SSRS, 5.9% of participants were identified as needing immediate in-person assessment and were transported to the psychiatric department of the local tertiary hospital. When assessed, each participant was diagnosed with severe depression and started on a clinical plan of antidepressants and psychotherapy. At the time of writing this manuscript, all continue to engage in outpatient mental healthcare.

CONCLUSION

Through a case study of maternal mortality research in Ghana, we demonstrate the feasibility and importance of (1) an interdisciplinary research team involving providers from the local community, (2) a practical framework for assessing suicide risk among study participants, and (3) a protocol to respond when risk is indicated. Assessing for suicidal ideation and behaviour and intervening appropriately when conducting research in LMICs is a critical step toward lowering the risk for suicide among at-risk research participants.

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