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REVIEW ARTICLE

Mental Health Literacy: A Strategy for Global Adolescent Mental Health Promotion

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Abstract: ***Background*:** Adolescence is defined by key transitional elements which are considered within a cross-cultural context. The importance of building mental health capacity for adolescents in low- and middle-income countries (LMICs) as well as high-income countries (HICs) is reviewed.

***Objectives*:** To review the developmental period of adolescence, global needs for mental health promotion, the needs of LMICs while emphasizing building adolescent mental health capacity, and the importance of efforts to promote mental health literacy.

***Methods*:** Mental health literacy (MHL) is presented as a strategy that can increase public awareness regarding mental health issues among adolescents. Increased awareness through an MHL framework is discussed as a way to build adolescent mental health capacity; with this work ideally occurring through global communities of practice (COP), dialogue, collaboration, and mutual support that aim to build innovation in systems of mental health promotion.

***Results*:** The authors review structural components in research, practice, and policy that seek to build global adolescent mental health capacity, nested within COPs involving HICs and LMICs working together to advance mental health promotion for children, adolescents, and young people.

***Conclusion*:** The article concludes with a discussion of how the three structural components (*i.e.*, research, practice, and policy) can address gaps in the provision of global mental health services for adolescents to meet adolescent mental health needs in LMICs and HICs. A multi-sectoral approach emphasizing a global COP is presented as a way to scale up capacity and maximize outcomes.

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1. INTRODUCTION: DEFINING ADOLESCENCE

Adolescence has been defined as "the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 19 years" (Ramadass, Gupta, & Nongkynrih, 20017, p. 468; World Health Organization [WHO], n.d.). WHO defines young people as encompassing ages 10 to 24 and youth as those in the 15 to 24 age range (WHO, n.d.). With the exception of infancy, adolescence is one of the most intense developmental times of change. These changes encompass all areas of an adolescent's life -- biological, social, educational, psychological, and developmental. They occur within the adolescent's cultural context that may lend itself to various transitions during adolescence.

Definitions of adolescence can vary across national contexts. For instance, while some cultures may view adolescence as a time of forging autonomy and independence, others might not view leaving the family as a critical task of adolescence. Further, while adolescence has been viewed by

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some as a time of "storm and strife", more recent research has examined the brain changes that occur during this period of development (*e.g*., maturation in reward, relationship, and regulatory neuronal systems) and documented the lack of concordance between the reward/limbic system and the regulatory/pre-frontal cortex system that develops later (Curtis, 2015; Steinberg, 2014). Brain research has helped us understand that the brain continues to develop into the 20s, thus presenting implications for the length of adolescence (*e.g*., at what age does it end?), as well as understanding that brain connections linked to reasoning, emotion, and impulse control continue to develop and mature throughout this time (Giedd, 2015).

Cultural contexts can lend themselves to transitional shifts throughout adolescence. Such transitions are broad and simultaneously experienced by the adolescent. These include: academic level of study (*e.g*., middle school to high school; high school to university); from living at home to living in a boarding school, university setting, or one's own home, *etc*. For adolescents living with their family of origin, such shifts might include increased responsibility for taking care of and contributing to the family's needs; transitions from one's family of origin to developing one's own family; transitions to greater financial responsibility for one's self and/or family of origin or new family; and transitions from being a student to being employed. The vast amount and array of potential transitions for adolescents highlight some of the key challenges that emerge during this time of life.

Ideally, these myriad changes experienced by adolescents are met with support from family, community, school, peer group, and the broader cultural context. The idea here is that support from the ecological community surrounding the adolescent can encourage positive developmental changes and mental health promotion (Clauss-Ehlers, Chiriboga, Hunter, Roysircar, & Tummala-Narra, 2019), while at the same time being sensitive to the needs of people involved in promoting adolescent mental health, and in some cases providing care for adolescents with more severe challenges (Dice & Zoena, 2017). At the same time, a lack of such support may lead to a rupture in achieving developmental milestones and transitions. Clearly, many challenges faced by adolescents indicate a need for global, targeted mental health promotion for this group.

2. PREVALENCE OF ADOLESCENT MENTAL HEALTH ISSUES GLOBALLY

Using a more narrow definition of ages 10-19, globally there are around 1.2 billion adolescents that make up 16 percent of the world's population (UNICEF, 2016). Data indicate that 80% of adolescents live in resource-constrained low- and lower-middle income countries (LMIC; Fisher & Cabral de Mello, 2011; Juengsiragulwit, 2015). While the WHO has long recommended mental health promotion for children and adolescents (Juengsiragulwit, 2015), LMIC countries that tend to have proportionally higher adolescent populations do not necessarily have policies that reflect child and adolescent mental health services (CAMHS) in place.

A dearth of policies is further exacerbated by the fact that LMICs often lack a mental health treatment infrastructure. For instance, LMICs have fewer pediatricians trained in mental health as well as fewer CAMH professionals and less community-based mental health care (WHO, 2005). In a literature review that sought to identify obstacles and opportunities for CAMHS in LMICs, Juengsiragulwit (2015) concluded that "A surprising finding from the review is that the current situation of CAMHS in LMICs is quite similar to that of 40 years ago. Evidence is scarce, and much of the evidence base comes from reviews of limited data or expert opinions rather than objective measures of interventions" (p. 120).

