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A Model for Sustainable Development of Child Mental Health Infrastructure in the LMIC World: Vietnam as a Case Example

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Abstract

Children and adolescents are among the highest need populations in regards to mental health support, especially in low and middle income countries (LMIC). Yet resources in LMIC for prevention and treatment of mental health problems are limited, in particular for children and adolescents. In this paper, we discuss a model for development of child and adolescent mental health (CAMH) resources in LMIC that has guided a ten year initiative focused on development of CAMH treatment and research infrastructure in Vietnam. We first review the need for development of mental health resources for children and adolescents in general, and then in Vietnam. We next present the model that guided our program as it developed, focused on the twin *Capacity Development Goals* of efficacy and sustainability, and the *Capacity Development Targets* used to move towards these goals. Finally we discuss our CAMH development initiative in Vietnam, the center of which has been development of a graduate program in clinical psychology at Vietnam National University, linking program activities to this model.

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Keywords

child and adolescent mental health; global mental health; clinical psychology; Vietnam; infrastructure development

Children and adolescents (hereafter collectively referred to as children) are one of the most important populations in regards to mental health support. This is true not only because of the prevalence and significance of their problems, but also because first onset of adult mental health disorders often is in childhood or adolescence (Kessler et al., 2005). Child and adolescent mental health (CAMH) is especially important in lower and middle income countries (LMIC), as they face particularly high levels of mental health-related challenges whereas at the same time treatment and prevention resources for CAMH are generally low, even compared to adults (WPA, WHO, & IACAPAP, 2005).

A number of factors underlie this scarcity of resources but ultimately a – if not the – pivotal factor is a lack of mental health professionals appropriately trained to develop and implement CAMH interventions (Belfer, 2008). One approach to compensating for this scarcity is mental health task-shifting, the use of non-mental health professionals (e.g., nurses, general practitioners, teachers) who receive relatively circumscribed training focused on specific mental health programs (World Health Organization, 2008). Mental health task-shifting is recognized within global mental health as a central strategy for provision of mental health support in low resources settings. However, although there are a number of CAMH programs recognized as evidence-based treatments (EBT) in the high income countries within which they have been developed (Chorpita et al, 2011), few are well validated for the LMIC context, or when implemented by non-specialists or paraprofessionals (i.e., task-shifting personnel), and research remains critical (Patel, Flisher, Nikapota, & Malhotra, 2008). Yet at the same time that there is a lack of CAMH treatment infrastructure in LMIC, there often also is a concomitant lack of CAMH research infrastructure.

This high level of need has been recognized but as Graeff-Martins et al. (2008) noted, there are few published reports of initiatives to develop CAMH infrastructure in LMIC. The present article presents a conceptual framework for development of CAMH infrastructure in LMIC, linking the model to our CAMH development initiative in Vietnam, as an illustration of this model's application.

Vietnam

Vietnam is a country of approximately 330,000 km² stretching more than 1,600 kilometers along the edge of the Southeast Asian mainland from the South China Sea to the Gulf of Thailand. It is the 13th most populous nation in the world, with a population of over 88 million, 25% of whom are under the age of 15 (Central Intelligence Agency, 2009). The per capita annual gross domestic product (GDP) is \$1,032 (World Bank, 2010). As with many developing countries, as it began the transition of developing from a primarily rural, agricultural economy to a more modern, mixed industrial economy, the Vietnamese government made an explicit decision to focus its limited resources on expanding infrastructure most directly supportive of economic development (e.g., roads; sea-ports); in contrast, education, social services, and health, in particular mental health, received little investment (Stern, 1998).

The focus on economic development was successful, at least at the national level, with Vietnam's GDP growth stabilizing at 8% per year, although in the recent world recession annual GDP growth declined to about 5.5% (World Bank, 2010). However, educational,

social, and health infrastructure has not developed comparably. Further, the rapid economic growth has placed increased pressure on families and children (e.g., Gabriele, 2006), threatening families' traditional ability to socialize their children into healthy, adaptively functioning adults (Korinek, 2004). In response to increased economic opportunity as well as increased economic pressure, for instance, parents often work two jobs or long hours, with many young children left alone at home for extended periods without adult supervision (Ruiz-Casares & Heymann, 2009). Overall, these social changes have increased Vietnamese children's risk for development of mental health problems (UN-VN Youth Theme Group, 2010).

