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Priorities for Implementing the Promotion of Mental Health and Primary Prevention of Mental Disorders:
Technical Evidence Paper

Margaret M. Barry, Aleisha M. Clarke, Inge Petersen

June, 2014
Priorities for Implementing the Promotion of Mental Health and Primary Prevention of Mental Disorders


Margaret M. Barry\(^1\), Aleisha M. Clarke\(^1\) and Inge Petersen\(^2\)

June, 2014

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Introduction

Good mental health is an integral component of population health and wellbeing and contributes to the functioning of individuals, families, communities and the social and economic prosperity of society [1,2]. Promoting mental health and wellbeing will deliver improved health and social outcomes for the general population and for people with mental health problems. Despite the recognition of the importance of mental health, it remains a neglected aspect of public health, especially in low- and middle-income countries (LMICs). People living in poverty and other forms of social disadvantage bear a disproportionate burden of mental disorders [3-5]. Addressing the social determinants of mental health is central to the global development agenda and affects progress towards the achievement of the Millennium Development Goals [6-8]. Mental health promotion and prevention needs to be integrated into population health improvement and development strategies, together with primary and secondary health care delivery [9].

This paper provides a briefing for policy and decision-makers on the evidence for mental health promotion and primary prevention interventions that can be implemented and sustained at a reasonable cost, whilst generating clear health and social gains in the population. Evidence from high, middle and low income countries clearly show that there are effective and feasible interventions for promoting mental health and preventing mental ill-health that represent a cost-effective use of resources and a strong case for policy investment [1,2,11-14]. This paper provides a guide, based on best available evidence, to support decision making in identifying priority areas and “best buys” for implementation.
The Case for Action

There is a solid case for investing in mental health promotion and primary prevention, whether on the grounds of improving population health and wellbeing, reducing social and health inequities, protecting human rights, or improving economic efficiency and development [1,2]. Strategies focused on curing mental ill-health alone will not necessarily deliver on improved mental health at a population level [1,15,16]. Mental health policies which embrace a public health perspective, focusing on promotion and prevention strategies at a population level, have been introduced in many countries globally as the most sustainable method of reducing the increasing burden of mental disorders and improving overall health and wellbeing. There is compelling evidence from high quality studies that mental health promotion and prevention interventions, when implemented effectively, can reduce risk factors for mental disorders, enhance protective factors for good mental and physical health, and lead to lasting positive effects on a range of social and economic outcomes [10-13,17,18].

Frameworks for Action:

**Mental health promotion** is concerned with promoting positive mental health and employs intersectoral strategies for strengthening protective factors and enabling access to resources and supportive environments that will keep individuals and populations mentally healthy. **Prevention** aims to reduce the incidence, prevalence or seriousness of targeted mental health problems, such as depression, anxiety, and suicide. Primary prevention can be universal or target populations at risk (selective and indicated) and is distinguished from secondary prevention that focuses on early detection and treatment, and tertiary prevention that aims to reduce disability and enhance rehabilitation of people with mental disorders. Current frameworks for mental health promotion [10,19] and prevention [20,21] seek to intervene at the level of strengthening individuals,
strengthening communities, reorienting health services, and promoting intersectoral actions to remove structural barriers to mental health at a societal level.

**Principles to Guide Effective Action:**

- Focus on the modifiable determinants of population mental health and wellbeing by addressing the social, psychological and socio-environmental factors that influence mental health at a population level

- Collaborate across sectors such as education, employment and community as well as health and social services to enhance mental wellbeing and reduce inequities

- Engage local communities and work in collaboration with individuals, families, community groups as well as health professionals and NGOs to strengthen competencies and local resources

- Adopt an ecological framework, recognizing the broader context of intervention delivery, to address multiple risk and protective factors that interact in the development of mental health and the prevention of mental disorders

- Adopt a lifespan approach that is sensitive to particular developmental vulnerabilities and opportunities associated with lifespan development