Building capacity for CAMHS in LMICs, as well as high resource settings, is critical. These efforts seem particularly relevant, given that many mental health issues experienced by adults have onset during adolescence. The data indicate, for instance, that the average age of onset (AAO) for 50% of mental health issues is during the mid-teen years and 75% by the mid-20s (Kessler, *et al*., 2007). Even in high-income countries (HICs) such as the United States (U.S.), in 2016, only 41% of 3.1 million adolescents who experienced depression received mental health treatment (U.S. Department of Health and Human Services, Substance Abuse and Mental Health Administration [USDHHS], 2017). Further, while more than 15 million U.S. adolescents needed psychiatric inter-

vention, only approximately 8,300 U.S. psychiatrists were specifically trained in child and adolescent psychiatry (USDHHS, n.d.).

Stigma and cultural attitudes regarding mental health issues remain an additional core factor that can interfere with access and utilization of mental health services among adolescents (USDHHS, n.d., Clauss-Ehlers, *et al*., 2019). As described by Pescosolido, Olafsdottir, Martin, and Long (2008), stigma "marks a person as tainted, calls their identity into question, and allows them to be devalued…[it] deprives people of their dignity, challenges their humanity, and interferes with their full participation in society" (p. 21). Dynamics associated with mental health stigma have shown mixed results across nations. In the 1950s, for instance, studies focused on mental health stigma found that people had a limited understanding of mental illness (Pescosolido, *et al*., 2008). In their review of studies conducted in the 1990s, Pescosolido *et al*. (2008) found that the U.S., Canada, Ireland, and Britain supported "a high level of acceptance of scientific advances marking biological and genetic causes of mental health problems; an acknowledgment of, and differential response to types of mental health and substance abuse problems (*e.g*., depression, schizophrenia, addictions); and a recognition of the existence of (and support for) effective treatments" (p. 22).

At the same time, however, studies from the U.S. and Canada also indicated a public unwillingness to work with someone who had a mental illness. Views of those with mental illnesses as being violent, dangerous, and unpredictable were also reflected in these research findings (see Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999). Research in Hong Kong demonstrated a similar dynamic whereby the public indicated greater understanding and awareness of mental health issues alongside a somewhat increased negativity towards those who had received mental health services (Chou & Mak, 1998). Mental health related stigma has influenced access and utilization of services in Ghana, Uganda, South Africa, and Zambia (Kleintjes, Lund, & Flisher, 2010). Research has also demonstrated that mental health related stigma interferes with people accessing services in many Latin American countries (Caldas de Almeida & Horvitz-Lennon, 2010).

Mental health related stigma as it plays out for adolescents introduces some specific considerations. Because adolescence is a time of identity development and transition, the risk of internalizing others' stigmatizing attitudes may have a detrimental effect on adolescents and developmental processes experienced by them. Further, adolescents may internalize stigma related to their definition of self not being accepted by others (Clauss-Ehlers *et al*., 2019). For instance, Bostwick *et al*. (2014) found a diverse group of sexual minority youth experiencing stigma related to their identification as lesbian, gay, bisexual, and transgender (LGBT). Sexual minority youth are twice as likely as heterosexual youth to consider suicide (Bostwick *et al*., 2014). Hence, identification and the intersectionality of such identifications that characterize adolescence may be met with stigmatizing attitudes that put adolescents in jeopardy of internalizing such attitudes or not seeking treatment.

Parental/caregiver attitudes may also contribute to the experience of mental health related stigma among adolescents. The literature indicates that parents report more stigma related to seeking mental health services for their children in comparison to getting medical care (Young & Rabiner, 2015). Parents may struggle with accepting that their adolescent has a mental health issue that warrants treatment. Family support programs that provide multiple levels of support for adolescents and their families have been shown to be effective in working with adolescents struggling with a mental health issue as well as their families (Kuhn & Laird, 2016). Related interventions from various countries that have demonstrated efficacy in mental health promotion among adolescents are presented below.

3. GLOBAL MENTAL HEALTH LITERACY TO PROMOTE ADOLESCENT MENTAL HEALTH

One effective way to promote mental health is to increase public knowledge via Mental Health Literacy (MHL). The United Kingdom's (U.K.) Mental Health Foundation defines MHL in terms of knowledge and beliefs regarding mental disorders that help promote their recognition/identification, management, and/or prevention (Mental Health Foundation, n.d.). MHL has also been thought to further spread awareness of mental health disorders and different treatment possibili-

ties (Melas, Tartani, Forsner, Edhborg, & Forsell, 2013). Due to the treatment gap (defined here as onset or continuation of a mental health issue and no access to mental health care and support), and lack of MHL, it is often the case that individuals who develop a mental disorder will receive delayed or no professional help (Kohn, Saxena, Levav, & Saraceno, 2004).