Vietnamese Children's Mental Health Functioning

There have been several studies assessing the mental health of Vietnamese children. The combined results of these studies indicate that children in Vietnam face substantial mental health challenges. The Young Lives Project (Tran et al., 2003) was a study of child health and development in four countries, including Vietnam. In Vietnam, it was found that children experienced a large number of poverty-related stressors, with 20% of the sample above the cut-off for the study's mental health screening measure. In a study in Ho Chi Minh City in southern Vietnam, Anh, Minh and Phuong (2007) assessed the mental health functioning of high school students, and found that 16% were above the threshold for experiencing significant affective problems, 19% were above the threshold for social relationship problems, and 24% were above the threshold for behavior problems. In northern Vietnam, Hoang-Minh and Tu (2009) found that about 25% of adolescents in their sample were at or above the clinical cutoff on at least one Child Behavior Checklist scale.

Mental Health Resources in Vietnam

As a result of the low level of investment in development of health resources noted above, infrastructure for treatment of mental health problems in Vietnam has been limited (World Health Organization, 2006). And as is true for many Asian countries (e.g., Hong, Yamazaki, Banaag, & Yasong, 2004), this lack of personnel is especially acute among children, with only about 30 child psychiatrists in Vietnam (the equivalent of about 1 child psychiatrist per 750,000 children), the large majority of whom have not had a formal residency or fellowship in child psychiatry. More recently there has been increasing awareness of a need for resources to be shifted to development of social domains such as mental health (Gabriele, 2006), yet not only are there few mental health service resources available but there also are few resources available for training CAMH practitioners or researchers.

As we have discussed previously (Weiss, Dang, & Ngo, et al., 2011), in 2002 we conducted a mental health needs assessment in six cities across Vietnam, meeting with 23 educational and mental health-related agencies (Dang & Weiss, 2007). Through these meetings, we found that (a) Vietnamese education and mental health professionals believed that children's mental health problems were a very serious challenge facing the country; leaders of 22 of the 23 agencies stated that children's mental health was a serious national problem; (b) depression, suicide, drug abuse, etc. were seen by non-professionals such as the general public and politicians as serious problems but not as connected to mental health. Rather, they were seen as personal weaknesses or moral failings, law enforcement issues, etc; (c) without exception, the professionals stated that there was an almost complete lack of clinical and research training available in Vietnam in regards to mental health, with training in CAMH deficient even relative to mental health training in general; (d) despite the lack of training and available expertise, many individuals and organizations were establishing CAMH counseling clinics, despite having little or no mental health training, or clinical skills or ability (e.g., one mental health clinic in Hanoi was opened by an epidemiologist). This may be in part due to the fact that superficially, mental health interventions appear relatively

simple (i.e., they involve talking with a patient, rather than prescribing medication, surgery, etc.). Generally speaking, the clinics have not been providing any form of empirically-based treatment.

In 2011, we began a national needs survey to assess the current status of mental health research, service, and training infrastructure in Vietnam (Weiss, Dang, Ngo et al., 2011). The survey was based in part on the World Psychiatric Association and World Health Organization *Child and Adolescent Mental Health Resources* survey (WPA, WHO, & IACAPAP, 2005). As with the WPA survey, we are using a key informant approach rather than a random sample since we are not interested in the typical professional's perspective but rather on the most accurate appraisal of the situation. Informants judged as most knowledgeable of the situation in Vietnam regarding CAMH research and service systems were selected to participate. Among the questions rated by the first 12 key CAMH professionals from whom we received data (rated on a scale of 1-5) were: (a) how serious of a problem are emotional and behavioral problems (e.g., anxiety; depression; substance abuse) in Vietnam, mean response = 4.0 ('very serious'); (b) how adequate are current treatment services for these problems in Vietnam, mean response = 2.6 ('slightly' to 'somewhat adequate'); (c) how adequate are current resources for clinical training in Vietnam, mean response = 2.1 ('slightly adequate'); (d) how important is conducting research on mental health in Vietnam, mean response = 4.3 ('very' to 'extremely important'), (e) how adequate is current research capacity in Vietnam, mean response = 2.6 ('slightly' to 'somewhat adequate'), and (f) how adequate is research training capacity in Vietnam, mean response = 2.1 ('slightly adequate'). For all areas of research, training and intervention capacity, ratings were less than even 'somewhat adequate' (3), the half way point on the scale.

Model for Developing CAMH Resources in LMIC

A central focus, and perhaps the central focus, of mental health services development over the past two decades has been the application of evidenced-based approaches to the services' development, implementation, and evaluation (e.g., Chambless & Hollon, 1998; Weisz, Hawley, Pilkonis, Woody, & Follette, 2000). As we considered the implications of our initial CAMH needs survey (Weiss, 2007) in this context, as well as CAMH needs in LMIC more generally (e.g., WPA et al., 2005), it was evident that there should be twin *Capacity Development Goals*: (a) efficacy, and (b) sustainability. To obtain these goals in turn, several *Capacity Development Targets* were identified; thus, the *Capacity Development Targets* represent the program means to the program ends, the *Capacity Development Goals*. The model discussed below focuses on technical program development. Development of a coordinated national policy addressing issues of advocacy, economic policy, etc. is of course also crucial to the sustainable development of mental health resources in LMIC (World Health Organization, 2007a) but is beyond the scope of the present article. It should be noted, however, that key policy objectives such as financial feasibility, program acceptability, quality improvement, etc. are integrated into the structure of the model discussed below. For a detailed discussion of policy issues regarding mental health capacity development in LMIC, see Gulbinat et al. (2004) and World Health Organization (2007a; 2007b).

