Special Communication

Enhancing Resilience and Mental Health of Children and Adolescents by Integrated School- and Family-based Approaches, with a Special Focus on Developing Countries: A Narrative Review and Call for Action

Abstract

Global mental health (GMH) is important for sustainable futures, but neglected, especially in low- and middle-income countries (LMICs). Child and adolescent mental heath (CAMH) is one of the essential components of GMH. CAMH is influenced by several factors and at several levels, of which resilience to adversity or stress is an integral component. In this narrative review, we first explore the concept of individual and family resilience (FR) and then review various resilience promoting interventions at school and family/community settings across the world but with a special focus on published research arising from LMICs. Resilience has been traditionally conceptualized at the individual level, but FR is also very important, especially in LMICs where there are severe resource constraints. Resilience, contrary to what was thought initially, is not an inherent, innate, unmodifiable personality "trait" but rather a dynamic multilevel systemic "process" that is changeable over time and in turn changes the outcomes related to mental health, adjustment, and thriving in the face of adversity and stress. An important corollary of this reframed conceptualization of resilience is that resilience – both at the individual and family level – is changeable and hence lends itself to interventions. These interventions can be school based (e.g., by imparting life skills education [LSE] in schools) and/or family/community based. Published studies in the area of CAMH, resilience, LSE, and related areas are heavily biased toward high-income countries, with a wide gap in published research from LMICs. However, the limited available literature suggests that such interventions are at least partially effective, and potentially feasible in LMICs, despite challenges. The available evidence also demonstrates the need for (a) using a multicomponent intervention; (b) involving families and focusing on family functioning as well; (c) using trained lay counsellors and peers rather than depending solely on teachers and health practitioners; and (d) working within a context of the culturally and locally sensitive needs, with a longitudinal perspective. Based on this review, we sound a call for action by proposing to develop, through research, models for promoting resilience at both individual and family levels, by working with children and adolescents and their families in school and family settings in an integrated manner in India and Kenya.

Keywords: *Child and adolescent mental health, family, life skills education, low- and middle-income countries, resilience*

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Introduction and Rationale

An important component to achieving sustainable development goals (SDG) is to enhance global mental health (GMH) and well-being, especially child and adolescent well-being.[1] This is particularly relevant in the context of stressors and challenges that these young people face in their daily life. These challenges could be developmental or contextual, or forms of victimisation in the vulnerable, as well as environmental exposures to extremes of poverty, and lack of necessary leisure, protections, and nurturing relationships.

Education can be an important intervention to prepare and empower young people to reduce the chances of experiencing victimisation and responding to such challenges. However, standard or routine educational approaches imparted in schools and colleges often do not address these wider issues.[2] For this to happen, the educational package has to include life skills, an essential set of skills that empowers one to adapt to life

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successfully.[3] In that sense, life skills education (LSE) can be seen as fostering resilience. Resilience is a term with several nuanced connotations but essentially refers to a process of bouncing back from adversity or stress.[4]

However, it is often difficult and impracticable to force life skills training in schools for several reasons and barriers. In India and other low- and middle-income countries (LMICs), the family serves as the bedrock and foundation that holds the individuals together, and collectivist/family values influence and often prioritize individual values rather than those offered in schools, where the remit is often perceived to be academic progression alone.[5] However, schools still play an important role in enhancing resilience as this is where young people spend most of their time, form friendships, and learn about the wider society. Further, schools prepare young people for their futures including employment and good health.

Thus, it is important to review the existing literature in school-based as well as family- and community-based approaches to enhancing resilience and thereby promoting mental health and well-being in children and adolescents, with a particular focus on LMICs.

This is a narrative review of key literature and sources and includes some exemplars of good practice from India and Kenya. We lay out the foundations for how such an approach may be implemented more widely. The program is being developed as part of the Future Cities Initiative-India (RFII), as part of the Global Policy Institute at Queen Mary University of London, in partnership with influential pioneering organizations and individuals in Kenya, India, and the UK.

Whilst recognizing the diversity of actual family experiences, this review calls for action and paves the way for future research that proposes to recruit the family as a focus of intervention, and work through the family, and examine the possibility that individual mental health and well-being can be fostered and sustained by enhancing family resilience (FR). The links with school and wider society, we propose, can be more strongly supported and reinforced through families as active agents in society, carers of children, and important stakeholders in school life.

This integrated approach of fostering individual and FR has rarely been studied and evaluated in any systematic manner, especially in a LMIC setting, although there are isolated examples of good practice and innovations to protect and promote the mental health of young people. Further, with the ever-increasing digital application through new-generation mobile phones and applications, innovative ways can be explored to develop and build FR. If successful, this strategy could be scaled up and has significant policy implications.

Methods

This is a narrative review because a systematic or even a proper scoping review was not possible, given the wide diversity and variability of the various themes covered. For this review, the following and related search words or phrases were looked up in PubMed and Google Scholar with multiple combinations of the words and phrases: resilience, individual resilience (IR), FR, resilience scales or assesment, mental health, child and adolescent mental heath (CAMH), positive mental health, SDG, LSE, LMICs, India, Kenya, school-based approach, family-based approach. To explore the area freely, no exclusion criteria were considered; rather, individual relevant articles were retrieved in full, and cross references were searched from them.

