Simple, Stigma-free, Scalable, and School-based: A Four-step Approach to Developing Adolescent Mental Health Treatments in Sub Saharan Africa

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To the Editor:

Common health disorders amongst adolescent populations present a current public health challenge all over the world.[1] These disorders account for 45% of the global disease burden on adolescents aged 15-to-19,[2] a burden which is particularly high in low-and middle-income countries (LMICs)—such as those in Sub Saharan Africa (SSA)—where risk factors like poverty increase the prevalence rates of disorders, and limited treatment options coupled with a societal stigma prevents young people from seeking help[3–5]. As a result, developing evidence-based mental health interventions has become a critical priority within global mental health research[6] and especially so in SSA where the population is particularly young.[7]

A majority of the efforts to develop treatments for SSA youths have been led by researchers and practitioners from high-income countries (HICs).[8] Because of this, most of the mental health interventions for adolescents in LMICs have been derived, fully or partially, from formal Western psychotherapeutic approaches. Undoubtedly, these efforts have been well-intentioned, and some have been beneficial for SSA youths.[8] However, they can be criticized for relying, primarily, on the adaption of Western-derived interventions for SSA contexts absent a careful consideration for sociocultural appropriateness.[9] Besides, these interventions are not scalable and accessible in SSA contexts because insofar as they rely on reworking of formal Western psychotherapy, they remain handicapped by barriers such as a need for expert delivery, and a societal stigma against mental illness.[10,11]

It seems, therefore, that it is important for intervention development efforts in SSA contexts to be done in a manner that is considerate of the local factors that may prevent SSA youths from accessing mental healthcare. One such factor is that existing evidence-based treatments that are derived from formal psychotherapy are long, costly, and require delivery by

trained experts.[12] In settings where incomes are low, and few mental healthcare providers exist, this presents a significant barrier to closing the treatment gap. A second factor is that societal stigma around mental health problems prevents adolescents, who are often shy from being label as "mentally-ill", from seeking treatment.[5] Another factor is that the perennial limited government investment in mental healthcare limits the expansion of mental health infrastructure.[4] As such, it has been suggested that mental health treatments in for SSA youths, and youths in other LMIC contexts, be done in a manner that can circumvent the present barriers that limit mental healthcare.[9,13,14]

Here, we propose on such approach that can guide the development and dissemination of evidence-based interventions for common mental health disorders amongst SSA youths. The approach—which we call the four-step (4S) approach—attempts to not only sidestep the existing barriers to mental healthcare in SSA contexts, it also privileges the scalability and sociocultural appropriateness of interventions. The hope is that this simple approach can guide researchers and practitioners, and especially those from HICs, to develop feasible and acceptable evidence-based treatments.

The Four-step (4S) Approach

The four-steps (Table 1) of our 4S approach are: 1) *simple* – the inclusion of simple evidence-based therapeutic elements in treatment protocols, 2) *stigma-free* – ascertaining that treatment is low-stigma in both content and context, 3) *scalable* – consideration of scalability and accessibility of treatments in order to meet the mental health needs of SSA youths, and 4) *school-based* – the delivery of treatments in schools and similar community-based settings.

The *simple* in the 4S approach encourages researchers and practitioners to prioritize the inclusion of *simple* elements in treatment protocols. Here, we define *simple* as the elements of an

intervention protocol which refer to broad and easily-understood aspects of human functioning, that are relevant to psychopathology, rather than referencing psychopathology itself. In other words, rather than comprise fully or heavily of formal psychotherapeutic elements that explicitly reference psychopathology and require expert delivery, intervention protocols should aim to include simple and easily-understood elements, such as gratitude[15] for example. This can be important for two reasons. The first is that *simple* therapeutic elements reduce the expertise requirement for delivery, and the second is that *simple* therapeutic elements are easily understood by youths as well as their parents and other stakeholders in the schools and local communities. Examples of *simple* elements that can be included in treatment protocols can found in the social psychological literature where interventions that focus on a single simple psychological principles that emphasizes broader human functioning – like growth mindset[16] – have been shown to yield benefits for youth mental health.[17] A recent review also suggests that the inclusion of simple theory-driven and evidence-based elements from broader psychological literature maybe therapeutically beneficial for adolescents.[18]

That stigma around mental health issues prevents SSA youths from seeking treatment cannot be overstated.[5] As a result, it seem that the success of a mental health intervention targeted towards SSA youths may depend largely to the extent to which it is non-stigmatizing. Therefore, our approach encourages the development of treatments that are *stigma-free* in both content and context. Achieving low-stigma content can be easily done, for example, by minimizing the content that refers directly to psychopathology or working with local collaborators to ensure that the content is culturally appropriate. Beyond content, ensuring that the context in which the intervention is delivered is also non-stigmatizing is also an important aspect of developing stigma-free interventions. This appears to amplify the need for multicultural

collaboration in global mental health research.[9,19] Research from SSA, who are familiar with the sociocultural context, should be actively involved throughout the intervention development process as has been suggested in a recent call to action.