- Base decisions on the available evidence, focusing efforts where they can reap the largest health and social gains
• Invest in developing capacity for implementation to meet local priorities employing the most cost-effective approaches, balancing universal and targeted interventions

• Contextualize interventions within local conditions and resources ensuring that they are culturally appropriate, feasible and sustainable

• Mainstream interventions by integrating mental health promotion and prevention action within existing health, community and social services

• Invest in developing research to monitor the implementation and outcomes of local interventions

Method for Assessing Best Evidence

The evidence for effectiveness of interventions was taken from existing databases and systematic reviews in high income countries (HICs) and LMICs and draws particularly on a review of the evidence of mental health promotion interventions in LMICs completed for the WHO Task Force on Mainstreaming Health Promotion [22], and a systematic review on interventions for young people in LMICs [13]. To assess the strength of available evidence on mental health promotion and primary prevention interventions, the Assessing Cost-Effectiveness in Prevention Project (ACE-Prevention) grading system [23] was used. This system, which provides a single framework for the evaluation of evidence on clinical, public health and behavioural interventions, grades the level of evidence into three categories:
1. **Sufficient evidence** – effectiveness is demonstrated by sufficient evidence from well-designed research (at least one systematic review of randomized control trials (RCTs) as well as several good quality RCTs or several high quality pseudo RCTs using alternate allocation or some other method or non-RCTs with comparative groups), where the effect is unlikely to be due to chance or bias.

2. **Limited evidence** - when there is limited evidence from studies of varying quality i.e. when the effect is probably not due to chance but bias cannot be ruled out as a possible explanation for the effect (One RCT of uncertain quality and one high quality pseudo RCTs/ one high quality non-RCT with a comparative group as well as evidence from several pseudo-randomized or non-randomized studies with a comparative group but of uncertain quality to rule out bias; or evidence from a number of good quality cohort studies with no control/historical control that consistently suggest an effect).

3. **Inconclusive evidence** - when there is inadequate evidence due to insufficient or inadequate quality research such as no evidence of any systematic reviews or RCTs although there may be a few poor quality pseudo-randomized/ non-RCTs with comparative groups /cohort studies.

In selecting priority interventions based on available evidence, “best-buys” are understood to be interventions for which there is not only evidence of their cost-effectiveness but also evidence of their feasibility in relation to their cultural acceptability as well as capacity of existing service delivery systems to deliver the intervention to the intended target population within existing resource constraints [23]. “Good buys” are interventions that do not meet all these criteria but are recommended based on the best available evidence. Given the paucity of cost effectiveness studies on mental health promotion and prevention research in LMICs, we recommend a set of “best buys” based on cost effective evidence from high-income countries (HICs) and evidence of feasibility in LMICs. Feasibility was determined on the basis of whether a task
sharing approach was successfully adopted by a number of RCTs, given the limited evidence of interventions that have been scaled up more broadly in LMICs.

**Implementing Mental Health Promotion and Prevention Strategies: Priorities for Action**

Table 1 identifies a number of priority areas for implementation and summarizes the evidence on mental health promotion and prevention interventions from high, middle and low income countries in terms of their ability to improve mental health, lead to social and economic gains/benefits, and the feasibility of their implementation. The interventions cover population groups across the lifespan from infancy to adulthood and include actions which can be delivered across different settings and delivery platforms.

**Promote infant (0-3 years) and maternal mental health  (Best buy)**

Infant mental health is dependent on the context of care and the relationship with the primary caregivers. Systematic reviews show that integrating mental health promotion and prevention within routine pre and postnatal care services, including home visiting parenting programmes, lead to improved child development and parenting skills, reduced behavioural problems and improved maternal health and social functioning [24-28]. Antenatal screening and targeted prevention interventions lead to improved detection and management of postnatal depression for women at risk of depression and intimate partner violence [29,30]. The effects of early years interventions are especially evident

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for the most vulnerable families, including those living in poverty, war torn areas and mothers with depression [31-34]. Economic analyses of several childhood interventions demonstrate that effective interventions can repay their initial investment with savings to the government and benefits to society, with those at risk making the most gains [35-37,12].

