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Editorial Perspective: 'From there to here': adapting child and adolescent mental health interventions for low-resource settings

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The recent publication of the first substantive randomised control trial in a low-resource setting of an adapted treatment for autism spectrum disorder that was originally developed in a high-income country has stimulated conversation on around the why, the what and the how of adapting complex interventions from higher resource settings to lower resource settings (Rahman et al., 2016). The Parent-mediated intervention for Autism Spectrum disorders in South Asia (PASS) is based on the Preschool Autism Communication Therapy (PACT) and was systematically adapted for delivery in two contexts in South Asia and then evaluated through a randomised control trial in India and Pakistan (Green et al., 2010). Replication of two out of three positive findings on primary outcomes from the UK study, particularly parent synchrony, which is known to be a precursor of future language development; suggests the need to understand the value and feasibility of replicating evidence-based interventions for child and adolescent mental health disorders so that they are acceptable in varied cultural contexts.

Children and adolescents constitute more than a third of the world's population, the majority residing in low- and middle-income countries. Developmental and mental health disorders affect nearly 10–20% of this population with the burden of care being disproportionately placed in regions with low resources (Belfer, 2008). The majority of these children do not have access to any interventions and those fortunate enough to live in larger metropolitan cities may only have access to intensive centre-based services by highly skilled professionals (Patel, Kieling, Maulik, & Divan, 2013). Most of these interventions tend to be an eclectic mix of approaches based on what the therapist has trained in and what the families can afford. Besides the limited generalisability of such interventions at scale, there is a treatment gap for community-based interventions that is essentially a hundred percent.

Why is adaptation necessary? If we consider autism, the current evidence base for interventions although limited, comes from work done in high-resource settings and tends to be delivered by highly skilled professional. Directly transferring such interventions to low-resource setting faces the key barrier of the paucity of highly specialised professionals working in such settings as well as the potential cultural inappropriateness of an intervention when taken out of the context in which it was developed. 'Task-sharing' is an approach which has been effectively used to address the former barrier, the human resource crunch, across numerous health challenges. In this approach, one aims for the 'rational redistribution of tasks amongst the health work force team' which allows the creation of health workers with shorter training and fewer qualifications to deliver specific aspects of a complex intervention; allowing the specialist to focus on supervision, training and more challenging clinical situations (World Health Organization, 2008). This approach has been shown to be successful in scaling up services for HIV and dramatically reducing rural neonatal mortality (Bang, Bang, Baitule, Reddy, & Deshmukh, 1999). Similarly, nonspecialists have been shown to be effective in the delivery of complex interventions for intellectual disability and low functioning autism but so far have not been evaluated in a low-resource settings (Reichow, Servili, Yasamy, Barbui, & Saxena, 2013). The second barrier is the cultural aspects of the content of an intervention; that is, whether there are elements which are culturally specific to the place where an intervention has been developed and therefore there needs to be a process of adaptation, to make the intervention acceptable to the local community.

What should we adapt? There can be no question of compromising on adapting only those interventions which have a clear supporting evidence. We should aim high, expecting that every child with autism irrespective of where they live should have access to those interventions which have been rigorously evaluated through randomised control trials. Additional characteristics of an intervention which would align with the task-sharing approach are that they should be manualised or have the potential to be manualised so that key approaches are not lost in the task-sharing methodology. Second, especially for autism, it may be important to consider low-intensity interventions if they are available. Third, it is important to consider the cost of interventions since in low-resource settings these tend to be transferred to families and become out-of-pocket expenses and hence unsustainable in the longer term. Finally, an intervention which allows for the use of technology, either in its training, delivery

or supervision may be able to capitalise the ever increasing penetration of mobile and internet technology to leap frog barriers to scale.