While most studies have focused on MHL among adults, some research has explored this concept among adolescents (Melas *et al*., 2013). A study conducted in Sweden examined how much Swedish adolescents were aware of symptoms related to depression and schizophrenia. The 426 adolescents who participated in the study were given two vignettes and asked to identify the extent to which they reflected symptoms of depression and schizophrenia. Results indicated that 42.7% and 34.7% of respondents identified depression and schizophrenia. Only 22.5% of research participants suggested professional help to be needed for the depression vignette and 32.6 % for the vignette reflecting schizophrenia. Further, while openness to helping someone experiencing a mental health issue was indicated by 58.2% of the sample (mostly female respondents), 11.5% indicated stigmatizing attitudes in response to the vignette that depicted an experience of schizophrenia. The researchers concluded that there are relatively low levels of MHL among teenagers in Sweden and that action is required to promote mental health. The recommendation was made to implement awareness campaigns as well as psychoeducation as part of the school curriculum (Melas *et al*., 2013).

In a study of MHL among secondary teachers (*i.e*., teachers who are primarily in the classroom with adolescents), Kutcher *et al*. (2016) applied an MHL curriculum in schools in Tanzania. Teachers received MHL-focused interventions as a way to support positive mental health promotion among secondary school students (Kutcher *et al*., 2016). Secondary school teachers in Tanzania learned about the African Guide (AG)--a resource adapted from a Canadian version of an MHL guide--and participated in training workshops.

Study results were overwhelmingly positive. Through workshops and AG interventions, secondary teachers reported a significant increase in both mental health and curricular knowledge. At the same time, teachers reported a significant decrease in stigmatized attitudes about mental health issues. Interestingly, after participating in the interventions, the study found that the teachers reported greater efficacy with regard to seeking help for themselves and others (Kutcher *et al*., 2016). The researchers stated positive study outcomes indicated " the use of a classroom-based resource (the AG) that integrates MHL into existing school curriculum through training teachers may be an effective and sustainable way to increase the MHL (improved knowledge, decreased stigma and positive help-seeking efficacy) of teachers in Tanzania" (Kutcher *et al*., 2016, online source). Further, because this study was a replication of previous research conducted in Malawi (Kutcher *et al*., 2015), the researchers suggested study interventions to be further implemented in Malawi and Tanzania as well as other Eastern African countries.

These studies point to the potentially important role that MHL can play for adolescents globally. As the studies indicate, community support and MHL have the potential to promote mental health and wellness among adolescents. In *Promoting Mental Health: Concepts, Emerging Evidence, and Practice--Summary Report*, the WHO Department of Mental Health and Substance Abuse, in collaboration with the Victorian Health Promotion Foundation and the University of Melbourne, seek to define characteristics of mental health promotion from a cross-cultural perspective (WHO, 2004). Mental health promotion is viewed as being linked to health promotion and a public health approach. It is defined as "actions that support people to adopt and maintain healthy lifestyles and which create supportive living conditions or environments for health" (WHO, 2004, p. 6).

The 2004 WHO report specifically identifies what they call *life skills education* as a model of mental health promotion among adolescents. The life skills education model works with adolescents to support them in responding to day-to-day life challenges. It teaches skills that include "decision-making, problem-solving, creative and critical thinking, effective communication and interpersonal skills, self-awareness, and coping with emotions and stress. Life skills are distinct from other important skills that young people acquire as they grow up, such as numeracy, reading, and practical livelihood skills" (WHO, 2004, p. 44). At the time

the WHO report was written, it was reported that the life skills education model had shown evidence of being effective in "the prevention of substance abuse, adolescent pregnancy, and bullying; improved academic performance and school attendance; and the promotion of mental well-being and health behaviours" (WHO, 2004, p. 44).

The important role of prevention is another foundation for adolescent mental health promotion. Primary prevention efforts "are designed to prevent the development of issues such as school violence, anxiety disorders, and internalizing/externalizing mental health problems in response to various content areas" (Clauss-Ehlers *et al*., 2019, p. 239). Baker-Henningham (2014) focused on the role of early childhood education programs in the promotion of child and adolescent mental health in LMICs. The study appraised peer-reviewed journal articles, describing controlled evaluations of early childhood education interventions and their outcomes. Three elements were identified as increasing the probability of benefiting a child's future mental health: activities to increase child development skills (*e.g*., cognition, language, emotional competence), training caregivers, and increasing attention to caregivers' mental health. The study concluded that it is likely that high-quality programs, their length, and intensity play a relevant, beneficial role in promoting children's future mental health (Baker-Henningham, 2014).

The fact that caregivers' mental health has been found to influence child and adolescent mental health has important implications for MHL at the community level. Studies indicate that parents have the opportunity to be crucial mediators of adolescent distress and can play a key role in helping adolescents seek mental health treatment (Clauss-Ehlers, 2017; Clauss-Ehlers, Austin, Ahto, Samperi, Zhao, & Su, 2017; Ruiz-Casares, Kolyn, Sullivan, & Rousseau, 2015). Ruiz-Casares *et al*. (2015) conducted a study to describe current programs across Canada that aim to support parents in mental health promotion efforts for their adolescents. While the researchers found that 47 programs met their criteria and provided a range of supports, they also noted that programs were primarily located in certain Canadian provinces and not geographically distributed (Ruiz-Casares *et al*., 2015). This point raises the question of access to mental health services as an issue in adolescent mental health literacy and promotion.