There is convincing evidence of the feasibility of implementing home visiting interventions in LMICs with trained community workers [38,39] leading to long term positive effects on the children’s development, including those who are underweight and undernourished [40] and improved mental heath for mothers from very poor communities [41,42]. Home visiting interventions, which have demonstrated long term positive outcomes for mothers and babies [43], have the potential to be scaled up in LMICs and are recommended as a “best buy”.

**Promote early child mental health development (3–6 years) through pre-school education and community-based parenting programmes (Good buy)**

Systematic reviews from HICs indicate that high quality early childhood enrichment provided through preschool results in enduring gains in children’s social and emotional wellbeing, cognitive skills, problem behaviours and school readiness [28,44,45]. Longitudinal studies from HICs and LMICs show evidence of long-term effects on school attainment, social gains and occupational status [31,46-48], with greater benefits for higher risk and more disadvantaged children [49]. Economic analyses from HICs of pre-school programmes indicate a benefit to cost ratio as large as 17.6 to 1 [12,35,46] with favourable benefit-cost ratios being reported for even the most higher-cost intensive programmes [50]. Early childhood development interventions have also been identified as a good investment for reducing inequities in the development of children’s potential perpetuated by poverty, poor health, poor nutrition, and restricted learning opportunities [49]. Interventions using existing resources, such as community workers, teachers and local mothers, is an important advantage when considering the feasibility of implementation and scaling up in LMICs.
Examples of successful implementation in LMIC contexts include the adaptation of the Incredible Years training programme for teachers, parents and children in Jamaica [51], development of a preschool programme for families of low education in Bangladesh [48]; and the long term impact of the Turkish Early Enrichment Project implemented by mothers with the help of local paraprofessionals [47]. Due to limited evidence on the potential for scaling up in LMICs, preschool education and community parenting interventions are recommended as a “good buy”.

Promote young people’s (6-18 years) life skills and resilience through school-based interventions in primary and post-primary schools (Best buy)

Universal and Targeted Social and Emotional Learning (SEL) Interventions

Systematic reviews from HICs demonstrate that universal SEL interventions in primary and post-primary schools lead to long terms benefits in children’s social and emotional functioning and academic performance [52-57]. The promotion of social and emotional wellbeing is a core feature of the WHO’s Health Promoting Schools initiative [58], with interventions employing a whole school approach (involving staff, students, parents, school environment and local community) being more likely to be effective than curriculum only programmes, including addressing problems such as bullying [59]. Targeted interventions for children at higher risk, which enhance coping skills, resilience and cognitive skills, are effective in preventing the onset of mental health problems such as anxiety, depression and suicide [60-64] with some interventions being adapted for LMIC settings [65,66].
A review of school-based interventions in LMICs concluded that there is strong evidence of significant positive effect on students’ emotional and behavioural wellbeing, including reduced depression and anxiety and improved coping skills [13]. These interventions can be feasibly delivered by teachers in low-resource settings by integrating social and emotional learning and lifeskills development into a health promoting school approach. While 82% of EMRO countries are reported to have school-based activities [18], efforts need to be stepped up to improve coverage, with only two countries having more than 50% coverage. Fidelity also effects the impact of SEL interventions, with attention needing to be paid to teacher training; teacher support and supervision; as well as implementation within the whole school environment [67]. Economic analyses indicate that SEL interventions are cost-saving with net savings in terms of the impact on crime and health outcomes [12,68]. Universal and targeted school-based interventions are recommended as a “best buy”.

