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COMMENTARY

Screening for common mental disorders in low resource settings: reasons for caution and a way forward

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Recognition of high rates of common mental disorders in many resource-constrained contexts has indicated the need for routine screening of patients attending public health facilities. Screening may facilitate entry into community level psychiatric services for those identified as disordered. Yet, screening instruments will need to ensure high specificity so as to minimise expenditures on treating false positives. Task shifting of screening activities to primary health care staff and lay workers in low income settings may hold some population-level advantages, including greater population coverage, more efficient deployment of health care staff, and the reduction of stigma if specific conditions are met.

Keywords: Screening, Common mental disorders, Low and middle income countries

Introduction

The ubiquity of psychiatric illness in all geographical areas of the world and in many sub-populations has become increasingly recognised. Non-detection and under-detection of common mental disorders (CMD) such as depression and anxiety disorders among patients attending public health facilities globally have brought into focus the need to consider integrating routine screening for CMDs into primary care.[1] The assumption is that successful screening increases the likelihood that those in need of treatment will be identified and appropriately treated. Beyond clinical settings, the ease of administration of most self-report measures of psychiatric disturbance makes them attractive options for use in large research studies in which full assessment by means of structured clinical interviews may be logistically and financially prohibitive.

Use of screening instruments for case-finding

Screening instruments are typically used for either initial screening or for case-finding.[2] With regards to initial screening of apparently healthy persons, the key test property is sensitivity, or the number of persons who are correctly identified as having a CMD divided by the total number of persons with CMDs in the sample. The diagnoses of persons who screen positive for a CMD may then be confirmed with a more time-intensive diagnostic inquiry.[3] In general, this practice is not without controversy as follow-ups require considerable financial and human resources.[4] Moreover, little evidence exists to suggest that screening results in improved detection or management in primary care.[5]

With regards to case-finding among care-seeking persons, the key test property is positive predictive value, or the probability that a person who screens positive for a CMD actually meets the diagnostic criteria for a psychiatric diagnosis. The positive predictive value of a screening instrument is critically dependent on the prevalence of the CMD being screened for.[6] In any sample in which the prevalence of a particular CMD is low, the majority of persons who screen positive are unlikely to meet formal diagnostic criteria for that CMD. For example, among HIV-infected persons in Cameroon, an interviewer version of the 9-item patient health questionnaire showed high specificity but low sensitivity for detecting major depressive disorder (MDD) compared with the Composite International Diagnostic Inventory (CIDI) as a gold standard.[7] Yet, screening may facilitate entry into community level counseling and psychosocial support. Screening in low resourced settings needs to ensure high specificity given the paucity of resources to treat false-positives—a cost-benefit decision that might be more acceptable in well-resourced settings.

Task shifting of screening activities to lay workers and primary care workers

With limited specialist human resources in low and middle-income countries (LMIC),[7] there have been increasing calls to train non-specialists, such as primary health care staff and lay community health workers (CHWs), in the detection and management of CMDs.[8,9] Such calls have been motivated

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by a number of potential benefits of such task shifting. These include greater population coverage, more efficient use of available health care staff, utilisation of staff who may have an understanding of local idioms and experiences of psychological distress, and the reduced stigma associated with the utilization of integrated healthcare services.

Many screening tools are readily useable by non-specialists, and it is therefore an appropriate consideration to shift the task of screening to this cadre, allowing mental health specialists to conduct formal assessments, particularly for complex cases. Furthermore the strategic use of screening tools could facilitate triage and the use of stepped care models, such as those pioneered in Chile[10] and India.[11] These studies took several precautionary measures to avoid inappropriate use of screening tools such as the repeated application of such instruments and the adjunct use of a structured diagnostic assessment.[10,11]

Does task shifting of screening to CHWs lead to better detection?

Although much is known about the role of CHWs in delivering interventions to improve maternal and child health in resource-limited settings, little work has been undertaken to inform how to develop innovative methods of enabling CHWs to effectively conduct routine screening or case-finding in the community. Evaluations of large-scale sub-national and national CHW-based programs have shown disappointing results with greatly reduced effectiveness when implemented at scale.[12] Rahman and colleagues have demonstrated that CHWs can be trained to deliver a psychological intervention to address maternal depression.[13] The team in this study relied on psychiatrists' clinical evaluations to identify women for inclusion in the study. In resource-limited settings under operational conditions, scale-up of a psychiatrist-initiated intervention may not be feasible.

Integrating routine screening into primary care – some concerns

A number of concerns need to be raised regarding routine screening. First, either over-diagnosis or under-diagnosis of CMDs may lead to the recommendation of inappropriate treatments. For example, the most efficacious treatment for MDD is cognitive therapy in combination with the prescription of an antidepressant.[14] Psychological distress, on the other hand, is usually self-limiting, possibly requiring social support, psycho-education and counseling in combination with lifestyle adaptations. The conflation of MDD, a psychiatric illness, with non-pathological psychological distress may lead to the misdiagnosis of a patient's condition and inappropriate treatment. Further, over-estimates of prevalence may lead to erroneous policy formulations.