Capacity Development Goals

Program Efficacy—The goal of any program is to be efficacious, the program should have the intended effects on the individuals who receive the program. However, in the present context two additional aspects of efficacy are important. First, efficacy should be objectively / scientifically established, rather than based on subjective appraisals, or uncontrolled assessments (Chambless & Hollon, 1998). Subjective assessments of program

efficacy, even by program participants, often are not highly congruent with more objective indices (e.g., Noser & Bickman, 2000), hence program efficacy should be objectively established. In addition, uncontrolled outcome assessments (e.g., outcome studies without a control group) can be misleading. Children receiving ineffective mental health services may show improvement, suggesting that the services are effective, but this improvement may be no greater than the improvement of children not receiving the services (e.g., Weisz & Weiss, 1989). Objective / scientific assessment is particularly important in LMIC with scarce resources, where ineffective or marginally effective programs may represent a relatively large drain on resources.

Second, “efficacy” is generally taken to indicate that a program improves the functioning of a significant proportion of persons *assigned* (through a clinic or research study) to receive treatment (Chambless & Hollon, 1998). In the present context we take a broader definition, that efficacy include public health impact, that the program improve the functioning of a significant proportion of persons *in need* of the treatment (Patel, 2009). That is, to be considered efficacious, a program should be able to impact not just on a small minority of individuals with ready access to the treatment but more broadly at a public health level, reaching a significant percentage of those in need.

Program Sustainability—Equally critical is that the program be sustainable without ongoing external resources, that it ultimately be funded by domestic sources rather than international NGOs, foreign governments, etc. This applies not only to financial support, but also to the professional expertise needed for training and supervising clinicians and paraprofessionals, for developing and evaluating new interventions, etc. Consideration of sustainability should be present from the beginning of program development, so that as the program develops it naturally moves towards independence and sustainability (see Figure 1).

Capacity Development Targets

As we considered these twin goals of efficacy and sustainability, it was evident that a number of development targets would facilitate achievement of these goals. We discuss these *Capacity Development Targets* below.

Task-shifting approach—Few LMIC have sufficient mental health personnel to provide services for a significant proportion of those in need, making a task-shifting approach invaluable for development of mental health infrastructure in LMIC (World Health Organization, 2008). Mental health task-shifting has often focused on primary health care settings (e.g., World Health Organization, 2010b). However, in regards to CAMH a focus on schools may be useful (Patel et al., 2008). Across the world as a whole, in LMIC in general, and in Vietnam in particular, 90%, 89%, and 92% (respectively) of children of primary school age attend school (United Nations, 2011; UNICEF, 2010), providing increased access for children in need of CAMH programs. Further, by being school-based interventions are directly implemented in one of children's most important environments – the school – increasing the interventions’ strength and generalizability. In addition, locating programs in schools can reduce stigma associated with mental health treatment and provides direct access to highly respected community members – teachers – who can serve as paraprofessionals for task-shifting interventions (Kutash & Duchnowski, 2007).

As with any site for provision of mental health services, schools have limitations. Most obviously, children who are below school age will not be accessed through schools. In addition, the children most in need of mental health services often are the least likely to be in school. For instance, children living in poverty are less likely to attend school, and children with behavior problems such as ADHD are more likely to be expelled from school

(United Nations, 2011). This suggests that ultimately multiple sites for provision of mental health services, or at least for accessing or identifying children in need of services, will be necessary.

Research capacity—The need for implementation research to evaluate the efficacy of CAMH programs follows directly from the goal that efficacy be demonstrated scientifically. In addition, research is important to (a) identify the prevalence and epidemiology of various CAMH problems and potential cultural variations in influences on their development, (b) evaluate different training and supervision models, and (c) assess the effects of cultural influences on the outcomes of CAMH programs (Patel et al., 2008). Thus, development of research capacity is a key *Capacity Development Target*.

Longterm training of trainers approach—By their nature, task-shifting programs generally have focused on training para-professionals, with foreigners often providing the training (e.g. Bolton et al. (2003). But for long-term sustainability, comprehensive CAMH development must as well focus on training new professionals who ultimately will be responsible for training and supervising these paraprofessionals, as well as the next generation of professionals. That is, not only must paraprofessionals be trained for task-shifting purposes, but professionals who can train these paraprofessionals, and future generations of professionals, also must be trained to create a self-sustaining cycle. This will require a focus on development of longterm training infrastructure, beyond training individuals, and beyond trainings for a specific program or intervention. Further, in addition to clinical intervention, local professionals must be able to conduct research and this also ultimately must be sustainable, not dependent on foreign support.