Selective classroom based interventions (CBI) for vulnerable children (orphaned by HIV/living in areas of conflict/war)
The prevalence of mental disorders in children living in countries at war and with complex emergencies is extremely high. For example, in the Eastern Mediterranean region, estimates of mental disorders in school children range from 22.2% in Afghanistan to 54.4% in boys in Palestine [18]. Classroom-based interventions, which aim to reduce distress and enhance resilience and coping skills, have been shown to improve psychological functioning and coping [69-71] and should be implemented in countries with complex emergencies on a broader scale. These interventions can be feasibly delivered by trained school counselors/social workers and have been implemented in LMIC settings [72-76] as demonstrated by the implementation of the Boston CBI at scale in Palestine [73] and described in Box 1.
**The Classroom-based Intervention (CBI) Programme in the West Bank and Gaza**

The CBI programme provides structured expressive-behavioural group activities over 15 sessions to reduce traumatic stress reactions and strengthen children’s resiliency to cope with the stress of ongoing violence and trauma. The programme in Palestine was delivered by trained school counsellors and other social workers to over 100,000 children. A randomized control trial involving 664 children from 6-16 years found that the programme improved psychological functioning and coping in young Palestinian boys and girls (aged 6-11 years) as well as in adolescent girls (aged 12-16 years), enabling them to function as other children would in relation to family, school and peers. This was, however, not the case with adolescent boys (aged 12-16 years) who demonstrated an increased tendency to use avoidance (of cognitions and feelings) as a defense mechanism, which may relate to their greater exposure to violence/conflict. While modifications to the programme are indicated for adolescent boys, the positive impact on younger children and adolescent girls provides a solid base for recommending that the programme be disseminated widely in countries experiencing conflict/war.

**Parenting and family strengthening programmes for school-going children (Good buy)**

Studies from HICs indicate that universal and targeted parenting/family strengthening interventions promote child emotional and behavioural adjustment, particularly in younger children (3-10 years) and can prevent conduct disorder in “at-risk” families [77-80]. In relation to the latter, economic modelling exercises indicate that the benefits of targeted parenting programmes for the prevention of persistent conduct disorders outweigh the costs in the region of 8 to 1 in HICs [12], with benefits accruing mainly in the criminal justice system. In view of limited evidence from LMICs, parenting/family strengthening interventions for school-going children are suggested as a “good-buy” with the recommendation that studies in the Eastern Mediterranean region be conducted to demonstrate the effectiveness and feasibility of parenting/family strengthening interventions for improving child mental health outcomes.
Promote the mental health and social wellbeing of adolescents and young people (12-18 years +) through out-of-school multicomponent interventions (Good buy)

Out-of-school youth empowerment programmes have been shown to improve the mental health of young people in LMICs through promoting lifeskills, greater gender equity, reduced intimate personal violence and poverty reduction, thus addressing some of the social determinants of mental health. There are a number of multicomponent community-based interventions that address emotional and sexual health, HIV prevention, substance misuse, violence prevention, literacy and social functioning among vulnerable youth, which show the potential for scaling up [81-83]. The implementation of youth empowerment programmes is recommended as a “good buy”, with the ISHRAQ intervention in Egypt [84] providing an example of a promising intervention from the Eastern Mediterranean region delivered using a task sharing approach.

Community empowerment interventions to promote mental health and reduce the risk of mental disorders for families in poverty and debt (Good buy)

Research clearly demonstrates the impact of poverty and debt on mental health [3-5] with studies from HICs showing a 33% higher risk of developing depression and anxiety for those experiencing unmanageable debt [85]. Economic analyses based on modeling show that debt advice services can be cost-effective from both a societal and public health expenditure perspective [12]. A number of LMICs have developed community banks and microcredit schemes, which provide loans to the poor thus reducing the risk of mental disorders and suicide. There is limited evidence from LIMCs that poverty focused initiatives, such as the combined microfinance and health training interventions, can have positive mental health and social benefits including; improved wellbeing and psychological health, improved nutrition, higher educational attainment, reduced risk of violence, empowerment and improved social participation and economic wellbeing [86-88]. A systematic review of the evidence on the impact of microfinance (micro-credit and micro-savings) for poor people in Sub-Saharan Africa, reported positive impacts
on people’s savings, health, food security and nutrition. The review found some evidence that micro-credit is empowering women, however, this was not consistent across the studies reviewed. The research to date indicates that the more traditional microcredit schemes, which incorporate health and education training alongside the provision of credit, are more effective in terms of mental health benefits [89].

