Preventing Child Maltreatment in Low- and Middle-Income Countries: What is Needed to Build the Evidence Base for Effective Implementation of Parent Support Programs?

Catherine L. Ward,a Matthew R. Sanders,b Frances Gardner,c Christopher Miktond, & Andrew Dawesa

aDepartment of Psychology and Safety and Violence Initiative, University of Cape Town, South Africa
bDepartment of Psychology, University of Queensland, Australia
cCentre for Evidence-Based Intervention, Department of Social Policy and Intervention, University of Oxford, United Kingdom
dDepartment of Violence and Injury Prevention and Disability, World Health Organisation

Correspondence to: Catherine L. Ward (e-mail: Catherine.Ward@uct.ac.za)
Postal address: Department of Psychology, University of Cape Town, Rondebosch, 7701, South Africa.
Telephone: +27 21 650 3422
Fax: +27 21 650 4104

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Why Low- and Middle-Income Countries?

Child maltreatment has serious consequences for child development: as the many studies of adverse childhood experiences have shown around the world, children who have experienced abuse or neglect are more likely to suffer mental and physical health problems throughout life, to under-perform at school, to have difficulties in jobs and relationships, to abuse substances, to engage in risky sex (and therefore to have unwanted pregnancies and contract HIV and other STIs), and to be involved in violence and delinquency. Child maltreatment is not only a human rights and public health issue, but its consequences can be costly for any country, both indirectly in terms of lowered economic productivity as well as directly through burden on the health, welfare and criminal justice systems. Most countries cannot afford the costs of child maltreatment, but there are three particular reasons to focus on low- and middle-income countries (LMIC): (1) child maltreatment tends to occur at higher rates in these countries than in high-income countries (HIC); (2) LMIC are typically facing other huge systemic burdens (such as high rates of HIV) and urgent needs to grow their economies, and thus costs such as those of child maltreatment create an unnecessary drain on economies that are already struggling; (3) the evidence base for effective interventions to prevent child maltreatment is thin in general, but much richer in HIC than in LMIC. LMIC thus have arguably a greater need for interventions to prevent child maltreatment, but a very much weaker evidence base for policy makers and practitioners to draw on to identify effective ways to reduce this burden.
In this discussion paper, we first address why parenting support in particular is a route that should be explored for preventing child maltreatment in the contexts of great poverty that are characteristic of LMIC. Then we lay out a research agenda for building the evidence base for parent support programs in LMIC: without evidence of effect, programs may simply waste public funds without achieving anything, or worse, may do harm. LMIC, much more so than HIC, can thus ill-afford to implement untested programs. In addition, traditional targeted clinical interventions reach few parents, and are offered once a problem has developed – an expensive model of service delivery. Given the tremendous unmet need and lack of established infrastructure for delivering parenting programs and services typical of poorer contexts, an approach that emphasizes prevention and scalability – a public health approach - offers the greatest capacity to improve child outcomes. To do so in a sustainable manner, interventions should meet four criteria: (1) they must target risk factors causally associated with the outcome to be prevented; (2) there must be evidence that they reduce risk factors and poor outcomes; (3) they must be cost-effective; and (4) there should be evidence that taking the interventions to scale is feasible in the context in which they are needed. Yet the evidence base for preventing child maltreatment through parenting programs is weak in many of these areas, and particularly in LMIC. We therefore offer a research agenda for a public health approach to preventing child maltreatment through parenting interventions in resource-poor contexts.

Why Parenting Support in Particular?

Poverty may present particular risks for parenting. Studies in HIC at the level of statewide data in the US, for instance, find that numbers of families investigated for child maltreatment and numbers of children in care increase when welfare benefits are reduced. Studies of individual children and their families find that the processes of parenting are affected by poverty. Parents struggling with
poverty are more likely to suffer depression (associated with harsher, more inconsistent parenting) mothers in this situation are less likely to be affectionate towards and to monitor their children, and more likely to use corporal punishment; so increasing the likelihood of children’s risk behaviors. Parents living in poverty are also less likely to have the social support that assists better-off parents with their parenting. Contexts of high poverty and poor socio-economic development, such as are widespread in LMIC, often present other risks for child development which may also make parenting harder. For instance, widespread exposure to violence, poor schooling environments, and a lack of opportunities for employment after school are all more likely to occur in LMIC than in HIC, all increase the likelihood of children engaging in delinquency and other risk behaviours, and thus make parenting a far more difficult task than it might be in a different context. Intuitively, then, it makes sense that one way to prevent child maltreatment would be to promote socio-economic development.