Relatedly, creating an evidence base for effective suicide prevention and mental health promotion efforts is critical, given that suicide is the third leading cause of death among 15 to 19 year-olds globally (WHO, 2018). In a cross-national model of suicide prevention among adolescents, the European Union (EU), under the Seventh Framework Health Program, funded the Saving and Empowering Young Lives in Europe (SEYLE) program (Wasserman *et al*., 2010). This cross-nation effort specifically aimed to promote suicide prevention intervention efforts among adolescents in 12 countries: Austria, Estonia, France, Germany, Hungary, Ireland, Israel, Italy, Romania, Slovenia, Spain, and Sweden (coordinating center).

The SEYLE sample included 11,110 adolescents with an average age of 15. Interventions encompassed MHL efforts such as a Youth Aware of Mental Health Programme (YAM) specifically for adolescents involved in the study, and the Question, Persuade and Refer (QPR) training module for teachers and screening by professionals with referrals for those students deemed at-risk (Wasserman *et al*., 2015). While there was no difference between intervention and control groups at the 3-month follow up interval, the 12-month follow up interval demonstrated that YAM was related to a significant decrease in "incident suicide attempts" (Wasserman *et al*., 2015). This youth awareness intervention further intensifies the important role of MHL among adolescents.

4. MOVING FORWARD: IMPLICATIONS FOR RESEARCH AND POLICY

As documented in this review, one in six people is between the ages of 10 to 19 years of age, which is the WHO's definition of adolescence (WHO, 2018). Further, mental health problems make up 16% of the global burden of disease for this age group (WHO, 2018). While approximately 50% of all mental health issues start by the age of 14, many are not identified, nor are they treated (WHO, 2018). Clearly, adolescent mental health is a global public health issue.

WHO published the *Global Accelerated Action for the Health of Adolescents (AA-HA!): Guidance to support country implementation* to help gov-

ernments address adolescent health and mental health needs. This WHO document discusses the critical importance of early detection and treatment: "It is crucial to address the needs of adolescents with defined mental health conditions. Avoiding institutionalization and over-medicalization, prioritizing non-pharmacological approaches, and respecting the rights of children in line with the United Nations Convention on the Rights of the Child and other human rights instruments are key for adolescents" (WHO, n.d.). WHO also supports the active involvement and participation of adolescents in contributing to national programs and policies.

The World Health Organization's 4S-Framework seeks to provide resource-constrained nations with a structure to address adolescent health and mental health (Fisher & Cabral de Mello, 2011; WHO, 2009). The first "S" of the 4S-Framework is "strategic information" such as adolescent mental health morbidity/prevalence data in a given community. Strategic information also includes being aware of natural disasters and war/conflict situations that may have an impact on adolescent mental health morbidity in a given community (WHO, 2009). The second "S" refers to "supportive evidence informed policies." Fisher and Cabral de Mello (2011) discuss how, while countries typically include adolescents in their mental health policy plan, specifics regarding how to meet the needs of adolescents are rarely spelled out. An informed evidence-based policy approach involves policies that focus on prevention and early intervention (Clauss-Ehlers *et al*., 2019), understanding the needs of vulnerable groups of adolescents (Fisher & Cabral de Mello, 2011), and workforce development so that countries have a professional presence to address adolescent mental health considerations.

The third S is "scaling up the provision of services" (WHO, 2009). This process involves building out a mental health infrastructure that meets the needs of a nation's adolescents, including building out small scale programs that have been shown to be effective and adapting them as needed. Scaling up means supporting a "broad public health response" (Fisher & Cabral de Mello, 2011, p. 8). The responsiveness of primary health care services is suggested as a critical point of contact for adolescents (Fisher & Cabral de Mello, 2011). As noted in some of the MHL studies cited above, schools can provide a natural setting where teachers, parents, and students can learn about mental health signs and symptoms.

Finally, the fourth S is "strengthening other sectors" (WHO, 2009). The emphasis here is that cross-sectoral collaboration and involvement facilitates a comprehensive approach to addressing adolescent mental health. Fisher and Cabral de Mello (2011) state: "The predominant endorsed action is not that dedicated mental health services for adolescents are required, but that mental health care should be integrated using cross-sectoral strategies into the communities in which adolescents live, the institutions they attend and the organisations in which they participate" (p. 1).

5. NEXT STEPS

Global responsiveness to adolescent mental health is a large, complex task that involves many moving parts. While there is no one solution that will address the needs faced by a specific nation, the following presents some key themes to consider in building CAMHS regional/country capacity. Three areas relevant to building CAMHS capacity are presented below. These include research, practice, and policy infrastructure (see Table **1** that presents key thematic content).

5.1. Research

Reviews of research suggest that most existing intervention studies reflect the experiences of HICs rather than LMICs. The result is a gap in the evidence base with significantly fewer existing intervention studies focused on the mental health experiences and needs of adolescents from LMICs. This knowledge gap exists despite the fact that LMICs experience mental illnesses at levels that are at least comparable to their HIC counterparts (Das, Salam, & Arshad, 2016; Das, Salam, & Lassi, 2016).