Supervision capacity—In general, supervision plays a central role in quality control and maintenance of mental health interventions' efficacy (British Psychological Society, 2003), likely in part at least through its impact on treatment fidelity (e.g., Miller & Binder, 2002). Supervision is viewed as a key to successful implementation and dissemination of evidence-based treatments because it provides the process through which clinical experts can support implementing clinicians who have less experience and less expertise (Falender & Shafranske, 2008). Consequently, supervision may be particularly important in task-shifting interventions implemented by paraprofessionals (Patel, 2009; Rahman, Malikb, Sikanderd, Roberts, & Creed, 2008), and thus development of supervision capacity should be an integral part of CAMH initiatives. It is important to note that this need for supervision also applies to research, and that new professionals (as discussed in the previous paragraph) may need training in how to best function as supervisors.

Dissemination—Dissemination involves the distribution and scaling up of programs to a broader level (Patel, 2000). Without dissemination, the efficacy goal of public health impact will be difficult to achieve, and development efforts may be little more than intellectual exercises. However, even in high resource settings, dissemination of new mental health programs can be highly challenging for a number of reasons, such as how labor intensive dissemination efforts can be (Kerner, Rimer, & Emmons, 2005; Nakamura et al., 2011). Thus, although dissemination is a later step in program initiatives, it should be given explicit consideration early in program development.

Developing CAMH Resources in Vietnam

This, then, is the model that guided the structuring of our CAMH initiative in Vietnam. The Vietnam Children's Mental Health Research Training Program (VCMH RTP) began in 2002, with the goal of sustainably increasing Vietnamese capacity to (a) develop effective, evidence-based treatments for priority mental health problems among Vietnamese children,

(b) plan and conduct research to evaluate these treatments within the Vietnamese context, and (c) disseminate the treatments to impact broadly across Vietnamese society (Dang & Weiss, 2007); thus its goals parallel the twin *Capacity Development Goals* of efficacy and sustainability. To achieve the *Capacity Development Targets* discussed previously, VCMH RTP contains five main components: (a) a graduate program in clinical psychology; (b) CRISP, a research center focused on CAMH; (c) a school-based CAMH program linked to the graduate program; (d) college-level teacher training in basic classroom and student management techniques designed to support CAMH; (e) outreach programs that provide training in CAMH programs across Vietnam (Dang & Weiss, in press).

Figure 1 provides an overview of the model, as implemented in the VCMH RTP, with CAMH needs the underlying driving force. External resources, in particular personnel and financial assistance, are often necessary for initial program development, to provide the expertise and money necessary for training, materials development, etc. Program activities focus on achieving the *Capacity Development Targets* such as longterm training, research, etc. and ultimately dissemination. Program activities are linked through the program's various key partnerships. Successful implementation of these targets results in program efficacy and sustainability, with program efficacy itself supporting sustainability through increased societal support for the program, garnered through the key partnerships. As efficacy and sustainability increase and feedback to program activities, reliance on external resource should decrease.

Given the complexity of CAMH needs and program activities, close partnerships across a variety of fields and levels are essential for CAMH initiatives to be successful (Shapiro, DuPaul, Barnabas, Benson, & Slay, 2010). These partnerships serve several critical functions. First, they ensure that development goals are congruent with the local context and priorities, increasing the feasibility and efficiency of development by tying them to local realities. In low resource LMIC environments, it is essential that selection of CAMH objectives be prioritized based on formal and / or informal cost-benefit analyses. This requires both a technical understanding of different CAMH problems (e.g., their longterm economic, social, etc. costs) as well as an in-depth understanding of local context, needs and resources; thus, close partnerships between local / national and international organizations and experts are essential (Saraceno et al., 2007). In addition, national / international partnerships can reduce the likelihood of resources being wasted through inadvertent duplication of efforts or programs.

Second, partnerships are essential because they increase buy-in from leaders and organizations needed to implement and sustain programs, as the entities have their own stake in the outcomes they helped to select (Funk, Lund, Freeman, & Drew, 2009). And third, partnerships facilitate program integration into existing infrastructure, which broadens public health impact, and sustainability. After discussing VCMH RTP's program components below, we outline its key partnerships and describe how these partnerships have served to integrate program activities into existing infrastructure.

Program components

The sections below discuss the primary components of the Vietnam Children's Mental Health Research Training Program, their structure and implementation, and how they link to the *Capacity Development Targets*. In addition, as appropriate, we also discuss limitations and challenges that we have encountered in developing and implementing the program components.