India and Kenya were particularly focused on in this review due to several reasons. Both are developing countries (LMICs) and both are members of the British Commonwealth. They have roughly similar socioeconomic and developmental indices, though situated very far apart geographically. They also share a common colonial history. Thus, developing a model applicable to these two countries could have implications for rolling out the program in other, similar commonwealth countries, which is the ultimate goal of this initiative. Finally, some of the auhors who have worked or have been working in this area in the two countries shared their experiences as exemplars of good practice.

Since the published work in this broad area is large, diverse and multifaceted, often with authors with different backgrounds (e.g., education, social welfare, mental health both medical and psychology, and sociology) and with different theoretical backgrounds and perspectives, there was a tendency of the findings losing focus and becoming just a silos of many articles stacked together without a direction. To put them in context so as to provide a logical exposition of the arguments leading up to our proposition, a theme-based organization of the articles was done, leading to an outline of the contents of this article with a conceptual direction of the themes. The outline is presented below in a numerical order (with subheadings wherever relevant), and the rest of the article follows the outline.

Outline of the Paper

1. SDG, GMH, and CAMH
   i. GMH as a SDG
   ii. CAMH is an essential component of GMH and hence of SDG.
2. Resilience and CAMH
   i. Resilience is an essential concept for developing preventive, protective, and promotive aspects of CAMH
   ii. IR can be promoted through LSE imparted through school-based approaches (SBA) – however, there are

issues with fidelity, replicability, implementability, and scalability.

3. FR and family-based models
   i. Concept of FR
   ii. Promoting IR through promoting FR?
   iii. Family-based models of education, development, and positive mental health.
4. Evidence on effectiveness of LSE or other resilience-promoting activities on CAMH
   i. Research gap between high-income countries (HICs) and LMICs in the areas of LSE, resilience, and CAMH
   ii. Reviews based on work in LMICs
   iii. Some individual relevant published studies from LMICs
   iv. Specific resilience-focused case examples
   v. LSE in the school curriculum in India
   vi. Some specific exemplars from India, Kenya, and elsewhere.

Sustainable development goals, global mental health and child and adolescent mental health

There exists a huge and diverse scientific literature documenting the role of early adverse events and experiences from the prenatal through adolescence and young adulthood period in shaping the mental health and other related outcomes (productivity, disability, and economic adversity) in later life, with many putative mechanisms ranging from neurobiological (epigenetics, brain development, neurohormonal, and neuroimmune axis among others) to personality–psychological and sociocultural ones. "Child is the father of man" is no longer a poetic aphorism but a scientifically valid reality with tremendous implications for SDGs and sustainable futures.

Many mental health disorders emerge in mid-to-late adolescence and contribute to the existing burden of disease among young people and in later life. More than 50% of adult mental disorders have their onset before the age of 14 years and over 80% are manifested by the early 20s.[6] Poor mental health has been associated with teenage pregnancy, HIV/AIDS, other sexually transmitted diseases, domestic violence, child abuse, car accidents, physical aggression and fights, crime, homicide, and suicide.[1] Thus, fostering mental health from an early age should be an important component of any school-based intervention.

Global mental health as a sustainable development goal

A recent Lancet Commission article underpinned the necessity, and the challenges as well as the opportunities, of pursuing GMH within the ambit of the United Nations SDGs.[1] Mental health promotion is an essential component of ensuring sustainable future social, cultural, and economic prosperity of the nations and the world. The article lamented that despite the availability of several evidence-based service models to improve mental health on a population basis, precious little has been achieved in terms of real-world translation of these models on a large and sustainable scale. The four "foundational pillars" of GMH for achieving SDGs are, according to the authors:

- "Mental health is a global public good and is relevant to sustainable development in all countries, regardless of their socioeconomic status, because all countries can be thought of as developing countries in the context of mental health
- Mental health problems exist along a continuum from mild, time-limited distress to chronic, progressive, and severely disabling conditions. The binary approach to diagnosing mental disorders, although useful for clinical practice, does not accurately reflect the diversity and complexity of mental health needs of individuals or populations
- Mental health is the unique product of social and environmental influences, in particular during the early life but over the life course too, interacting with genetic, neurodevelopmental, and psychological processes and affecting biological pathways in the brain
- Mental health is a fundamental human right for all people. The response must include a rights-based approach to protect the welfare of people with mental disorders and those at risk of poor mental health and to enable an environment that promotes mental health for all."[1]

Child and adolescent mental health is an essential component of global mental health and hence of sustainable development goal

Of the six "key actions" formulated by the Lancet Commission article to realise the reframed agenda of GMH, one specifically focuses on CAMH:

"…Mental health needs to be protected by public policies and developmental efforts; these intersectoral actions should be undertaken by each country's leaders to engage a wide range of stakeholders within and beyond health, including sectors in education, workplaces, social welfare, gender empowerment, child and youth services, criminal justice and development, and humanitarian assistance. These interventions should target social and environmental determinants that have a crucial influence on mental health at developmentally sensitive periods, particularly in childhood and adolescence, for the promotion of mental health and the prevention of mental disorders."[1]