Beginning steps to address such barriers include encouraging researchers to engage in cross-national collaboration with multidisciplinary research team members. Patton and Temmerman (2016) recommend "coordinated multicomponent interventions" as an efficacious strategy to address mental health and substance abuse concerns. Despite this recommendation, however, the authors acknowledge that few existing studies take a

Table 1. Structural Components to Building Global Adolescent Mental Health Capacity

Structure	Gaps	Meeting the Need	Application of a Multi-sectoral Approach
Research	1. Research disproportionately reflective of HICs 2. Much fewer intervention studies that reflect LMICs 3. Language barriers 4. Research processes that are not inclusive across countries/regions	1. Commitment to funding CAMHS intervention studies in LMICs 2. Support to publish in a range of peer-reviewed journals 3. Re-thinking Western IRB processes that are not inclusive of the research processes in other countries/regions	1. Engaging multiple systems, levels, and services in international intervention studies 2. Recruit a multidisciplinary research team that includes a range of actors who have familiarity with the issue, including young people 3. Journal editors and publishers can design creative strategies so that their publications are more inclusive of global CAMHS research
Practice	1. Gaps in capacity to scale up small scale interventions to large scale projects/access 2. Gaps in ability to move away from a one size fits all model to adapt interventions accordingly	1. Scale up interventions from smaller scale practices so that more adolescents have access to services 2. Adapt interventions so that they reflect the cultural and linguistic context of the community they are designed to serve 3. MHL as one approach to promote adolescent mental health	1. Engage various actors to cultivate a large scale program of intervention 2. Collaborate across national regions and internationally to share resources and best practices 3. Engaging youth at all points of the process incorporates the youth voice and contributes to the pipeline of future mental health professional capacity
Policy Infrastructure	1. Potential lack of awareness and education regarding adolescent mental health issues 2. Stigma as a contributor to a lack of awareness of the need for services	1. Taking a contemporary public health approach	1. Incorporating a systems-wide, comprehensive public health approach to building a policy structure 2. Including multiple systems, levels, constituencies, and youth in policy development

multi-coordinated approach. Research such as the SEYLE project provides a model of how this approach can work (Wasserman *et al*., 2010).

Related barriers concern research publication processes such as the language in which journals are published, with most prominent journals in English and presenting challenges for researchers from non-English speaking countries and LMICs (Juengsiragulwit, 2015). Here researchers whose first language is not English may be penalized and have their work rejected for publication in English-language peer-reviewed journals. If the rejection is from a journal with high impact, the authors' work is, in effect, prevented from being shared across a larger market.

There are additional barriers such as Institutional Review Boards (IRBs) which are formal structures in HICs. The IRB process can introduce other issues based upon U.S. research norms. The norm for U.S. peer-reviewed journals and for those from other HICs is that studies with human subjects must undergo an IRB review process. The reality is, however, many countries, especially LMICs, do not have IRB processes in place and are thus unable to meet publication requirements in this domain. The international scholarship may be rejected because, what is known as the IRB process in the U.S., differs in the author's country of origin.

When the first author was editor of the *Journal of Multicultural Counseling and Development* (JMCD), this issue was addressed via efforts to launch a global perspectives journal section. The editorial team made changes to the review process so that, rather than being penalized and rejected for not having an IRB process, international authors were given alternative ways to demonstrate compliance with the ethical and safe treatment of human subjects. The solution reached in this instance stated: "As JMCD increasingly receives international manuscripts, it is important to emphasize the requirement for ethical treatment of human and animal subjects regardless of possible country/institutional requirements to do so and given that some countries and respective institu-

tions may not require a formal IRB as in the United States. In a country/institution where there is no IRB process in place, it is the author(s) responsibility to comply with the ACA Code of Ethics in terms of how their sample was treated (American Counseling Association, 2014a; American Counseling Association, 2014b; http://www.counseling.org/resources/aca-code-of-ethics.pdf). The authors should also clearly specify in the Methods section the procedures they used to comply with these standards. In addition, author(s) are required to state how they responded to their respective countries/institutions' requirements (if applicable) regarding the ethical treatment of human subjects and animals" (see http://jmcdonline.org/guidelines/, JMCD website, retrieved 2019).

5.2. Practice

In response to the 4S of "scaling up," community practice efforts suggest that cultivating large scale programs from smaller, successful adolescent mental health promotion projects may be a powerful way to contribute to building a larger infrastructure (Kleintjes *et al*., 2010). At the same time, it is important that those who implement the evidence-base in large scale settings are aware of and sensitive to the importance of adapting interventions so that they reflect the cultural contexts of the communities they are designed to serve (Clauss-Ehlers *et al*., 2019). The WHO's focus on cross-sectoral strategies to bring resources together and build upon them, suggests a creative platform from which to collaborate.

MHL is one such cross-sectoral practice strategy that can support adolescent mental health promotion. As noted in the studies cited, MHL can occur in schools through teacher and school personnel training, and in collaboration with primary care professionals and community-based mental health workers (Kutcher *et al.*, 2015; Kutcher *et al*., 2016). Finally, youth are powerful actors who can and should influence the provision of adolescent mental health promotion as indicated in the SEYLE study (Wasserman *et al*., 2010; Wasserman *et al*., 2015). Awareness and having a voice support the development of infrastructure and may also lead to a growing pipeline of future generations of mental health professionals.