While there is a need for further quality evaluations, there is encouraging evidence, for example, from the IMAGE intervention combining gender and HIV training with microfinance initiatives for women in South Africa [90,91] and an economic empowerment initiative for AIDS orphaned children has also shown positive impacts on participants’ self-esteem and reduced levels of depression [92]. The engagement of local women trained as facilitators is important in terms of the sustainability of these interventions. Microfinance interventions for young adults and women provide encouraging evidence that combined microfinance and training interventions promoting essential lifeskills, asset building and resourcefulness, can result in significant mental health and wellbeing benefits and are recommended as a “good buy”.

**Training primary health care (PHC) providers in opportunistic mental health promotion and prevention interventions for adults and older people (Good buy)**

There is good evidence from HICs that training of PHC providers in screening and brief interventions for alcohol misuse can reduce harmful alcohol use and that training them in the identification and management of mental disorders can prevent suicide [116]. Given that many patients first seek care from PHC practitioners in the Eastern Mediterranean region [18], these interventions are recommended as “good buys” with brief advice by PHC practitioners on alcohol consumption being considered more cost effective than policy level interventions (see section on policy/regulations) in countries where harmful drinking is low, given that risky drinking is not widespread [93]. While treatment guidelines in Eastern Mediterranean countries exist in some PHC clinics (76% or 13 countries), there needs to be efforts to improve coverage, with only 18%
(3 countries) having these guidelines in 80% of their clinics [18]. Brief passive psycho-educational interventions for depression and psychological distress should also be considered given evidence from HIC that these interventions can reduce symptoms [117].

Policy and Regulations

Advocate for the implementation of policies and regulations on alcohol consumption and restricting access to commonly used lethal means of suicide (Best buy)

Policies and regulations on alcohol consumption are the most cost-effective strategy for reducing harmful alcohol use globally, with raised tax/price on alcohol products the most cost-effective, followed by restricted access to alcohol and bans on alcohol advertising, particularly in countries where harmful drinking is high [93]. Regulations restricting access to commonly used lethal means of suicide (region specific) is also a cost effective means to reduce suicide rates [116].

Advocate for workplace policies and programmes that will improve the mental health of working adults (Good buy)

Policy and legislation to support the mental health of workers include initiatives for creating healthy working environments through integrating mental health into Health and Safety regulations, workers’ rights, job security, increased job control and autonomy, and anti-bullying measures [94]. There is limited evidence from HICs that integrated workplace interventions combining both individual and organizational level approaches will improve and maintain mental health at work [95] with the gain from comprehensive approaches being reflected in reduced absenteeism, improved wellbeing and productivity [94]. Economic analyses indicate that workplace interventions addressing depression and
anxiety through screening and cognitive behavioural therapy courses are cost-saving due to a reduction in both absenteeism and presenteeism (lost productivity while at work) [12,96]

There is a paucity of evidence from LMICs on the effectiveness of mental health policies and interventions in the workplace. Given that 75% of the world’s labour force is in LMICs there is an urgent need for further research on the implementation of workplace mental health policies and interventions. The New SOLVE training package, developed by the International Labour Organization (ILO), integrates workplace health promotion into occupational health and safety policies. This training programme aims at reducing the incidence of work-related stress, workplace violence (physical and psychological), tobacco, alcohol and drug misuse, and HIV/AIDS. This intervention, which has been implemented in several LMICs [97], is recommended for implementation supported by more rigorous research on its impact in the Region.