Resilience and child and adolescent mental health

Although the resilience concept has been well known in physical systems and in biology for more than a century, its application in the field of mental health is relatively recent, starting from the 1970s and better articulated since the 1980s.[7] Over the past three decades, the literature on resilience has grown to a wide and diverse field. Not surprisingly, this has given way to many

conceptualizations, definitions, scales, applications, and controversies.[4] The term resilience has been applied to psychological, neurobiological, and social domains, and at the levels of individual, family, community, and team or organizational resilience.[4] However, through these confusing and diverse array of applications, resilience has consistently comprised of two core components: an element of adversity/challenge/stress and the element of adaptation/coping/resistance/"bouncing back."[8]

An easy, if a bit oversimplified, definition of resilience is that given by the American Psychological Association: "The capacity of individuals to adapt to adversity or stress, including the capacity to cope with future negative events."[9] This is, however, one of the definitions based on the conceptualization of resilience as a relatively stable "trait" residing within individuals, making them more or less "resilient." One implication of this definition is that some individuals are more resilient to stress than others to begin with, and would remain so. Another and potentially disadvantageous implication is that there is limited scope of enhancing resilience by interventions, training, and experience. However, research shows that this is not necessarily correct; resilience can indeed be enhanced by training and interventions, and resilience is a dynamic asset that can be nurtured.[4,7,8]

More recent conceptualizations of resilience have moved on from individual trait-centred theories to process-centered system-perspective theories. Thus, Masten defines resilience as "the capacity of a system to adapt successfully to significant challenges that threaten its function, viability, or development."[7] This definition conceptualizes resilience not as a stable trait-like individual characteristic but a dynamic process in a systems' perspective. Kalisch *et al*.[10] in a recent paper have proposed that resilience is a "dynamic process of adaptation to the given stressful life circumstances. Resilience is not a trait or stable personality profile, or a specific genotype or some hardwired feature of brain architecture. Resilience should not be understood as a predisposition and thus, is not the flip side of vulnerability. We refer to stable resilience-conducive traits or other predispositions as resilience factors." A corollary of this process-centered definition of resilience is that resilience can only be inferred as outcome in the face of adversity ("Resilience should operationally be defined ex postfacto, that is, as a good mental health outcome following an adverse life event or a period of difficult life circumstances")[10] rather than it is a valuable asset for all young people and members of a society. Similar views are expressed by other recent articles where resilience is seen as "an active and dynamic process through which a person adaptively overcomes a stressful or difficult situation or recovers swiftly from a period of ill-health. Thus, resilience is not a passive reaction to an adverse situation, nor is it merely the reverse side of posttraumatic stress disorder or the absence of symptomatology."[11]

Another important corollary of this conceptualization is that resilience studies should be longitudinal, with at least two (preferably more) time points of measurement to capture the dynamic process of resilience reflected in outcomes. For example, "in current research, resilience as process is characterized by either a trajectory of undisturbed, stable mental health during or after a period of adversity, or by a pattern of temporary disturbances that is followed by a relatively rapid and successful recovery."[12]

Resilience is an essential concept for developing preventive, protective, and promotive aspects of child and adolescent mental heath

In whichever perspective, it is seen and measured, resilience is currently understood as an essential component to study the preventive, protective, and promotive aspects of CAMH.

While one strand of literature has emphasized the influence of childhood and developmental or contextual stressors on adverse mental health outcomes, another, relatively recent, strand of research has focused on the coping, adapting, and "bouncing back" to positive mental health in the face of such adversities and stress. This is the core of resilience research. Arguably, resilience is the essential cornerstone of positive mental health because rather than taking a liability-based approach with mental disorder as its final outcome, resilience research adopts a strengths-based approach with mental health as its final outcome, often irrespective of the presence or absence of mental illnesses. In that sense, resilience is an essential concept for developing preventive, protective, and promotive aspects of CAMH.

Individual resilience can be promoted in children and adolescents through resilience-building interventions including life skills education imparted through school-based approaches

There is now some reasonable research accumulating on resilience training. A recent meta-analysis of 11 randomized controlled trials (RCT) concluded that "Resilience interventions based on a combination of cognitive behaviour therapy and mindfulness techniques appear to have a positive impact on individual resilience."[13] An earlier systematic review too found moderate beneficial effects of building resilience in nonclinical sample of adults, despite noting several conceptual, operational, and methodological issues.[14]

However, most published studies are on adults. As mentioned above, the focus of the present review is on children and young persons. One approach of enhancing IR is by imparting LSE. Life skills have been defined as "the abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life."[3] The World Health Organization (WHO) defined five broad domains of LSE:

decision-making and problem-solving, critical and creative thinking, communication and interpersonal relationships, self-awareness and empathy, and coping with emotions and stressors. These psychosocial skills are believed to influence positive health outcomes. LSE as propounded by the WHO was, by definition, meant for school education, i.e., through SBA.[3]

Mutiso *et al*. found that a combination of LSE and psychoeducation together reduced emotional and behaviour problems in children who had gone through adversity and who were institutionalized.[15] Furthermore, Ndetei *et al*., 2019 found WHO life-skills training efficacious in improving mental health in a nonclinical sample of schoolgoing children in Kenya.[16]

The latest and the largest meta-analysis of 49 RCTs across 16 countries (predominantly from USA, Australia, and other high-income countries) of universal, school-based resilience-focused interventions including LSE found that these were effective in reducing depressive symptoms, internalizing problems, externalizing problems, and general psychological distress.[17] However, the authors commented that "the limited number of trials providing data amenable for meta-analysis for some outcomes and subgroups, the variability of interventions, study quality, and bias mean that it is not possible to draw more specific conclusions. Identifying what intervention qualities (such as number and type of protective factor) achieve the greatest positive effect per mental health problem outcome remains an important area for future research."[17]

Family resilience and family based models

Concept of family resilience

Starting somewhat later than the research on IR, a parallel line of research focused on FR. It is a useful concept because from a systems' theory perspective, children and adolescents are very much a part of their family of origin and hence are influenced by all positive and negative influences from the family in fostering both adaptive and maladaptive behaviour. For children in care, their carers and the institution and peers are effectively their family of origin.