5.3. Policy infrastructure

Research and practice contribute to educating communities and policy makers about public policies to address a country's respective adolescent mental health issues. One approach to creating a CAMHS policy infrastructure is to consider adolescent mental health as a *public health issue*. The publication of the *World health report 2000: Health systems, improving performance* (WHO, 2000) contributed to a paradigm shift that encouraged public health reform through the intersection of health system functions, varying levels, and services (Martin-Moreno, Harris, Jakubowski, & Kluge, 2016). Just as a range of countries/regions have adapted a "system-wide approach to defining and assessing public health," (Martin-Moreno *et al*., 2016), CAMHS mental health policy structure and reform can occur through an intersectoral approach.

6. LIMITATIONS AND ADDITIONAL NEXT STEPS

We acknowledge that this review includes research and literature primarily from North American and European nations. While we emphasize the importance of attending to the needs of lower and middle-income countries (LMICs), there is a need to better capture the experiences of these nations. In particular, documenting national mental health strategies taken by these nations, and focusing on other critical themes (*e.g*., mental health in schools, systems to address addiction, assisting people in addressing major traumas such as war; addressing basic needs such as food and shelter) should be prioritized in future scholarship (see Betancourt, Agnew-Blais, Gillman, Williams, & Ellis, 2010; Clauss-Ehlers & Akinsulure-Smith, 2013; Pollack, 2004; Rowling & Weist, 2004). Ideally, this work should be occurring within a global community of practice (see Cashman *et al*., 2014; Wenger, McDermott, & Snyder, 2002) in which stakeholders (especially youth and families) are working with scholars, and practitioners and policymakers are working together to build innovative systems for mental health promotion for children, adolescents, and young people. Lessons learned can be shared across these constituencies and mutual support can be provided to make collective advancements in research, practice, and policy.

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REFERENCES

American Counseling Association. (2014). *ACA code of ethics*.. Alexandria, VA: Author. a

American Counseling Association. (2014). *ACA code of ethics*.http://www.counseling.org/docs/ethics/2014-aca-code-of-ethics.pdf b

Baker-Henningham, H. (2014). The role of early childhood education programmes in the promotion of child and adolescent mental health in low- and middle-income countries. *Int. J. Epidemiol., 43*(2), 407-433. http://dx.doi.org/10.1093/ije/dyt226 PMID: 24366491

Betancourt, T.S., Agnew-Blais, J., Gilman, S.E., Williams, D.R., Ellis, B.H. (2010). Past horrors, present struggles: the role of stigma in the association between war experiences and psychosocial adjustment among former child soldiers in Sierra Leone. *Soc. Sci. Med., 70*(1), 17-26. http://dx.doi.org/10.1016/j.socscimed.2009.09.038 PMID: 19875215

Bostwick, W.B., Meyer, I., Aranda, F., Russell, S., Hughes, T., Birkett, M., Mustanski, B. (2014). Mental health and suicidality among racially/ethnically diverse sexual minority youths. *Am. J. Public Health, 104*(6), 1129-1136. http://dx.doi.org/10.2105/AJPH.2013.301749 PMID: 24825217

Caldas de Almeida, J.M., Horvitz-Lennon, M. (2010). Mental health care reforms in Latin America: An overview of mental health care reforms in Latin America and the Caribbean. *Psychiatr. Serv., 61*(3), 218-221. http://dx.doi.org/10.1176/ps.2010.61.3.218 PMID: 20194395

Cashman, J., Linehan, P., Purcell, L., Rosser, M., Schultz, S., Skalski, S. (2014). *Leading by convening: A blueprint for authentic engagement.*. Alexandria, VA: National Association of State Directors of Special Education.

Chou, K.L., Mak, K.Y. (1998). Attitudes to mental patients among Hong Kong Chinese: A trend study over two years. *Int. J. Soc. Psychiatry, 44*(3), 215-224. http://dx.doi.org/10.1177/002076409804400307

Clauss-Ehlers, C.S. (2017). In search of an evidence-based approach to understand and promote effective parenting practices. *Couple Family Psychol., 6*(3), 135-153. http://dx.doi.org/10.1037/cfp0000082

Clauss-Ehlers, C.S., Akinsulure-Smith, A.M. (2013). Working with forced migrant children and their families: Mental health, developmental, legal, and linguistic considerations in the context of school-based mental health services.*Handbook of culturally responsive school mental health: Advancing research, training, practice, and policy*. (pp. 135-146). New York, NY: Springer. http://dx.doi.org/10.1007/978-1-4614-4948-5_10

Clauss-Ehlers, C.S., Austin, M., Ahto, L., Samperi, F., Zhao, J., Su, N. (2017). Application of the Parenting Research Partnership Model to an evidence-based case study approach. *Couple Family Psychol., 6*(3), 171-184. http://dx.doi.org/10.1037/cfp0000081

Clauss-Ehlers, C.S., Chiriboga, D.A., Hunter, S.J., Roysircar, G., Tummala-Narra, P. (2019). APA Multicultural Guidelines executive summary: Ecological approach to context, identity, and intersectionality. *Am. Psychol., 74*(2), 232-244. http://dx.doi.org/10.1037/amp0000382 PMID: 30762387

Clauss-Ehlers, C.S., Weist, M.D., Sood, A.B., Lomaro, C. Being a change agent for social justice for children and youth.*Social justice for children and young people: International perspectives*.. Cambridge, United Kingdom: Cambridge University Press. in press