Next Steps:

There is convincing evidence of the effectiveness of interventions for mental health promotion and primary prevention of mental disorders that could be feasibly implemented in the Eastern Mediterranean region. There is an urgent need to invest in building the policy, practice and research capacity in the region for implementing and evaluating the interventions identified as “best buys” and good buys”. Developing the regional evidence base on the implementation, outcomes and actual costs of the interventions described in this paper is an important next step, together with further work on the cultural adaptation and tailoring of intervention approaches to local needs and resources. Workforce capacity needs to be built for the integration of interventions into existing public health, mental health, development and social polices and programmes in partnership with the health, social services, education, employment and community sectors. This will ensure positive impacts on population mental health, especially for the most vulnerable, together with wide ranging health, social and economic benefits for society.
<table>
<thead>
<tr>
<th>Intervention area</th>
<th>Specific Approaches/Actions</th>
<th>Quality of Evidence from HIC</th>
<th>Quality of Evidence from LMIC</th>
<th>Mental health and socio-economic benefit</th>
<th>Feasibility of implementation in LMIC settings and practice issues</th>
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<tbody>
<tr>
<td>Infant and maternal mental health promotion and prevention of postnatal depression delivered through community and primary care services (Children 0-3 years)</td>
<td>Home visiting programmes for new mothers and their babies integrating mental health promotion within routine pre and post natal care services</td>
<td>Sufficient evidence from HIC of long term positive impacts on infant development and maternal mental health and wellbeing (Level I studies[24,25,28,32, 77,98])</td>
<td>Significant benefits for vulnerable families and those at higher risk of adverse outcomes [33,99]</td>
<td>Mental health benefit</td>
<td>Improved infant development and wellbeing</td>
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<td>Improved child cognitive development and reduced behaviour problems</td>
<td>Low cost feasible interventions especially beneficial for vulnerable families.</td>
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<td>Improved maternal health and social functioning</td>
<td>Interventions delivered in the community by community workers who receive training and supervision from health professionals</td>
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<td>Improved parenting skills</td>
<td>Practice issues: Interventions should start prenatally, be of high intensity and followed up by comprehensive postnatal support and services over the first year</td>
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<td>Improved detection and management of postnatal depression [79]</td>
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<td>Sufficient evidence from LMICs of clear benefits for families living in poverty including underweight and undernourished children (1 Level 1 [32]; Level II studies, [34,38,40,41,43, 102-104]</td>
<td>Socio-economic benefit</td>
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<td>Cost-effectiveness of health visiting interventions reflected in improved health, quality of life, education and workforce participation [12,106]</td>
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<tr>
<td>Promote early childhood mental health development through pre-school education for vulnerable families (3-6 years)</td>
<td>Access to pre-schools offering day centre and home based educational interventions for children living in poverty – high</td>
<td>Sufficient evidence from HICs of the long term impacts of preschool interventions on</td>
<td>Limited evidence from LMICs of the long term effectiveness of quality preschool</td>
<td>Mental health benefit</td>
<td>Studies from HICs and LMICs show long term positive impacts on children’s social and emotional</td>
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Promoting early childhood mental health development through pre-school education for vulnerable families (3-6 years)
<table>
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<tr>
<th>Develop young people’s life skills and resilience through school-based interventions for school-going children and adolescents (+6-18 years)</th>
<th>Universal social and emotional learning (SEL) delivered through school-based lifeskills programmes in primary and post-primary schools.</th>
<th>Sufficient evidence from HICs of the effectiveness of SEL and whole school approaches to mental health promotion in terms of children’s improved social and emotional functioning, academic performance and social wellbeing [28,52-57]</th>
<th>Sufficient evidence of effectiveness of SEL programmes in schools from LMICs [1 level I study [13]; level II studies [108-111]]</th>
<th>Sufficient evidence of targeted interventions in LMICs level I studies [13], Level II studies [65,66]</th>
<th>Mental health benefit</th>
<th>Mental health benefit</th>
<th>Universal school-based SEL interventions can be feasibly and effectively implemented in real world settings on a broader scale as demonstrated by the HEALTHWISE programme in South Africa (currently being taken to scale) [67].</th>
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<tr>
<td></td>
<td>Targeted interventions which enhance resilience, cognitive and coping skills for children at increased risk of depression and anxiety</td>
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<td></td>