As defined by Froma Walsh, a pioneer in the study and application of FR, FR refers to: "the capacity of the family system to withstand and rebound from adversity, strengthened and more resourceful. More than coping with or surviving an ordeal, resilience involves positive adaptation, (re) gaining the ability to thrive, with personal and relational transformation and positive growth forged through the experience……. A basic systemic premise is that serious crises and persistent life challenges impact the whole family, and in turn, key transactional processes mediate adaptation (or maladaptation) for all members, their relationships, and the family unit. Major stressors or a cascade of stresses can derail family functioning, with reverberations throughout the relational network. In facing adversity, the family approach and response are crucial for resilience. Key processes enable the family to rally in highly stressful times to reduce the risk of dysfunction and to support positive adaptation. Although some families are more vulnerable or have experienced severe trauma or persistent hardships, a family resilience perspective is grounded in a deep conviction in their potential for repair and growth."[18,19]

The key processes in FR have been summarized as:[19]

Shared belief systems

1. Making meaning of adversity
2. Positive outlook
3. Transcendence and spirituality.

Organizational processes

4. Flexibility
5. Connectedness
6. Mobilize social and economic resources.

Communication/problem-solving processes

7. Clarity
8. Open emotional sharing
9. Collaborative problem-solving.

"To summarize, several basic principles grounded in systems theory serve as the foundations for a family resilience framework:

- (Family) Resilience is complex, multidimensional, multilevel, and dynamic in nature. It is best understood and fostered contextually, as a mutual interaction of individual, family, sociocultural, and institutional influences over the life course and across the generations
- Crisis events and persistent stresses affect the entire family and all its members, posing risks not only for individual dysfunction but also for relational conflict and family breakdown
- Family processes mediate the impact of adverse situations for all members, their relationships, and the viability of the family unit
- Maladaptive responses heighten vulnerability and risk of individual dysfunction, relationship distress, and family breakdown
- Dynamic family processes foster resilience by buffering stress, building strengths, and mobilizing resources to facilitate positive adaptation
- All individuals and families have the potential to strengthen their resilience; we can maximize that potential by encouraging their best efforts, strengthening key processes, and drawing on resources."[20]

Promoting individual resilience through promoting family resilience?

Family values, practices, rituals, communication patterns, interpersonal factors, bonds, cohesiveness, common

family events including financial or health adversities, all impinge on the children and young members in the family. This may be especially true for collectivistic societies like many LMICs where the family as a functional unit has a strong influence on the individual members.

Thus, one particularly interesting notion could be to examine if promoting FR could enhance IR. A systematic review of the effectiveness of mental health promotion interventions for young people in LMICs,[21] found the quality of evidence from community-based interventions for adolescents as being moderate to strong on impacting positively on youth mental health and social well-being. Other supporting evidence from church-based interventions for families in promotion of mental health and prevention of HIV in rural Kenya provides evidence that strengthening family ties and processes protects negative future health outcomes for adolescents pointing to the fact that engaging with the religious sector can be another strategy for sustainable community-based interventions.[22]

It is to be noted that other very recently published articles have directly or indirectly called for inclusion of family or community in resilience-promoting interventions along with SBA.[23-26] For example, in the latest and most extensive network meta-analysis till date on 137 studies (56,620 participants) on school-based interventions to prevent anxiety and depression in children and adolescents, Caldwell *et al*.[23] concluded that "there is little evidence that educational setting-based interventions focused solely on the prevention of depression or anxiety are effective. Future research could consider multilevel, systems-based interventions as an alternative to the downstream interventions considered here." Fazel and Kohrt, while writing a methodological critique of this study in their accompanying editorial, emphasized the need to consider "multidimensional interventions that will have components aimed at the staff, parents, whole school and specific year groups."[24] Weist *et al*. provided evidence of a multicomponent package including a strong family component (consisting of engagement, collaboration, support, and empowerment) to improve mental health of school children.[25] Finally, in their literature review, Twum-Antwi *et al*. made a strong case to demonstrate that "where the more resilient caregivers are, the more likely children are to experience the promotive and protective factors they require for optimal growth and development in both home and school settings."[26] It is to be noted, however, that the exemplars they cited in support of this conclusion are all from high-input, cost- and labour-intensive, multilevel interventions conducted in high-income developed countries (USA and Canada). It would be of great importance to test this notion in a LMIC setting with resource constraints and different sociocultural milieu.

Family-based models of education, development, and positive mental health

In discussing family-based models of resilience, it is important to note that work on community development and education, mostly situated in North America, has pointed out the benefits of involving the family as a unit of intervention.[27-32] Way back in 1987, Epstein[33] proposed a theory of overlapping spheres of influence, which emphasizes that schools, families, and communities are major institutions that socialize and educate children. This theory states that goals like student academic success are of interest to all of these institutions and are best achieved through their cooperative action and support. Heath and McLaughlin[28] iterated the importance of community involvement, as the problems of educational attainment and academic success require resources beyond the scope of the school and most families.