Curtis, A.C. (2015). Defining adolescence. *Journal of Adolescent and Family Health, 7*(2). https://scholar.utc.edu/jafh/vol7/iss2/2

Das, J.K., Salam, R.A., Arshad, A., Finkelstein, Y., Bhutta, Z.A. (2016). Interventions for adolescent substance abuse: An overview of systematic reviews. *J. Adolesc. Health, 59*(4S), S61-S75. http://dx.doi.org/10.1016/j.jadohealth.2016.06.021 PMID: 27664597

Das, J.K., Salam, R.A., Lassi, Z.S., Khan, M.N., Mahmood, W., Patel, V., Bhutta, Z.A. (2016). Interventions for adolescent mental health: An overview of systematic reviews. *J. Adolesc. Health, 59*(4S), S49-S60. http://dx.doi.org/10.1016/j.jadohealth.2016.06.020 PMID: 27664596

Dice, F., Zoena, F. (2017). Loneliness and family burden: An exploratory investigation on the emotional experiences of caregivers of patients with severe mental illness. *The Qualitative Report, 22*((7)), 1781-1791. https://nsuworks.nova.edu/tqr/vol22/iss7/4

Fisher, J.R.W., Cabral de Mello, M. (2011). Using the World Health Organization's 4S-Framework to strengthen national strategies, policies and services to address mental health problems in adolescents in resource-constrained settings. *Int. J. Ment. Health Syst., 5*(23), 23.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3182992/ http://dx.doi.org/10.1186/1752-4458-5-23 PMID: 21923901

Giedd, J.N. (2015). The amazing teen brain. *Sci. Am., 312*(6), 32-37. a. Journal of Multicultural Counseling and Development. [n.d.]. Guidelines. Retrieved from http://jmcdonline.org/guidelines/. http://dx.doi.org/10.1038/scientificamerican0615-32 PMID: 26336683

Juengsiragulwit, D. (2015). Opportunities and obstacles in child and adolescent mental health services in low- and middle-income countries: a review of the literature. *WHO South-East Asia J. Public Health, 4*(2), 110-122. http://dx.doi.org/10.4103/2224-3151.206680 PMID: 28607309

Kohn, R., Saxena, S., Levav, I., Saraceno, B. (2004). The treatment gap in mental health care. *Bull. World Health Organ., 82*(11), 858-866. PMID: 15640922

Kessler, R.C., Amminger, G.P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., Ustün, T.B. (2007). Age of onset of mental disorders: a review of recent literature. *Curr. Opin. Psychiatry, 20*(4), 359-364. http://dx.doi.org/10.1097/YCO.0b013e32816ebc8c PMID: 17551351

Kleintjes, S., Lund, C., Flisher, A.J. MHAPP Research Programme Consortium. (2010). A situational analysis of child and adolescent mental health services in Ghana, Uganda, South Africa and Zambia. *Afr. J. Psychiatry (Johannesbg.), 13*(2), 132-139. http://dx.doi.org/10.4314/ajpsy.v13i2.54360 PMID: 20473475

Kuhn, E.S., Laird, R.D. (2014). Family support programs and adolescent mental health: review of evidence. *Adolesc. Health Med. Ther., 5*, 127-142. PMID: 25177156

Kutcher, S., Gilberds, H., Morgan, C., Greene, R., Hamwaka, K., Perkins, K. (2015). Improving Malawian teachers' mental health knowledge and attitudes: an integrated school mental health literacy approach. *Glob. Ment. Health (Camb.), 2*e1. http://dx.doi.org/10.1017/gmh.2014.8 PMID: 28596850

Kutcher, S., Wei, Y., Gilberds, H., Ubuguyu, O., Njau, T., Brown, A., Sabuni, N., Magimba, A., Perkins, K. (2016). A school mental health literacy curriculum resource training approach: effects on Tanzanian teachers' mental health knowledge, stigma and help-seeking efficacy. *Int. J. Ment. Health Syst., 10*(50), 50. http://dx.doi.org/10.1186/s13033-016-0082-6 PMID: 27493684

Link, B.G., Phelan, J.C., Bresnahan, M., Stueve, A., Pescosolido, B.A. (1999). Public conceptions of mental illness: labels, causes, dangerousness, and social distance. *Am. J. Public Health, 89*(9), 1328-1333. http://dx.doi.org/10.2105/AJPH.89.9.1328 PMID: 10474548

Martin-Moreno, J.M., Harris, M., Jakubowski, E., Kluge, H. (2016). Defining and assessing public health functions: A global analysis. *Annu. Rev. Public Health, 37*, 335-355. http://dx.doi.org/10.1146/annurev-publhealth-032315-021429 PMID: 26789385

Melas, P.A., Tartani, E., Forsner, T., Edhborg, M., Forsell, Y. (2013). Mental health literacy about depression and schizophrenia among adolescents in Sweden. *Eur. Psychiatry, 28*(7), 404-411. http://dx.doi.org/10.1016/j.eurpsy.2013.02.002 PMID: 23764405

Mental Health Foundation. *Mental health literacy.* https://www.mentalhealth.org.uk/a-to-z/m/mental-health-literacy n.d.