There is evidence (at least from the USA) to support this approach, as suggested by Leroy Pelton in a 2015 paper in Child Abuse and Neglect. Pelton describes an experiment in which one group of families receiving public assistance in Wisconsin were able keep all their child support, and then had less child protective services involvement than a group of similar families who were not allowed to keep all their child support. In another study described by Pelton, families who received housing and other material support they needed were also less likely than other families not receiving that support to have substantiated reports of child maltreatment.

Yet a number of questions remain about the relationship between poverty and parenting. First, as is the case with parenting programmes, studies of the relationship between poverty, parenting and child maltreatment are largely from HIC. It is possible that this relationship may be an effect of relative deprivation in a high-income context, and parenting may be perhaps be less affected by poverty in those LMIC where poverty is more widespread and normative. In
addition, while better-off caregivers may be at less risk of abusing or neglecting their children, the risk is not entirely absent even when poverty is absent. The precise role that poverty plays in undermining parenting, and the conditions under which it has those effects, would be far better understood if this were further explored in LMIC, which have both forms of poverty and cultural values around parenting that are different from those in HIC.

There are also good reasons to pursue parenting programs in LMIC even if the relationship between poverty and child maltreatment is not well understood. Studies (again from HIC) suggest that good parenting is a protective factor that promotes healthy development in the face of genetic, pre- and peri-natal and social risk (including poverty); given the kinds of risks that children face in LMIC, it may be that supporting good parenting is perhaps even more critical in LMIC than elsewhere. Further, the parenting skills that mitigate against child maltreatment also prevent many of the other burdens that face LMIC, such as substance misuse, delinquency and violence, and the sexual risk behaviors that drive the HIV epidemic in many LMIC. They also promote better school attainment, thus increasing the likelihood that children will be employed in jobs that build the tax base of LMIC (and thus promoting the kinds of socio-economic development that may reduce child maltreatment).

Thus, although evidence from HIC suggests that poverty increases the risk of child maltreatment, questions remain about whether this relationship pertains in LMIC, and the conditions under which it holds. Exploring these questions in LMIC is critical for building the field, as they offer contexts that are different from those in HIC and thus the opportunity to explore whether it is universally true that family poverty increases risk for child maltreatment, or whether the relationship holds only under certain conditions. There is also evidence that parenting support programs may be effective in preventing child maltreatment in LMIC. It seems, therefore, that pursuing research into both the effects of poverty reduction on child maltreatment, and into parent support programs as a tool for
preventing child maltreatment, will provide the best support for an evidence-based approach to understanding the relationship between parenting and poverty.

In the remainder of this paper, we lay out a research agenda for achieving effective parenting programs that will meet the needs of LMIC.

A Research Agenda for Achieving Effective Public Health Parenting Programs in LMIC

Knowing Prevalence Rates of, and Risk and Protective Factors for, Targeted Child and Parent Behaviors

Understanding which risk and protective factors are most associated with child maltreatment, is ideally the first step before designing, testing and then rolling out wide-scale parenting programs.

The number of national baseline surveys in poorer countries (e.g., those conducted by the Centers for Disease Control, and those funded by the Optimus Foundation), has been rapidly increasing. However, when such large-scale epidemiological studies are neither feasible nor affordable, a number of alternatives are possible. Needs assessment approaches, such as key informant interviews and small-scale surveys, can quickly (and cost-effectively) establish the need for parenting support interventions in a particular area, and which risks are most prevalent in the target populations being studied. If designed well, these surveys could form the baseline data for an intervention trial and so serve these purposes as well as providing data against which the effect of the intervention can be assessed.