Coleman coined the term family social capital to refer to the "…norms, social networks, and relationships between adults and children that are valuable for children while they are growing up."[34] The concept of social capital implies the importance of engaging families and communities in helping youth develop the knowledge and skills they need to function effectively. The family social capital can be influenced by structural characteristics such as the presence of parents at home and the number of siblings. The process of family social capital includes nurturing interaction between parents and children such as parents helping children with their homework, discussing school activities, and holding higher educational aspirations.[34] In addition to its educational value, an integrative and community-based framework can also be applied to enhance the psychological resilience of children and prevent the development of mental health issues. Indeed some Kenyan work on schoolgoing youth on ego (individual) resilience demonstrated that although youth may be growing up in adversity, their mental health symptoms were not associated with their ego resilience. Resilience must therefore be perceived to also be a property of social groups, families, institutions, and community.[35]

An innovative ambition for our proposed work (see below) is to explore whether a family-based resilience promotion could be complementary and add value to school-based individual resiliency training, and vice versa.

Evidence on effectiveness of life skills education or other resilience promoting activities on child and adolescent mental heath

The research gap between high income countries and low- and middle-income countries in the areas of life skills education, resilience and child and adolescent mental heath

The available scientific literature in this area is predominantly from the HICs, particularly USA, Australia, Canada, and some European countries. Published studies from LMICs are few and far between.

A recent overview of 38 systematic reviews on interventions to improve adolescent mental health is an example to prove this point.[36] This very large overview included reviews into the following categories for reporting the findings: school-based interventions (n = 12); community-based interventions (n = 6); digital platforms (n = 8); and individual-/family-based interventions (n = 12). Of the 38 systematic reviews included in the mega-review, 34 were on studies exclusively on HICs. The remaining four systematic reviews too included studies mostly from HICs, with very few isolated studies from LMICs such as Nigeria, Brazil, Thailand, and Tanzania. One of the strong recommendations from this article was that "there is a dire need for rigorous, high-quality evidence especially from LMICs on effective interventions to prevent and manage mental health disorders among adolescents."[36]

The conclusion of the authors in their final summary report on various adolescent health interventions was even sharper: "Majority of the evidence for improving immunization coverage, substance abuse, mental health, and accidents and injury prevention comes from high-income countries. Future studies should specifically be targeted toward the LMICs with long-term follow-up and standardized and validated measurement instruments to maximize comparability of results."[37]

Finally, in the latest and most extensive network meta-analysis till date on 137 studies (56,620 participants) on school-based interventions to prevent anxiety and depression in children and adolescents, it was noted that only 5 of 76 studies on universal interventions were from middle-income countries (none from low-income countries), while only 5 studies from middle-income and only 1 from low-income countries were included out of 61 studies on targeted interventions.[23] This speaks for the sorry state of affairs. This does not necessarily mean that there are no studies from LMICs (see below), but that published studies from LMICs meeting selection criteria based on quality and other indicators are few compared to those from HICs.

Reviews based on work from low- and middle-income countries

Three reviews could be identified specifically focused on studies from LMICs. In the first, Barry *et al*.[21] did a WHO-commissioned systematic review of findings for interventions promoting the positive mental health of young people (aged 6–18 years) in school- and community-based settings from LMICs (14 school based and 8 community based). Of the school-based programs, 4 were from Gaza/Palestine, 3 from South Africa, 2 from Uganda, and 1 each from India, Nepal, Chile, Mauritius, and Lebanon. Of the community-based programs, 4 were from South Africa and 1 each from India, Honduras, Egypt, and Uganda. Quality of the evidence was rated as moderate to strong. Overall, with the exception of a few studies, it was concluded that mental health promoting interventions were effective for the young both in school-based and community-based programs. However, the authors emphasized that further evidence was needed for their sustainability and effectiveness when scaled up through the educational system and community settings, especially in low-income countries. In addition, long-term study outcomes were needed. Research is also needed to strengthen the evidence base on the interrelationship between mental health and other health, educational, and social well-being outcomes. Such research would strengthen the case for mainstreaming and thus systems of integration of mental health policy and practice into health, education and development policies and practices for young people in LMICs.

A second review extended this work.[38] It too came to similar conclusions but additionally identified research gaps and raised many questions for future research and the scalability and implementation barriers in LMICs. It also noted the need to renovate existing programs to suit local sociocultural context and needs, in isolated and rural communities.

A third review focused on early childhood education (ECE) on both child behavior–mental health outcomes (21 studies) and on caregiver outcomes (25 studies).[39] It is to be noted that the majority of the studies were from upper middle-income countries. ECE had mostly consistent beneficial effects on child behaviour and mental health. More importantly, however, ECE had consistently good effects on caregiver outcomes. Perhaps, the most important part of this important review was the identification of key elements of the interventions:

"Gains to child mental health may be most likely when ECE interventions include three main elements: (i) activities to increasechild skills including cognition, language, self-regulation, and socioemotional competence; (ii) training caregivers in the skills required to provide a cognitively stimulating and emotionally supportive environment; and (iii) attention to the caregivers' mental health, motivation, and self-efficacy."[39]

Some individual relevant published studies from low- and middle-income countries

Probably, the best-documented and highly cited published earlier study from India is by Srikala and Kumar.[40] This was a pioneer school-based study which first developed a National Institute of Mental Health and Neuroscience (NIMHANS) manual based on WHO LSE principles and used it on 605 secondary school students. There was a significant effect on students' self-esteem, coping, and general adjustment. However, there was no difference in psychopathology and adjustment at home and with peers.