Patton, G., Temmerman, M. (2016). Evidence and evidence gaps in adolescent health. *J. Adolesc. Health, 59*(4S), S1-S3. http://dx.doi.org/10.1016/j.jadohealth.2016.08.001 PMID: 27664591

Pescosolido, B.A., Olafsdottir, S., Martin, J.K., Long, J.S. (2008). Cross-cultural aspects of the stigma of mental illness.*Understanding the stigma of mental illness: Theory and interventions.* (pp. 19-36). London, UK: John Wiley & Sons, Ltd.. http://dx.doi.org/10.1002/9780470997642.ch2

Polack, R.J. (2004). Social justice and the global economy: new challenges for social work in the 21st century. *Soc Work, 49*(2), 281-290. http://dx.doi.org/10.1093/sw/49.2.281 PMID: 15124969

Ramadass, S., Gupta, S.K., Nongkynrih, B. (2017). Adolescent health in urban India. *J. Family Med. Prim. Care, 6*(3), 468-476. http://dx.doi.org/10.4103/2249-4863.222047 PMID: 29416991

Rowling, L., Weist, M.D. (2004). Promoting the growth, improvement and sustainability of a. school mental health programs worldwide. *Int. J. Ment. Health Promot., 6*(2), 3-11. http://dx.doi.org/10.1080/14623730.2004.9721925

Ruiz-Casares, M., Kolyn, L., Sullivan, R., Rousseau, C. (2015). Parenting adolescents from ethno-cultural backgrounds: A scan of community-based programs in Canada for the promotion of adolescent mental health. *Child. Youth Serv. Rev., 53*, 10-16. http://dx.doi.org/10.1016/j.childyouth.2015.03.021

Steinberg, L. (2014). *Age of opportunity: Lessons from the new science of adolescence.*. Houghton Mifflin Harcourt.

UNICEF. (2016). https://data.unicef.org/topic/adolescents/demographics/

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Administration. (2017). https://www.samhsa.gov/data/sites/default/files/NSDUH-FFR1-2016/NSDUH-FFR1-2016.htm

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Administration. *Access to Adolescent Mental Health Care.* https://www.hhs.gov/ash/oah/adolescent-development/mental-health/access-adolescent-mental-health-care/index.html n.d.

Wasserman, D., Carli, V., Wasserman, C., Apter, A., Balazs, J., Bobes, J., Bracale, R., Brunner, R., Bursztein-Lipsicas, C., Corcoran, P., Cosman, D., Durkee, T., Feldman, D., Gadoros, J., Guillemin, F., Haring, C., Kahn, J.P., Kaess, M., Keeley, H., Marusic, D., Nemes, B., Postuvan, V., Reiter-Theil, S., Resch, F., Sáiz, P., Sarchiapone, M., Sisask, M., Varnik, A., Hoven, C.W. (2010). Saving and empowering young lives in Europe (SEYLE): a randomized controlled trial. *BMC Public Health, 10*(192), 192. http://dx.doi.org/10.1186/1471-2458-10-192 PMID: 20388196

Wasserman, D., Hoven, C.W., Wasserman, C., Wall, M., Eisenberg, R., Hadlaczky, G., Kelleher, I., Sarchiapone, M., Apter, A., Balazs, J., Bobes, J., Brunner, R., Corcoran, P., Cosman, D., Guillemin, F., Haring, C., Iosue, M., Kaess, M., Kahn, J.P., Keeley, H., Musa, G.J., Nemes, B., Postuvan, V., Saiz, P., Reiter-Theil, S., Varnik, A., Varnik, P., Carli, V. (2015). School-based suicide prevention programmes: the SEYLE cluster-randomised, controlled trial. *Lancet, 385*(9977), 1536-1544. http://dx.doi.org/10.1016/S0140-6736(14)61213-7 PMID: 25579833

Wenger, E., McDermott, R., Snyder, W.M. (2002). Cultivating communities of practice: A guide to managing knowledge. Boston, MA: the Harvard Business School.

World Health Organization. *Adolescent health and development.*http://www.searo.who.int/entity/child_adolescent/topics/adolescent_health/en/ n.d.

World Health Organization. (2018). https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health

World Health Organization. (2005). http://www.who.int/iris/handle/10665/43307

World Health Organization. *Global Accelerated Action for the Health of Adolescents (AA-HA!): Guidance to support country implementation.* https://www.who.int/maternal_child_adolescent/topics/adolescence/framework-accelerated-action/en/ n.d.

World Health Organization. (2004). *Promoting mental health: Concepts, emerging evidence, and practice--Summary report.* Geneva, Switzerland: Author.

World Health Organization. (2009). *Strengthening the health sector response to adolescent health and development.* Geneva, Switzerland: Author. http://www.who.int/child_adolescent_health/documents/cah_adh_flyer_2010/en/index.html

World Health Organization. (2000). *World health report 2000: Health systems, improving performance.*. Geneva, Switzerland: WHO.

Young, A.S., Rabiner, D. (2015). Racial/ethnic differences in parent-reported barriers to accessing children's health services. *Psychol. Serv., 12*(3), 267-273. http://dx.doi.org/10.1037/a0038701 PMID: 25602502