<td>Socio-economic benefit</td>
<td>Cost benefit modeling exercises in HICs suggest that the benefits of whole school interventions in particular, outweigh the cost just on reduced risky behavior [106].</td>
<td>Practice issues: Teachers can be trained to deliver these interventions. Implementation fidelity effects level of impact. Attention needs to be paid to teacher training; teacher support and supervision; and school environment.</td>
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<td></td>
<td>Classroom based</td>
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<td></td>
<td>quality education and parent support focusing on children’s emotional, behavioural and social development and parents’ parenting skills and mental wellbeing</td>
<td>multiple risk and protective factors for children’s mental health, academic and social functioning [Level I studies [28,44,45]; Level II studies [46]]</td>
<td>parenting interventions (Level II studies – [33,47,48]; Level III-1 study [107])</td>
<td>parental wellbeing and cognitive skills development</td>
<td>Socio-economic benefit</td>
<td>Improved school readiness, social functioning and occupational status [46,47]. Benefits to cost ratios up to 17.6 to 1 with greater benefits for children at higher risk [12,35,46].</td>
<td>Practice issues: Training for teachers, parents and community workers in the use of culturally and developmentally appropriate teaching methods and materials. Higher quality and more intensive programmes lead to more enduring effects on outcomes</td>
</tr>
</tbody>
</table>
| Parenting and family strengthening programmes for children and adolescents (± 3-16 years) | Universal and targeted parenting/family strengthening programmes which enhance parenting and family communication skills for promoting children’s development | Sufficient evidence that universal and targeted parenting programmes impact positively on child emotional and behavioural adjustment (3-10 years), (9). Level I studies – (77,78) especially for families of children with conduct disorders (79,80,99) | Limited evidence of effectiveness in LMICs 1 Level II study (83); Level III-1 studies (113,114) | Mental health benefit Studies from HICs indicate that universal and targeted parent/family strengthening programmes improve emotional wellbeing and behavioural adjustment. Studies from LMICs provide promising evidence of improved parenting practices as a result of family strengthening interventions  
Socio-economic benefit Studies from HIC indicate that targeted interventions for children at risk for emotional problems are the most cost-effective. Modelling exercises on parenting programmes in HIC indicate that the benefits can outweigh the costs by a factor of 8 to 1, particularly in relation to the prevention of conduct disorders (106,12,37) | Promising evidence of the feasibility of implementing parenting/family strengthening interventions on a broader scale in real world settings in LMIC in collaboration with community members  
Practice issues: Programmes adopting an empowerment approach carried out in partnership with parents, families, local communities and services are more likely to be successful in reaching those most in need |
| **Promoting the mental health and social wellbeing of adolescents and young people through out-of-school multicomponent interventions (±12-30 years)** | Out-of-school Empowerment programmes for adolescents/young adults designed to promote youth health through the use of multicomponent interventions | Sufficient evidence of effectiveness 4 Level II studies [82, 83,90-92] and 1 Level III study [84] | Mental health and socio-economic benefit  Studies from LMICs indicate that out-of-school programmes focusing on gender and/or economic empowerment can be beneficial for promoting greater gender equity and reducing violence against women which can have a positive impact on mental health | Promising evidence of feasibility of implementing gender and/or economic empowerment interventions on a broader scale in real world settings in LMIC  Practice issues: Multidimensional interventions have been successfully implemented in LMICs with the active involvement of community members in planning and delivery |
| **Community economic empowerment interventions for families in poverty and debt** | Community microcredit schemes which incorporate health and education training alongside the provision of credit for income generation | Limited evidence from HICs of the effectiveness of debt advice to reduce mental health problems resulting from debt (Level II study [115]) | Mental health benefits  Studies from LMICs indicate positive impacts on empowerment, psychological health, wellbeing, reduced depression  Socio-economic  Improved nutritional status and educational attainment, lower rates of domestic violence and improved social participation and economic wellbeing | Limited but promising evidence of feasibility of implementing microfinance interventions on a broader scale in real world settings in LMIC  Practice issues: Engagement of local women trained as facilitators important for sustainability. Interventions combining health and education training with the provision of credit have greater mental health benefits |
| **Training PHC providers in opportunistic mental health promotion and prevention** | Screening and brief interventions for problem drinkers by PHC workers | Sufficient evidence from HIC [93] | Sufficient evidence from LMIC [93] | Mental health/health benefits  A reduction in harmful alcohol use can help prevent a number of | Promising evidence of the potential for implementing screening and brief...
### Interventions in adults