Another earlier study from India utilized a different, multicomponent approach with both institution-based training and community peer-based education plus

health information materials in both urban and rural communities.[41] The interventions were found to be effective across a broad range of health and behavioural outcomes, although effectiveness of individual components on individual outcomes varied across settings and context. Another important finding was the potential usefulness of "task-shifting" using trained lay counsellors instead of school teachers or health practitioners.

This idea was tested in a rigorously conducted large controlled study utilizing multicomponent intervention recently published in the Lancet.[42] It was found that, compared to teachers and the standard government-run LSE program, trained lay counsellors were more effective in improving the overall school climate (primary outcome) and several secondary outcomes including depression, bullying, violence victimisation, violence perpetration, and attitude toward gender equity. The final and important implications of this study were noted as follows:

"A whole-school, multicomponent intervention targeting school environments delivered by lay counsellors in government-run secondary schools is acceptable, feasible, and effective for enhancing school climate and improving health-related outcomes in adolescents. These findings need to be replicated in other contexts so that the intervention can potentially be scaled up as a relatively low-cost strategy to improve adolescent health outcomes."[42]

Specific resilience-focused case examples

As mentioned above, programs focusing on enhancing resilience can be useful to empower children and adolescents as well as their families to withstand or bounce back from stresses embedded in development, situational context, or other situations. However, published studies from LMICs in this aspect are few and far between.

Since 2009, CorStone, a US-based nonprofit organization, has developed and piloted one of the first resilience-based curricula for middle-school girls in LMICs. The curriculum, called the Girls First Resilience Curriculum (RC), is designed to be low-cost, flexible, and scalable.

There are a few recently published studies from this group in India. Leventhal *et al*.[43] conducted a randomized controlled trial of a 5-month resilience-based program (RC) among 2308 rural adolescent girls at 57 government schools in Bihar, India. Local women with at least a 10th grade education served as group facilitators. Girls receiving RC improved more (vs. controls) on emotional resilience, self-efficacy, social-emotional assets, psychological wellbeing, and social well-being. Effects were not detected on depression, however; indeed, there was a mild negative effect on anxiety, which suggests further research is necessary alongside implementation to better understand unintended consequences. Thus, while very promising, this seems to be a work in progress. Newer elements may be added in an innovative way to further improve the program.

Another study from the same group showed the beneficial effect of the RC program on adolescent physical health as well.[44] However, another recent pragmatic "real-world" school-based trial aiming to enhance resilience in disadvantaged school students in Australia did not find any significant improvement in internalizing or externalizing problems,[45] highlighting the continuing difficulties in developing effective, school-based prevention programs for mental health problems in adolescents. It may be argued that adopting a multicomponent approach involving the families could be worthwhile to explore. Previous intervention trials of this nature too have identified lack of family and parent components as a possible explanatory factor toward null intervention outcomes.[46] Indeed, parents' involvement in family-based interventions has shown improvement in close family support and relations with adolescents reporting improved parent–adolescent communication.[47]

In contrast, another recent study from West Bengal[48] found that the adapted NIMHANS module on LSE increased resilience as measured by Children and Youth Resilience Measure-28 items (CYRM-28)[49] in tribal adolescents. The intervention also significantly improved internal health locus of control, self-determination, and reduced pathological behaviour of the adolescents. However, and importantly, the authors noted that:

"Our study informed the current health policy that the existing LSE -based programme should be reviewed and modified to include generic life skills, and the LSE -based programme should be coupled with developmental interventions aimed at improving adult education and family climate for optimum effect on mental health and health behaviour of adolescents."[48]

Finally, in a recent publication, factors such as "family type," "time spent with father," "time spent with mother," and "physical activity" were found to be associated with high resilience as measured by CYRM-12[50] on multivariate regression analysis in schoolgoing adolescents in Kolkata.[51]

While all the above studies were conducted on schoolgoing children and adolescents, there is one recent publication on out-of-school young women residing in an urban slum in northern India.[52] In this uncontrolled repeated-measures design to evaluate the effectiveness of the 15-module mental health and RC developed by the authors, the study found that while all outcome measures (resilience, self-esteem, anxiety, depression, and gender attitude) improved after the intervention, the improvement was sustained 8 months after intervention for emotional states and gender attitude, while, interestingly, measures of resilience and self-esteem returned to baseline.

Life skills education in the school curriculum in India

In the context of India, the involvement of the community in the governance of public or

government-aided schools has been institutionalized, as Section 21 of the Right To Education Act mandates the formation of School Management Committees (SMCs) in all government-run and government-aided schools. Three-fourth of an SMC is comprised of parents or guardians. These parents are elected by the local community as their representatives. SMCs are mainly responsible for developing school–community linkages, monitoring and reporting child rights' violations and monitoring school functioning and finance. In the local context, the SMC is often understood as a body that is supposed to hold the school accountable. This measure recognizes the importance of the community, especially in resource-poor settings to ensure educational access and quality to students.[53] Similarly, nongovrnmental organizations (NGOs) working in the educational sector in India acknowledge the importance of including the family, so as to be able to garner legitimacy and continued enrolment of children.