One of the problems facing the field in general (but particularly in LMIC) is the need for good data collection instruments, across the spectrum of what is
needed for establishing evidence for parenting programs: estimating the prevalence of child maltreatment, establishing prevalence of risk and protective factors, and measuring outcomes of programs. In LMIC, even more so in HIC, costs, low literacy levels of children’s caregivers, and low levels of in-country research capacity, are all issues that surveys and intervention trials must face. In order to do this, instruments are needed that are brief; reliable; valid; change-sensitive; low cost; easy to use, score and interpret; have low literacy demands; have consistent response formats across different areas assessed; and are easy to translate into different languages. A number have been developed (e.g., the Alabama Parenting Questionnaire, and the Child Adjustment and Parent Efficacy Scale), though they need validation in each new context. More measures in the public domain are also needed, to cover the spectrum of child and parent outcomes that are relevant to the evaluation of a parenting program. Some published measures that are widely used in parenting studies, such as the Child Behavior Checklist and the Eyberg Child Behavior Inventory, are proprietary and therefore may be too expensive for trials in low-resource settings unless special discount arrangements can be entered into with publishers.

**Identifying Effective Interventions**

The evidence base for a particular intervention is typically built slowly, through pilot-testing, a trial establishing efficacy and another to confirm it, and then an effectiveness trial – a process that can take 10-20 years before the program is recognized as evidence-based and suitable for rolling out widely. The needs of poorer contexts are too urgent for such a slow and costly process. There are three areas where evidence is needed most: identifying programs that are likely to be effective in resource-poor contexts; ensuring programs are culturally relevant when using a program developed in another context; and then establishing the effectiveness of the program in the new context. In this section, we make recommendations for building the evidence base so that this lengthy
process can be shortened.

Which Programs are Likely to be Effective in Resource-Poor Contexts?

We have learned from the evidence-base developed in high-income contexts that program development is informed by a number of common principles: for instance, that programs based on social learning and cognitive-behavioral theory and teaching positive parenting are effective in reducing behavioral problems in children, and it is possible that these would also be effective in reducing child maltreatment. A recent systematic review, by Frances Gardner and colleagues, suggests that these common principles, and even particular programs, translate well from HIC contexts to LMIC and remain effective. Outcome and consumer studies have also shown that specific parenting strategies common to a number of parenting programs (e.g., praise and time out) are seen as highly acceptable and useful to a diverse range of parents in wide range of contexts. However, there is still room for further understanding of common principles that achieve effects: for instance, meta-analyses (by Jennifer Kaminski and colleagues) have addressed essential components of effective practices for parenting programs addressing child behavior problems and the components of effective home-visiting programs, but we could find no such study identifying what is effective in programs that prevent child maltreatment.

Identifying these common principles would make it easier either to identify existing programs in the low-resource setting that are likely to be effective, or to develop new programs that have a strong likelihood of achieving the desired effects. However, there is no substitute for careful testing of programs, whether they are newly developed or newly transported.

Issues of Cultural Adaptation.

Applying an evidence-based program developed for use in one context, to another, raises the question of generalizability. The position typically taken concerning the cross-setting generalizability of interventions is that it is unwarranted to assume that programs shown to be effective in one context will
continue to work when transported without adaptation to a different context. A host of factors – including for instance language, culture, literacy, poverty, and health and social care delivery systems – may weaken or even cancel out the effects of the program in the new setting. This has been the concern for decades about the cross-cultural use and adaptation of psychosocial interventions in general.

This view, however, was formulated when there was little empirical evidence on the impact of interventions in new settings. Recently empirical evidence, bearing on the question of whether and how interventions should be adapted, has become available. Though still limited, it casts doubt on this concern. For instance, Huey and Polo’s 2008 meta-analysis looking at evidence-based interventions for ethnic minority youth found that in some cases, interventions that had been adapted to the new setting were no better than non-adapted interventions. Gardner and colleagues found that non-adapted parenting interventions were sometimes more effective than in the original settings. Existing evidence, limited though it is, is too equivocal to justify the assumption that non-adapted interventions are less effective when implemented in new settings.