Second, as discussed above, over-diagnosis through routine screening may result in large numbers of people identified as psychiatrically disordered and thus requiring psychiatric treatment. Yet, appropriate treatments for such persons may be unavailable in many countries, especially LMICs. To this extent, the practical utility of screening thus needs to be juxtaposed with a realistic appraisal of the benefits that may accrue to patients in routine care. This juxtaposition applies even in well-resourced settings. For example, as discussed by Thombs et al.,[15] in 2009 the US Preventive Services Task Force recommended screening patients for depression only in contexts in which resources were available to manage the condition. The UK National Initiative For Clinical Excellence (NICE), however, did not recommend routine screening in primary care settings due to the absence of an evidentiary base that screening offered any benefit to patients.[16] Thus, if treatment interventions are not available for those who have been identified as being in need of treatment, it does not follow that routine screening will yield improved mental health outcomes.

Third, varying literacy levels along with linguistic diversity provide challenges to the assumption that items on self-report screening instruments will be easily understood by patients. Such instruments will almost certainly require translation into local languages and validation of the instrument in the translated language. The problem of patients' limited comprehension of test items may be addressed with the assistance of a community health worker who may explain the meaning of the items to the patient. However, the need for a health worker to perform such a function would mean incurring personnel costs and will thus obviate the presumed benefits of screening, namely, its low cost and resource efficiency. The use of mobile or web-based technologies that utilize voice-activated audio messages and information, as well as visual cues on a mobile phone offers some promise that the barrier of low literacy levels can be countered.

Finally, programmes in which non-specialists administer initial screening assessments may not be feasible in the context of overburdened public health systems. The appropriateness of such programmes would depend on the extent to which the benefits outweigh the costs. Indeed, in some settings, policy-makers may choose to focus their attention on scaling-up evidence-based treatments for those persons already identified as having a mood disturbance rather than on expending additional resources on identifying new cases for treatment. As argued by Thombs et al.,[15] the financial costs of introducing screening in a resource-constrained health care setting is likely to be high; providing routine screening may direct already meagre resources away from treatment for those persons already identified as depressed; and patients who screen positive for depression may be prescribed medication from which they may not benefit and which may expose them to common treatment side effects. Clearly more research is needed on these points.

Concluding remarks

Routine screening is not a panacea to the problem of high rates of psychiatric disorders and may not necessarily translate into benefits for population mental health. Screening is likely to have maximal benefit in contexts where a clear referral trajectory exists for persons who screen positive for a CMD. When integrated into routine care, screening activities should be short and easy to administer. In an ideal scenario, screening might be conducted at two levels, i.e., routine general screening using a self-report measure, followed by a structured interview for those whose scores exceed a locally validated cut-off point. Those who meet the diagnostic criteria following this second stage can then be offered treatment where it is available. Such an approach will likely require logistical and organisational creativity in the context of scarce financial resources directed at mental

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Box 1. Recommendations for screening for common mental disorders

(1) Given imperfect sensitivity and specificity of many self-report screening instruments, a positive screen should be followed by a diagnostic interview to confirm the diagnosis of a psychiatric disorder. Stepped care models are good examples of such an approach. A positive screen by itself is insufficient to make a diagnosis of disorder.
(2) Screening instruments should be short, easy to administer, and easy for primary health care workers to interpret.
(3) In linguistically diverse societies, in addition to the usual requirements of translation, back-translation, and calibration, clear evidence in support of reliability and validity should be demonstrated before screening instruments are used.
(4) In circumstances where literacy levels are low, caution should be exercised when employing a CHW to assist with persons experiencing difficulty reading and understanding test items. For such an initiative to succeed, CHWs require training in the administration of screening instruments. The success of such an initiative will increase the likelihood of greater community coverage of appropriate screening and referral for treatment.
(5) Innovative approaches to detection need to be developed and tested using CHWs within integrated primary health care systems.
(6) At a policy level, adequately resourced referral trajectories are necessary so that persons identified as having a psychiatric disorder indeed have treatment available to them within the public health system. It may be prudent to begin screening among high risk clinical populations where there are already resources and policies to provide care, for example, for non-adherent HIV positive populations[17] or for women during the perinatal period in settings where high rates of CMD have been found in antenatal and postnatal mothers.[18,19]
(7) Mobile and web-based platforms need to be explored to counter the literacy and numeracy barriers common in many LMIC.

health care, a low ratio of mental health professionals to the population in many resource-constrained environments, cultural barriers that inhibit the uptake of psychiatric and psychological services, and the increasing costs of training for clinicians. From a research point of view, there remains genuine equipoise regarding the detection of CMDs and the population mental health benefits of using screening tools versus assessments by trained clinicians. This is a potentially fruitful and much needed avenue for future research. Box 1 identifies recommendations for screening for common mental disorders.

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