The National Curriculum Framework 2005 of the National Council of Educational Research and Training (NCERT) India provided encouragement to include LSE in school curriculum. The Ministry of Human Resource Development too launched an Adolescence Education Programme with similar ideas, coordinated by NCERT.[54] However, the page was last updated in 2016, and no actual documents are available, except one curriculum on LSE produced by the Central Board of Secondary Education for Grades 8, 9 and 10. The UNICEF has been providing support to various NGOs and educational foundations to implement LSE in schools in several states including Gujarat, Maharashtra, Bihar, and Assam.

A recent publication on the evaluation of such a pilot program conducted by a NGO with technical support from UNICEF in the state of Maharashtra from 2014 till 2016 is available online.[55] This detailed document provides evidence of the relevance and effectiveness of the program but found challenges in terms of its efficiency and sustainability. Unfortunately, the program was not continued after 2016.

This is also the only available document to calculate and comment on cost-efficiency of the program. The findings are quite instructive:

"From the point of view of cost efficiency, the program cost per student was approximately Rs. 900/-(approximately 13 US Dollars). If the programme was institutionalised, and the role of *prerika* (motivator) taken over by the school counsellor, then the recurring cost per student would be Rs. 20, which would be used to purchase stationery and other necessary materials. This cost would be stable provided there was no increase in the costs of stationery. Otherwise, the only expense would be the provision of other necessary materials. Therefore, the program would be cost-effective if it were to be institutionalized. Moreover, the training cost of the *prerika* would be reduced if the role was taken over by the school counsellor or a dedicated teacher."[55]

Finally, the most comprehensive and up-to-date mapping document on LSE in India has been available since October 2018.[5] This extensively documents the various piecemeal efforts both from the government and more from the NGO sectors to implement various programs incorporating several elements of LSE, although no mention is made to enhance resilience to adversity as such and its effect on CAMH. In fact, the final summary section of this excellent document notes that:

"There is very little research done from a developing country context and from looking at the extent, depth and complexity of adversity from an Indian context. There needs to be pertinent research questions asked across academia, policymakers and practitioners and we need to build a body of knowledge seeped in evidence to inform further research, policy, and implementation strategies."

It further notes that:

"In traditional constructs, life skills has been looked at as a value-add to academic learning and outcomes. What is becoming clear is that life skills are foundational to overcoming adversity, achieving development milestones, and helping children develop the capacities needed to thrive in an increasingly complex and uncertain future……. Adversity, currently articulated as a problem of employment readiness rather than life readiness of the children, adolescents, and young adults, is in our mind the core challenge that needs urgent addressing. Evidence in the form of theoretical or institutional research, thus, in our mind, must stem from the need to address adversity in all its complexity in India."[5]

Thus, it makes a strong case for building resilience, without specifically mentioning the term.

Some specific exemplars from India, Kenya, and elsewhere

A brief scoping of two NGOs working in India, *Samarsh* and *Udyog* (both pseudonyms to protect the identity of the organizations pending their informed consent) that work in the area of education in Bangalore and Haryana, respectively, reveals the articulation of a more family and community-based model of educational development. Samarsh attempts to implement a system leadership approach that focuses on collective rather than individual improvement in education. There is an effort to expand the definition of system leaders to include community members and parents, who can influence aspects of education that the school leader cannot access. One way in which the community members are included are through Whatsapp groups, where they receive updates and ideas are regularly communicated (Samarsh Report).

Samarash's intervention derives from the understanding that facilitating community participation in the school

management is useful for reducing the distance between people and schools and fostering a culture of mutual respect and dialogue. At the same time, they acknowledge the challenges to such an endeavor. For instance, many times, teachers feel they are losing authority and more power and control is exercised by parents. On the other hand, parents, especially whose children are the first in their family attaining education, do not always want to be involved in school activities. This is for a range of reasons such as illiteracy and discomfort in talking to teachers as well as, not feeling like they have any control over the school. If they are working, they are not able to skip their employment to attend meetings (Samarsh Report). Thus, in many cases, parental and community involvement in the school is infeasible and can create more obstructions to the smooth working of the school. Despite Samarsh's efforts and framework for community participation, in practice, the community's involvement is limited to enrollment drives and Whatsapp updates.

Udyog attempts to train community members in low-income communities to be governance and accountability partners for schools through capacity building sessions, support sessions, and grievance redressal (Udyog Report).

A brief examination of these two organizational programs reveals a recognition of the importance of involving the community in educational interventions. However, it is necessary to further engage with these and other such interventions to ascertain their impact on educational development and ability to establish long-term partnerships with the community. Given the challenges of community involvement and restrictions like funding and programmatic requirements, it is important to ask whether these interventions move beyond institutional requirements to elicit the community as an equal collaborator.

The Healthcare Sector Skill Council (HSSC) has oversight of over 250 trainers per state, across 17 states in India. HSSC works in schools, providing vocational and skill training for students of year 9 onward in the healthcare sector space – under the government's Ministry of Skill Development and Entrepreneurship. HSSC offers the possibility of working with these trainers to access students directly and also their families in future research. HSSC employed trainers could be brought on board to collect baseline and ongoing data, as well as deliver possible interventions with students and families. The presence of these trained individuals within schools offers excellent access to our target populations and the real potential for high-quality data.