Speculations abound concerning the factors that impact on the effectiveness of interventions in new settings. The nature of the intervention (e.g., psychosocial, policy, etc.), the mode of delivery, delivery systems, human and institutional capacity, policy environments, language, literacy, poverty, culture, family structure, child-rearing traditions, acceptability of and participants’ engagement in the intervention, and culturally specific risk factors – are some the factors that have been singled out. Empirical evidence on such factors, however, remains scant. With regard to parenting programs, Gardner and colleagues’ meta-analysis found that characteristics of trials (e.g. type of participants, program delivery format, implementation fidelity) and country-level policy and resource factors (e.g., child policies, child poverty) were not associated with the
intervention’s effectiveness, but that countries that were culturally more distant (Hong Kong, Iran, and Puerto Rico) with more traditional values related to family life and child rearing, than the countries in which the programs originated (the US and Australia), were associated with larger effects (often greater than those found in the origin countries).

While understanding the nature of cultural differences helps inform how parenting programs can be adapted to the needs of parents, parents everywhere share many common challenges and aspirations in raising their children. The shared journey of parenthood means that many solutions to parenting challenges that work in one context often make sense to parents in a different cultural context when culturally relevant examples are used.

As the number of evaluations of programs implemented across countries and cultures continues to increase and more such meta-analyses are performed, it will be possible to establish with greater confidence which factors influence the effectiveness of programs in new settings. The identification of such factors will allow the development of evidence-based guidance on what types of cultural adaptation is required and how extensive it should be.

In addition, it is worth noting that concerns about "culture" (and therefore the need for adaptation) often assume that programs are fixed and non-dynamic, and that they dictate strategies to parents. On the contrary, many high-quality parenting programs are culturally flexible, with ‘collaborative’ values built fundamentally into training and delivery, emphasizing that parents choose the goals and strategies they will use, based on their own family needs, priorities and childrearing values. In addition, childrearing “culture” itself is far from fixed. For instance, in many countries, it is traditional to use physical punishment with children, yet new policies and laws attempt to prohibit use of this culturally acceptable strategy (e.g., in South Africa, Brazil and Venezuela). Equally, changes in cultural practices shift rapidly across generations with rapid urbanization, migration, and increasing access to communication technologies,
meaning that ideas about raising children are more easily transported from one cultural context to another and there may not be consensus between caregivers, or between community elders and parents, about what is acceptable and desirable in that society. Thus, although it is vital to explore local understandings of the ‘proper way’ to raise children, the likelihood that there will be shifting views about child-rearing, even within one community, means that it is important that programs are based on flexible, respectful principles, that allow tailoring to parents unique circumstances and where parents learn to problem-solve to meet their own family goals in ways that are both acceptable and effective for them.

The jury is thus out on whether programs imported to LMIC from HIC need adaptation beyond the processes that are already embedded in high quality programs, and on how much and what sorts of adaptation might be needed. This is an area where more research is needed, so that clear guidance can be provided to policy-makers and program staff about how to make decisions about whether to adapt a program from another context, or to invest in developing an evidence base for a local one. Developing this guidance will need greater investment in trials to establish program effectiveness and research on the relevance and usefulness of specific techniques employed in programs.

_Establishing Effectiveness of Programs in Resource-Poor Contexts._

There is a broad consensus that outcome evaluations using randomized controlled designs allow the strongest inferences about intervention effectiveness to be drawn, and that quasi-experimental and other weaker designs can produce misleading conclusions. From the perspective of LMIC, where needs are urgent, resources are low, and expertise in trial methodologies is often low, investing in this may not appear possible. Yet the cost of rolling out an ineffective or even harmful program must be factored into this decision. This is particularly true in a LMIC where resources are few and the choice to spend funds on a parenting program may mean that other important services are not provided. Where randomized controlled trials are truly impossible, other methods (such as
propensity score matching or regression continuity designs) are available and can provide accurate estimates of effect, under certain conditions such as having a control group that is similar to the treatment group at baseline. Stepped wedge designs for randomized controlled trials make it possible to roll out a program while simultaneously both developing the expertise to deliver it and evaluating it rigorously, thus meeting need as fast as possible while providing high quality evidence of effect.