Graduate Program—The graduate program in clinical psychology, which is the first graduate program in clinical psychology in Vietnam, enrolled its first cohort of 16 students

in 2009 at the Vietnam National University (VNU) School of Education, and a second cohort of 16 students in 2010. The program currently provides a *Masters in Clinical Psychology* in a two-year course, with the research-focused Ph.D. program targeted to open in 2014 or 2015. The masters program provides training via graduate courses, community practicum / placements, and mentored experience in (a) empirically-based mental health service provision, and (b) research, in particular evaluation research (see Weiss, Dang, Ngo et al, 2011) for a detailed description of the curriculum). Clinical training focuses on developing students' skills as direct clinicians within a stepped care model, as well as on their ability to work with other mental health professionals, and to train and supervise paraprofessionals, in particular teachers.

Although the program provides training in 'evidence-based' treatment (EBT), in general these are EBT as evaluated in high income countries such as the U.S., Australia, etc. No assumption is made about their efficacy or even their appropriateness for Vietnam. Development, adaptation, and evaluation of mental health interventions is a primary focus of the VNU clinical psychology research program. During courses, students and faculty discuss how the various interventions might or might not apply in Vietnam, how they might need to be adapted for the Vietnamese context, etc. These discussions are useful not only for clinical training but also to identify critical research questions.

A key function of the graduate program is to serve as a dissemination platform for new or modified CAMH programs (Weiss, Dang, Ngo et al., 2011). We anticipate that ultimately about 20% of graduate students will pursue a Ph.D. and contribute to sustainable development of CAMH research, and training infrastructure (as they become university faculty) in Vietnam. Students who take a terminal master's and become mental health professionals also will have a critical role to play in development and evaluation of CAMH resources. They will be trained in EBTs, and as new treatments are developed or as old treatments are modified based on research findings, new cohorts of students will be trained in these treatments; in addition, we anticipate that former graduates of the program will receive continuing education training through the program focused on these new or modified treatments (see **Out-reach Training** below). This dissemination will be relatively seamless because the researchers developing and evaluating the treatments often will be the same people (or colleagues of the people) training the graduate students. Thus, the structure of the program provides for ongoing and sustainable dissemination of CAMH programs, through the production of new professionals and continuing education of prior graduates. It is hoped that this structure will reduce the difficulty disseminating new EBTs sometimes encountered in the U.S. and other high resources countries.

Another key aspect of masters students' contributions to the development of the field is that they also will have received graduate research training. We envision that ultimately the masters students will constitute a network of potential research clinicians and program and center administrators who will be supportive and involved in field testing of new interventions. As program graduates, their close connections to the program and faculty will increase our ability to conduct research outside of universities, institutes and other formal research settings.

The large majority of foreign faculty involved in the VNU clinical psychology graduate program are of Vietnamese birth (e.g., Vietnamese-Australian, Vietnamese-American, Vietnamese-Canadian). The use of ethnic Vietnamese as the foreign personnel has provided a number of benefits, including fewer language and cultural barriers, and a high degree and durability of motivation. To achieve program sustainability in regards to personnel, courses are jointly taught by these faculty and Vietnamese faculty, with the same instructors generally teaching the same course across years. The expectation is that Vietnamese faculty

will take responsibility for the course after a period of co-teaching, with an explicit focus on transfer of responsibility to the Vietnamese instructor.

There have been a number of challenges encountered in developing and implementing the *Masters in Clinical Psychology* program. In developed Western graduate programs, a substantial part of training and learning takes place outside the classroom, often through outside readings discussed in class. As noted above the VNU graduate program has begun with a co-teaching model. Courses are taught in intensive seven day blocks from 8 AM to 5 PM to accommodate the foreign teachers' schedules. Such a schedule makes it difficult for students to complete home-based assignments that would further their learning and allow for consolidation of knowledge.

Other challenges have been more political in nature. Although our program is the first successful graduate program in clinical psychology in Vietnam, there have been other attempts to establish graduate programs in clinical psychology or similar areas such as school psychology. These programs often unfortunately have treated the VNU clinical psychology program as competition rather than as a source of potentially mutually beneficial collaboration. For instance, although it would be natural to do so, these programs have declined to provide their undergraduate students with information regarding the VNU graduate program, and voted against acceptance of the program at the university level (the one vote out of nine against the program).

This attitude and these behaviors probably reflect realities, or perceptions of realities, of operating in an environment where resources are scarce, and where cooperating or providing mutual support can be seen as potentially resulting in loss of these scarce resources or opportunities. For instance, it is likely that these programs decline to provide information to their college students regarding the VNU graduate clinical psychology program because they are concerned that their students will attend the VNU graduate program rather than their own programs; i.e., even potential graduate students are seen as a scarce resource that must be protected.