Mobilizing and working with families and communities and especially in Kenya requires certain mapping strategies that may be helpful in achieving a buy-in from the community leaders for sustainability of interventions.[15,16,56] These works highlight the fact that it is important to be aware of the realistic challenges and barriers to a successful program implementation. For example, Puffer *et al*.[57] in their study on family skills training intervention among Burmese migrant families in Thailand highlighted certain challenges that researchers and other implementors should be aware. These include power imbalances, decision-making about sustainability of the interventions as well as scarcity of resources to sustain the intervention.

Finally, another example of good practice is the Secret Parent Coaching Programme, developed and implemented by Child Mental Health Advocate, Zelna Lauwrens (an ex-teacher and school counsellor by profession). This was originally launched in South Africa in 2003 and has expanded globally since 2012 and is currently represented in 22 countries across five continents. To date, the model and associated life coaching program for children is found to be entirely adaptable to any culture, religion, demographic, or challenge. Originally available in English, it is currently being piloted in Afrikaans, French, Spanish, Sotho, and Hungarian. The approach focuses on leadership development and mental well-being which aims to build resilience from a family perspective with a comprehensive assessment of the child's lifestyle and their family dynamics, usually done online (https://www.kidslifestudio.com/assessments/premium-assessments/). The assessment helps identify if the children need a preventative, behavioural or psychological approach, or referral to specialist interventions (psychiatrist or psychologist) if there are immediate risk concerns. However, due to extensive waiting lists, the Secret Parent Life Coaches will support young people over extended time frames using a strong family-based approach, which focuses on tangible life skills and tools for alleviating stress factors in the short-term and laying the foundation for long-term mental well-being. The approach is easily integrated into schools, for example, by training the school counsellor or teaching assistant or dedicated teacher. However, a whole-school based approach can add value as it impacts on systems more widely. In this program, children are best supported when engaged in a playful but purposeful way, and this is the underpinning essential ingredient that allows effective transformation in the children resulting in their peak performance. After the initial foundational work is done, the use of additional extramural activities such as sport, cooking, arts, drama, music, technology, eco awareness, and world travel provide an opportunity for increased buy-in and long-term sustainable results (see: www.kidslifestudio.com and www.secretparentfoundation.com). However, it is important to study and publish evidence on effectiveness of such interventions.

Summary, Recommendations, and A Call for Action

A tentative summary of the relatively recent but profusely growing theory and research in the area of resilience and CAMH reviewed above would suggest:

- GMH in general, and CAMH in particular as one of its essential components, is important for sustainable futures, but neglected especially in LMICs
- CAMH is influenced by several factors and at several levels, of which resilience to adversity or stress is an essential component
- Resilience has been traditionally conceptualized at individual level, but FR is also very important, especially in LMICs where there is severe resource constraint at school and social services level while family still continues to be an extremely important factor in individual development
- Resilience, contrary to what was thought initially, is not an inherent, innate, unmodifiable personality "trait" but rather a dynamic multilevel systemic "process" that is changeable over time and in turn changes the "outcomes" related to mental health, adjustment, and thriving in the face of adversity and stress
- An important corollary of this reframed conceptualization of resilience is that resilience – at all levels – is changeable and hence lends itself to appropriate interventions
- These interventions can be school based (e.g., by imparting LSE in schools) and/or family/community based
- Published evaluative studies in the area of CAMH, resilience, LSE, and related aeas are heavily biased toward HIC, with a wide gap in existing research from LMICs
- The limited literature from LMICs does raise hope that such interventions are at least partially effective, and potentially feasible
- They also demonstrate the need for (a) using a multicomponent intervention; (b) involving families and focusing on their well-being as well; (c) utilizing trained lay counsellors and peers (say, through NGOs) rather than depending solely on teachers and health practitioners; and (d) working within a context of the culturally and locally sensitive needs, with a longitudinal perspective
- Two areas where more inputs are required are (a) exploring the possibility of developing and utilizing digital platforms to enhance and facilitate individual and family education in this area and (b) need to demonstrate cost-effectiveness of these approaches to buttress the case for translation of any research-derived benefits to the real-world effectiveness and for possibly informing policy recommendations at a larger level.

Based on the above, we propose to develop research and implementation to LSE, promoting FR and IR, and enhancing CAMH through a combination of family-based approaches with school-based approaches in India and Kenya. Members of the author team have experience of implementing LSE in whole schools and seek to develop new approaches to work with families as well as societies. Thus, colleagues in Kenya and India are well placed to develop the research programs, as well as implement, and they already work closely with policy makers.

In light of the Commonwealth Secretariat's ambition to build a resilience toolkit, the wider the scope of the project, the more successful that kit might be when rolled out across 53 very different commonwealth countries. We will develop models of good practice and research evidence that supports good practice. We will do this in an action learning and participatory action research process, in which we combine face to face interventions with digital platforms to achieve our goals.

We propose to draw up a broad framework of research and implementation, scaling up, cost-effectiveness, and policy reforms. Our principles and values include codesign and respecting the cultural and social contexts to support policy, education, and health leaders as well as practitioners such as teachers, and young people to ensure sustainable solutions are adapted to contexts.

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Conflicts of interest

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