Another key question is whether to track child outcomes (the strongest approach to determining effectiveness), or to track changes in mediators such as parent behavior. Tracking child maltreatment outcomes such as reports to the relevant authority may be unreliable in a context where the quality of administrative data is poor. In addition, since reports of child maltreatment are rare events even in high-risk populations, a very large sample size may be necessary to detect an effect. A simpler and therefore less expensive option currently used by many programs is to track mediators that are theoretically linked to child outcomes (for instance, parents’ use of non-violent discipline within a year of the trial). This does, however, require a high degree of certainty about risk factors for particular outcomes – another area that would benefit from more evidence, particularly from longitudinal studies in different contexts, including in LMIC.

**Understanding Cost and Cost-Effectiveness**

Once effectiveness has been established, the issue of cost and cost-effectiveness must be addressed. Estimated costs of implementing parenting programs in high-income contexts appear, at first glance, to be prohibitive for most developing countries. For instance, in 2012 Furlong and colleagues estimated the costs of group-based parenting programmes for early-onset conduct problems in children aged 3 to 12 years to be approximately US$2,500 per family. To put these estimated costs into some context, total health expenditure per capita in 2009
was on average US$25 in low-income countries and US$185 in middle-income countries, compared to US$4,446 in high-income countries. On the other hand, there is evidence from high-income contexts that parenting programs may be less costly than allowing child problem outcomes to develop. For instance, Aos and colleagues estimated that every dollar invested in the Nurse Family Partnership in the USA produces a return of US$3.23; and that costs of implementing the universal Triple P system, would be around US$137 per family, and that if only 10% of parents received Triple P the program through the universal delivery mechanism, there would be a benefit to cost ratio of US$9.22.

Programs are more likely to be supported and sustained over time if they are cost effective. However, current estimates of the cost-effectiveness of parenting programs have mainly been produced in the USA, UK and Australia. Further, the relevance of cost-effectiveness estimates established in HIC to resource-poor settings may be limited: in low- and middle-income countries, not only are the costs of programs possibly much lower (because of lower costs of salaries, materials, and overheads) but the costs saved in the case of a non-existent or severely underfunded healthcare, social welfare, and criminal justice system might be very different. It is also worth noting that cost estimates have typically been investigated for the more intensive “in person” group or individual programs, whereas lower cost, low intensity interventions (media interventions, large group seminars, self-help, telephone-assisted and web-delivered programs) may have high relevance to low resource settings and are developing an evidence base. More research into cost-effectiveness of different intensities and delivery options in low-resource settings is therefore urgently needed.
Questions about Capacity to Deliver Programs in Low-Resource Settings

Two key areas need to be explored here: first, the readiness of the context to support parenting programs, and issues relating to the implementation of programs.

Having the evidence base for a program is not in itself sufficient to ensure that the program is delivered: institutional “readiness” (will and capacity) must also be present. In the broad area of child maltreatment prevention, Mikton and colleagues explored a concept of readiness that includes ten dimensions: (1) key country conditions, such as administrative divisions of the country and how programs might fit with these; (2) problem assessment, including whether the outcome targeted is perceived to be a problem by key decision-makers; (3) whether there are relevant legislation, mandates, policies, and plans that can enable program implementation; (4) the will to address the problem (for instance, political will); (5) institutional links and intersectoral collaboration, which may help or hinder program implementation; (6) institutional resources and efficiency; (7) material resources; (8) human and technical resources; (9) informal social resources, such as social capital; and (10) program implementation and evaluation, such as an inventory of programs already in the context, and their evidence base. This model has demonstrated success in discriminating between countries’ levels of readiness to implement child maltreatment prevention programs, and to identify specific gaps in that readiness. This model may be useful in promoting the adoption and roll-out of child maltreatment prevention programs (including parenting programs) and identify what is necessary to work at the country level to introduce prevention programs.