CRISP Center—CRISP (Center for Research, Information, and Service in Psychology) is a non-profit center within the VNU School of Education. Its mission is to promote the practical application of scientific knowledge through research, training, and EBT services to address social issues in Vietnam. It is an integral part of the VNU clinical psychology program, with program faculty typically conducting their research through CRISP. Although the program's ultimate focus is on intervention and dissemination research, and fundamentally on applied research that can efficiently use scarce resources to address CAMH challenges, in Vietnam CAMH research is still in early stages. Consequently, much of the work at CRISP is preparatory towards this end. For instance, a major limitation in the research infrastructure in Vietnam is a lack of well validated measures. One focus of CRISP has been to adapt and evaluate measures so that they will be available for research and clinical purposes. CRISP has, for example, adapted, validated, and normed the WISC-IV intelligence test for Vietnam, and is its official distributor (Dang, Weiss, Pollack, & Nguyen, 2011). Research at CRISP also has adapted, validated, and normed the NEO-PI-R personality test (Costa & McCrae, 1992), and the Chinese Personality Assessment Inventory (Cheung et al. 1996). In addition, CRISP conducted the first nationally representative CAMH epidemiological survey in ten provinces in Vietnam, which will help identify mental health domains and geographical areas to be targeted for specific CAMH services.

As a key *Capacity Development Target*, it is important that research such as that conducted through CRISP be integrated into clinical and training activities as much as feasible. For instance, undergraduate and in particular graduate students at VNU often are involved in

CRISP projects as research assistants, which enhances their training as well as contributes to the success of the projects. In addition, graduate students' research and clinical skills and aptitudes are assessed prior to their beginning training in the program, to allow for assessment of program effectiveness, and to identify factors related to successful completion of the program.

School-based Mental Health Program—The VNU School of Education *School-based Mental Health Program* currently is being conducted in three schools in Hanoi. The program serves as practicum training sites for graduate students, many of whom in their second year spend two days a week in the schools working on CAMH issues with teachers as well as directly with students. Under the guidance of program faculty, graduate students and teachers implement the RECAP universal classroom behavior management program designed to promote mental health, and reduce the incidence of emotional and behavioral CAMH problems (Weiss, Harris, Catron, & Han, 2003). The program focuses on helping teachers use effective discipline and classroom strategies (e.g., emphasizing reinforcement of desired behaviors over punishment of undesired behaviors), and on identifying children in need of specialized treatment services, which are provided by the graduate students. In addition, the classroom component of the RECAP program (Weiss et al., 2003) provides training to students in the classroom in social and emotional health skills. This program has been initially implemented by the graduate students, with the goal for teachers to ultimately take responsibility for the program as they become familiar and trained in it. Research is integrated into the school-based mental health program through ongoing program evaluation of teachers, students, VNU trainees, and the overall system.

Teacher Training—The VNU School of Education is generally recognized as the top college of education in Vietnam. As such, undergraduate students come from around the country to learn to become teachers in schools throughout Vietnam. All current student teachers receive basic classroom mental health training (Dang & Weiss, in press) similar to that provided for teachers involved in our school-based mental health program, as described above. This provides an integrated model of dissemination of evidence-based classroom interventions.

Out-reach programs—In addition to the program of training that current VNU student teachers receive, we have been involved in a national program to train teachers already in the field. The first cohort of this training took place in 2010, in Haiphong (northern Vietnam) and Dalat (southern Vietnam). Participants were Civics Education teachers, and educators from Provincial Departments of Education. Each province in Vietnam sent five representatives, for a total of 325 participants. The training focused on the *Caring and Cooperative Behavior* program (Frey, Nolen, Van Schoiack Edstrom, & Hirschstein, 2005), a social values and life skills program that provides training in student conflict resolution, anger management, and problem-solving skills. The training consisted of didactic presentation of the structure and theoretical rationale for the program as well as extensive role-playing of the content with feedback from VNU faculty. After completing their own training, educators train school staff in their home districts and provinces. Although less in-depth than training provided to clinical psychology graduate students or student teachers at VNU, the training does provide an opportunity for teachers already in the field to develop ability to support their students' mental health using EBT programs. Ultimately, a tiered system of supervision is planned wherein VNU staff supervise regional trainers who in turn supervise provincial trainers, to enhance quality control.

As part of our dissemination efforts, other less intensive out-reach programs also are conducted through CRISP. For instance, program faculty have provided EBT parent-training workshops in pre-schools in Hanoi, to increase parents' ability to support their children's

mental health. Training workshops in evidence-based psychotherapy treatments also are being conducted with Central Psychiatric Hospital #1, which as a psychiatric facility historically has focused on medication treatment.