How should adaptation be approached? There are a number of contextual issues which need to be addressed before any intervention can be transported from one context to another. The Medical Research Council guidelines on the development and evaluation of complex interventions describe a stepped approach to conduct this systematically. Such a systematic process allows the intervention to be nuanced to the needs of the local community besides the more obvious aspects of adapting language. An important step is around formative work which allows the exploration of the explanatory models of a disorder in key stakeholders in the target community, as well as the acceptability of any 'key ingredients' that an intervention may have. In the adaptation of PACT, this involved understanding the expectations of families from the intervention, which was introduced as an additional session on initial engagement with the family. Many families expressed a desire for their child to be able to 'talk someday'; to address this, we developed a script to clarify that the intervention aimed to improve the child's communication which did not always reflect in language acquisition. Similarly, the use of video feedback in PASS was a novel method for adult learning especially in the South Asian context. When we explored its acceptability through focus groups, in-depth interviews and case studies, the results were interesting. Although local autism experts felt that families would find this intrusive and potentially unacceptable, in reality both in India and Pakistan where the adaptation process occurred in parallel – parents not only accepted this methodology but also found the video feedback very helpful (Divan et al., 2015). Thus, involving families and community members directly besides professionals is vital for getting an accurate picture of the potential challenges an intervention may face, simultaneously allowing the development of possible solutions. Also, while a home-based delivery was acceptable in India; in Pakistan, parents found attending a centre more convenient and conventional, and this flexibility was introduced into the adapted package in that country. Hence, any intervention which is to be implemented in a different setting or with a different community within a given setting should be systematically adapted by engaging with the community, thus increasing the acceptability of the adapted intervention. Another important aspect of the adaptation process is to identify and extract the key ingredients of a specific intervention; this would allow specific adaptations to be matched to the abilities of the nonspecialist as well as to the families they are being delivered to without losing the essence of what makes the intervention work. For example, a key challenge for PASS was finding a nontechnical term for 'communication' in the local languages for both the nonspecialist as well as for parents of variable literacy to understand. A solution was to use analogies for explaining the process of communication which allowed parents to contextualise key concepts, such as shared attention to their lived experiences. Integral to using the task-sharing approach is to consider how to set-up supervision systems to support the nonspecialist. The PASS trial has demonstrated that a systematically adapted intervention with a collaborative care structure which designates the specialists role to one of training, supportive supervision and addressing the more complex problems beyond the reach of the nonspecialist can deliver an intervention as effectively as if by professionals. The simultaneous development of competency measures linked to training for nonspecialists, as well as the supportive supervision allowed the development and long-term sustainability of peer supervision skills during the PASS trial.

The PASS experience illustrates that it is possible to adapt evidence-based interventions without compromising on fidelity. Interestingly, we found that compared to the small effect sizes in the original intervention the effect sizes for two of the three outcome measures were bettered in the adapted intervention trial. We hypothesise that in low-resource settings, an intervention with smaller effect sizes but which lends itself to adaptation with such characteristics as being of low intensity and being manualised allows a clearer pathway to scale using the task-sharing approach. Similarly parent-mediated interventions which make the parent the 'therapist' have the benefit of requiring fewer sessions, since theoretically the parent can generalise strategies beyond the treatment sessions themselves. Initiatives like the World Health Organisations Parent Skills Training programme are based on this very idea and are very promising.

This systematic process of adaptation of a communication intervention for autism has given us the first evidence-based intervention for autism in a low-resource setting. It has provided a nice example of the way in which carefully matching local conditions and cultural contexts can make it possible to deliver effective evidence-based interventions in low-resource settings across varied child and adolescent mental health disorders in a sustainable way. However, there are important next steps; these include understanding the barriers to taking such an intervention to scale through implementation studies, widening reach by increasing the number of trained supervisors and widening the scope by creating a network of accessible community-based interventions for families across a range of mental health problems. For older children, this could include interventions which are delivered by teachers, teaching assistants or special educators, bringing us back to the need for continued systematic adaptations and evaluations. The final aim of such a systematic process is to allow all children with mental health

problems and their families, everywhere, access to the effective interventions they deserve.

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