As identified by the readiness model, human resources for program management and delivery are critical. One potential obstacle to the delivery of
evidence-based parenting programs in low-resource settings is the lack of an adequately trained workforce that can deliver programs. While some studies suggest that only professionals can effectively deliver programs (for instance, David Olds’s work on the Nurse Family Partnership), there is very little likelihood that there will be sufficient numbers of professionals to achieve widespread implementation in low- and middle-income countries. More recent studies, such as the work of the Parenting for Lifelong Health team, show that paraprofessionals can deliver programs with fidelity, an essential precursor to effectiveness; however, very little is known about the necessary conditions (for instance, for selection, training and supervision) which make it possible for paraprofessionals to achieve good outcomes in parenting programs. In addition, widespread rollout of programs will need widespread training; how is fidelity best maintained when huge numbers of people need to be trained both to deliver programs, and to train those who will deliver them? These areas urgently need exploration, to meet the needs of LMIC in this area.

Recent developments in implementation science such as the NIRN framework (from the National Implementation Research Network based at the University of North Carolina at Chapel Hill) have helped to define the organizational conditions necessary for sustained implementation of evidence-based practices. The applicability of such principles needs to be explored in the LMIC context.

Questions about the Most Appropriate Shape of Programs for Low-Resource Settings

There is also the question of programs attaining broad reach at an affordable price. Some parents may want basic advice on dealing with common parenting problems, whereas others may require intensive intervention over a longer period. To ensure that the diverse needs of parents are addressed, a
population-level parenting strategy requires different evidence-based interventions to be available. This is likely to reduce cost, since longer, more intensive interventions are more costly, but each approach needs evaluation. For instance, the World Health Organization recently published a review which found that evidence for the effectiveness of mass communication strategies in preventing violence, although sparse, is growing rapidly (also see, for instance, Sanders and colleagues’ review of the Triple P system). Because of their potential to reach many parents at low cost, mass communication strategies also need further investigation as a priority.

Furthermore, in contexts in which interventions are delivered to families in poverty, a range of interventions may be required to secure positive child outcomes, including psychosocial support to vulnerable caregivers, strengthening of infant-mother bonds and positive parenting, nutritional support and health services for both caregivers and children, access to social protection, and stimulation for early learning. In many contexts (and perhaps especially poorer ones), these inputs may be delivered as a package. So parenting interventions may need to be delivered alongside other inputs, tailored according to family or community needs; this approach can of course lead to cost savings in terms of identifying, training and supporting the workforce, but the effectiveness of such delivery methods, and how to optimize integrated programs, are not well understood.

In Conclusion

Good parenting is critical to preventing child maltreatment and achieving positive child outcomes. But many questions remain, particularly when considering LMIC. First, research in LMIC will clarify the conditions under which poverty affects parenting and is a risk for child maltreatment; it will also help clarify the extent to which parenting support programs can provide parents with the skills to buffer the risks that poverty presents to children. However, the vast majority of parents
raising their children in adverse socio-economic circumstances do not abuse their children. With regard to parenting support programs, which potentially modifiable risk and protective factors are most strongly and causally associated with child maltreatment prevention and the promotion of resilience in children must be identified. This begs for the development of low-cost measures (for risk and protective factors, and for child outcomes) that are valid and reliable in context.

What is the best starting point for addressing child outcomes and parenting issues - adapting and scaling up existing programs with a good evidence base, or identifying existing in-country programs that are informed by evidence-based principle, evaluable and potentially scalable? What factors influence the cultural acceptability of programs? How can programs best be delivered so that they reach the maximum numbers of parents in the most cost effective way while maintaining effectiveness? What capacity is needed to deliver effective programs in a low resource context? How cost-effective are programs and delivery options when delivered in low- and middle-income countries?

The pressing needs of the very many children and parents living in LMIC make these questions a research priority for scientists, governments and donors alike.

**Keywords:** child maltreatment, prevention, low- and middle-income countries, research agenda

**Suggestions for Further Reading**


programmes for early-onset conduct problems in children aged 3 to 12 years. *Cochrane Database of Systematic Reviews, 2*, CD008225. doi: 10.1002/14651858.CD008225.pub2


**Suggested websites**