A key limitation of these out-reach programs to date has been a lack of follow-up – both in regards to clinical supervision as well as research evaluating the efficacy of the outreach programs – due to limited funding resources, reflecting a lack of interest from NGO funding sources in conducting follow-up training and research. As Baron (2006) has noted, in short term trainings lasting a few weeks or less without longer term follow-up or supervision it can be difficult for clinicians or mental health paraprofessionals to fully understand the richness of the interventions and the underlying theoretical models. Thus, as the clinicians and paraprofessionals face the complexity of their clients, they may lack the in-depth understanding necessary to implement the intervention in an efficacious manner.

Key partnerships, and program integration into existing infrastructure

As noted previously, close partnerships with a variety of fields are critical for CAMH initiatives (e.g., Saraceno et al., 2007; Shapiro et al., 2010). VCMHRTP's key partnerships cut across academic disciplines such as education, psychology, and medicine, and reach outside of academic institutions to involve stakeholders in the public schools, governmental and non-governmental organizations (NGOs), and youth and family members through their involvement in school-based CAMH and out-reach programs. VCMHRTP is principally integrated within the educational system, as a program of Vietnam National University. Advantages of integrating VCMHRTP into the university system, as opposed to a community or non-governmental organization or a health-related entity such as a hospital or the Vietnamese Ministry of Health, include (a) universities' primary and long term mission focuses on training and research, which fits well with the *Capacity Development Goals* of efficacy and sustainability; (b) faculty at national universities generally focus their careers on training, teaching and research, which directly supports achieving the *Capacity Development Targets*; (c) developing formal degree programs, which supports the training of longterm trainers goal, is facilitated by being housed within the university system; (d) NGOs and other community organizations often are dependent on 'soft money' which makes achieving financial independence from external resources (see Figure 1) more difficult. In addition, reliance on soft money means that an organization typically will have less independence in setting their agenda, and critically often will be less interested in establishing an empirical base for CAMH programs.

Vietnam National University reports directly to the Prime Minister's office rather than the Ministry of Education and Training (MOET), but MOET is a key partner with VCMHRTP. Many of the VNU School of Education student teachers, trained in classroom CAMH support, ultimately are MOET employees; also, our teacher-focused out-reach training is conducted at the request and through MOET. In addition to its direct teacher training focus, many faculty from teacher colleges from around the country graduate from VNU School of Education programs. These faculty ultimately will help to integrate CAMH programs into colleges of education around the country.

Although VCMHRTP is centrally housed in the educational system, close linkages to the medical community have been essential given the program's focus on mental health. The VCMHRTP's *Medical Director*, who is the Director of the Danang Psychiatric Hospital, serves as a formal liaison with the medical community. Partnerships with medicine and psychiatry, which are under the Ministry of Health (MOH), include collaborative research projects (e.g., the national CAMH epidemiological study), the first clinical internship (at the Danang Psychiatric Hospital) for the Ph.D. component of the graduate program, and collaborative out-reach trainings (e.g., conducted at Central Psychiatric Hospital #1, which

is part of and a policy-setter for the MOH). In addition, graduate students practicing in hospitals and clinics collaborate with medical staff, serving as models for EBT implementation (psychosocial CAMH EBT programs typically are not well represented in clinics and hospitals in Vietnam – or in schools for that matter). Overall, these partnerships facilitate implementation of the *Capacity Development Targets* and sustainability through the broad base of support and resources that they engender for the program, and through integration of the program into current infrastructure.

Evaluation

Program evaluation of CAMH development activities is critical in at least two areas. First, it is important for all aspects of the training programs themselves to be evaluated, in regards to the attitudes and skills (including research, teaching, and clinical skills) acquired by trainees through the programs. True randomized design experiments of actual extant programs (vs. analogue training programs) may be difficult, but pre-post evaluations wherein trainees complete surveys or applied assessments before beginning training, and after completing training can be very useful (Harris, Kinsinger, Tolleson-Rinehart, Viera & Dent, 2008). Another approach to assessment is to compare trainees' attitudes and competencies to a group of similar professionals who have not been through the training program. We are, for instance, conducting a national survey of attitudes and competencies in regards to EBT psychosocial interventions. The graduates from our *Masters in Clinical Psychology* program will be included in this assessment, and we have hypothesized that they will show more positive attitudes towards EBT, more knowledge of EBT, and great competency in EBT than individuals in general who are providing psychosocial interventions in Vietnam.

The second area where evaluation is critical is in regards to the EBT themselves. Although the various interventions that our students are taught have been derived from evidence-based approaches, many have been substantially adapted for an LMIC context, and thus program evaluation is essential. In this case, randomized controlled trials of the interventions will be useful, although subject to the more general complexities of conducting experimental evaluations of interventions.