<table>
<thead>
<tr>
<th>Improved recognition and treatment of mental disorders, particularly depression by general practitioners reduces suicide rates</th>
<th>Sufficient evidence from HIC [116]</th>
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<tbody>
<tr>
<td>Brief passive psychoeducational interventions for depression and psychological distress can reduce symptoms</td>
<td>Sufficient evidence from HIC [117] (One level 1 study).</td>
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</table>

**Mental Health Benefits**
- Reduced suicide rates

**Socio-economic benefits**
- Reduced mortality and relatively cheap – can be delivered by PHC practitioners

**Mental Health Benefits**
- Passive psycho-educational materials have been found to reduce psychological distress and depressive symptoms in HIC [117]

**Socio-economic benefits**
- Relatively cheap, less stigmatizing and can be delivered by non-professionals in PHC settings

**Interventions for alcohol on a broader scale in real world settings in LMIC**

**Chronic diseases including**
- Certain cancers, neuropsychiatric disorders (unipolar depression and alcohol use disorders) diabetes,
- Cardiovascular disease, cirrhosis of the liver, foetal alcohol syndrome [93]

**Socio-economic benefits**
- A reduction in harmful alcohol use leads to a reduction in intentional/unintentional injuries, interpersonal violence and accidents as well as increased productivity.

**Mental Health Benefits**
- Reduced mortality and relatively cheap – can be delivered by PHC practitioners

**Socio-economic benefits**
- Relatively cheap, less stigmatizing and can be delivered by non-professionals in PHC settings
### Policy/Regulations

#### Advocate for workplace policies and programmes that will improve the mental health of working adults

| Interventions that integrate mental health promotion into workplace health and safety policies and health promotion programmes | Limited evidence from HICs of the effectiveness of integrated workplace interventions (individual and organizational change) on workers’ mental health Level I study [118,119]; Level II study [120] | Inadequate evidence from LMICs due to insufficient research |

#### Advocate for implementation of policies and regulations on alcohol consumption and restricting access to means of suicide

| Raised tax/price on alcohol Restricted access to alcohol Bans on alcohol advertising | Sufficient evidence that raised tax/price on alcohol, restricted access and bans on alcohol advertising reduce alcohol consumption [93] | Sufficient evidence that raised tax/price on alcohol, bans on alcohol advertising reduce consumption of alcohol [93] |
| Restricting access to potential lethal means of suicide | Restricting access to commonly used lethal means of suicide e.g., firearm control legislation, restrictions on pesticides, | Sufficient evidence that restricting access to commonly used means of suicide reduce suicide rates [116] |

### Mental health and socio-economic benefits

Evidence from HICs of cost savings for both business and the health system due to improved psychological health, reduced levels of sickness absence and increased productivity [12].

The New SOLVE initiative has been implemented in several LMICs [97] and offers a feasible approach to integrating workplace mental health promotion into occupational health and safety policies.

### Mental health/health benefits

Reduced harmful alcohol use can help prevent a number of chronic diseases including certain cancers, neuropsychiatric disorders (unipolar depression and alcohol use disorders) diabetes, cardiovascular disease, cirrhosis of the liver, foetal alcohol syndrome as well as intentional and unintentional injuries.

### Socio-economic benefits

Raised tax/price on alcohol the most cost effective [93]. Can provide greater tax revenue for health care.
<table>
<thead>
<tr>
<th>Detoxification of domestic gas has been shown to decrease rates of suicide</th>
<th>Mental health benefits</th>
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<td>Reduced mortality</td>
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References


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