In order to address the treatment gap for mental health problems in SSA, treatment development efforts should prioritize developing *scalable* interventions. Scalability can be achieved through cost-effectiveness for example. Interventions should be low-cost and affordable to SSA youths and their family. Researchers and practitioners should consider alternative modes of delivery such as the use of lay-providers rather than expensive experts, delivery of treatment in group-sessions rather than one-on-one sessions, as well as the possibility for digitally-delivery of treatments.

Finally, schools and other community-based settings may provide a scalable and accessible access point for mental health interventions. In addition, existing literature suggests that school-based mental healthcare can be effective in both HICs and LICs.[20,21] Beyond efficacy, schools may be a particularly important access point in SSA because nearly half of the population in this region is 15 years or younger.[22] But besides this advantage of easy-access to mental health services for in-school youths, *school-based* mental health interventions may also be particularly important for two other reasons. The first is the "do-or-die" nature of the education systems in SSA countries which leads to increased psychosocial stress amongst SSA youths and especially those youths who are about take important, and sometimes life defining, national examinations.[23,24] Indeed, one recent study suggested that this psychosocial stress leads to higher prevalence of depression and anxiety amongst youths in SSA schools.[23] As such, there may be a particularly higher need for mental health interventions within these settings. The second is that nature of the education systems across SSA in which many students attend public

boarding schools[22] and in which school administrators play an important custodial role in the lives of youths. As such, school administrators influence decisions on mental healthcare for many adolescents in SSA. It seems then, that if interventions were school-based and received buy-in from school administrators and parents, it would be easier and less stigmatizing for youths to take advantage of them.

Can the 4S approach work? To briefly show that it can, we now briefly describe how it formed the development of Shamiri (Kiswahili for "thrive")—a 4-week school-based group intervention that teaches growth mindset, gratitude, and value affirmation and is delivered by high-school graduates trained as lay-providers—that has been shown to reduce depressive and anxiety symptoms in both a pilot randomized controlled trial (RCT) with 51 high-symptom youths, as well as in a high-powered large-scale RCT with 413 youths with effects lasting at least seven months.[11] In the first step, we identified brief, simple, and positively-focused psychological elements from the broad social, clinical, and development literature, and selected three: growth-mindset, gratitude, and values, for inclusion in the treatment protocol. In the second step, we ensured that the intervention was non-stigmatizing by including elements that did not explicitly refer to psychopathology, communicating to youths that the intervention was intended to improve wellness and functioning, delivering the intervention in the school setting and in groups so students could participate with their peers, and involved local collaborators throughout the entire research and development process. For step three, we designed the intervention to be low-cost, delivered in group sessions, and by lay-providers. The group-based Shamiri also only consisted of 4 one-hour sessions which is shorter than most traditional psychotherapy. The researchers also investigated other intervention delivery modes, i.e., digital delivery of treatment content.[25] Finally, all the sessions were held in schools during the time

usually allocated for after-school programs, in this way, students did not have to leave the school to access treatment. More information about the Shamiri intervention can be found elsewhere.[11,26]

Conclusion

Because of the increasing priority for developing interventions for adolescent mental health problems in SSA regions, it is now important that research efforts be done in a manner that takes into consideration the sociocultural context and existing barriers to mental healthcare in SSA. Here, we have proposed a four-step approach that can guide the development of evidence-based interventions for these settings that are simple, stigma-free, scalable, and school-based. Our hope is researchers and practitioners around the world, but specially those from HICs, can use this approach as a guide in their efforts to expand mental healthcare for SSA youths.

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Tables

Table 1: The Four-step (4S) approach to development treatment for youth mental health problems in Sub Saharan Africa.

Step	Definition	Questions to consider
Simple	The elements of an intervention protocol should refer to broad and easily-understood aspects of human functioning, that are relevant to psychopathology, rather than referring psychopathology itself.	• Are intervention components evidence-based? • Do intervention components emphasize broader human-functioning rather psychopathology? • What literacy/knowledge level is required to effectively engage with intervention
Stigma-free	Making intervention content, as well as the context of delivery, low-stigma or completely stigma-free	• To what degree do intervention contents refer to psychopathology • How does the delivery affect stigma? • Have local collaborators been involvement in development of intervention materials
Scalable	To address the treatment gap, intervention development efforts should prioritize scalability of treatments.	• Does intervention require delivery by trained experts? • Does intervention require existing mental healthcare infrastructure? • How many sessions are required? • Is the intervention cost-effective?
School-based	Community settings such as schools can be scalable and accessible access points for mental health interventions and especially in SSA where the nearly half of the population is under 16 and the amount of school-going youths has doubled over the last decade.	• Can the intervention be accessed in schools or similar settings? • Are school leaders involved in intervention delivery