Challenges to CAMH Development

In the section on our *Masters in Clinical Psychology* program, we briefly discussed some of the challenges that we have encountered in developing and implementing this program. It will also be useful to consider the challenges that we and others (e.g., Eaton et al., 2011; Hanlon, 2010; Petersen, Lund & Stein, 2011; Shah & Beinecke, 2009; World Health Organization, 2010a) have observed more generally in our attempts to develop mental health resources in LMIC. These include obvious challenges, such as (a) a lack of financial resources, (b) a lack of trained professionals – both research as well as clinical professionals, (c) a lack of domestic training programs, (d) a lack of awareness and appreciation on the part of the general public regarding mental health problems, and (e) stigma regarding mental health that both makes families reluctant to seek treatment as well as young professionals reluctant to pursue careers in mental health (e.g., one of our psychiatric colleagues stated that after completing medical school, when he found out that his government had assigned him to psychiatry, he began crying). Less obvious challenges are (f) the fact that the presence of foreign support for mental health or other fields may reduce the government's own sense of urgency for taking responsibility for the field (although this has not been our experience in Vietnam), and (g) a lack of professional regulatory systems resulting in a lack of oversight of professional activities and quality control.

These are certainly major problems, but our own experience is that a different set of difficulties may be even more challenging. For example, there are a number of cultural barriers to the development of CAMH resources that are challenging to resolve. In Vietnam as in many LMIC, for instance, extended families and multiple generations often live and raise their children together. This can be a significant source of social support for both the children and parents, but can also create significant challenges. As elders, grandparents often have a higher level of moral authority in family decision making than parents. However, grandparents may utilize parenting practices that are not compatible with evidence-based treatments for child behaviors problems, and they may be disinclined to change their parenting practices. For instance, in our experience grandparents sometimes may be excessively lenient with children (e.g., giving their grandchildren money when the parents want to control the amount of money that their children have), or they may be excessively harsh, using fear-based, corporal punishment. (Grandparents in the U.S. and other Western countries certainly may be excessively lenient or excessively harsh. The difference is that in Vietnam, grandparents often live in the same household as the grandchildren, and serve as the heads of the family). Because of the grandparents' greater moral authority in the family and their disinclination to become involved in parenting interventions, their use of these parenting approaches may undermine evidence-based treatments for child behavior problems in which the parents are participating.

Another difficulty is that individuals and organizations in Vietnam (and based on conversations with colleagues, in many other areas of the world) sometimes implement research or clinical practice for which they are lacking appropriate, or any, expertise. For instance, with funding from an international NGO, a physician with training in social medicine planned to open a department of clinical psychology at her school of medicine, without any consultation from psychologists. This problem can also include well intentioned foreigners, who provide training in practices such as psychoanalysis or other forms of psychotherapy for which there is little evidence of their efficacy. Such activities are partly due to the lack professional regulatory systems in Vietnam (except for psychiatry, no mental health professions including psychology require licensing to practice) but it is also due to a climate of open entrepreneurship wherein people, including foreigners, feel more drawn to respond the demands of the marketplace than to follow professional standards.

Another challenge has been the lack of interest on the part of NGOs to fund research evaluations of mental health programs. Commendably, a number of international NGOs have supported development of mental health programs in Vietnam. However, their interest in funding evaluations of the programs is notably lower than their interest in funding the programs themselves. Although the exact reasons for this are not entirely clear, it likely is at least in part due to a lack of understanding of the necessity of program evaluation (i.e., that programs that appear to be effective actually very well may not be effective), and also to the fact that the NGOs themselves are reinforced by their donors for implementing programs, but not for evaluating them.

Probably the biggest challenge and drain on efficiency that we have seen, however, is a lack of cooperation and an over-riding sense of competition that cuts across both foreign and domestic organizations and individuals. Although certainly far from universal, our experience has been that a desire to be the first organization or the first person to implement a program, or to control resources in or be seen as the leader of a particular area of mental health development too often appear to override an interest in productive collaboration. This can take many forms. At conferences, presenters may view the meeting as an opportunity to promote their own programs or agendas rather than to report on scientific development to advance the field. Individuals may initially collaborate but after discovering another group's "trade secrets" discontinue collaborating, and present the ideas as their own. Or they may be

disinclined to work with another group, even though the other group demonstrably has greater expertise, out of fear that their own recognition will be supplanted. In our experience, problems such as these and such counter-productive competition, and an excessive focus on promoting one's own self-interest have been the greatest challenges to developing CAMH mental health capacity in Vietnam. And unfortunately, although perhaps not surprisingly, conversations with global health colleagues suggest that this problem is not unique to Vietnam.

Conclusions

The model we have discussed above borrows substantially from the thoughts of other scholars, arranged in a framework that we have found helpful for guiding our CAMH program initiative in Vietnam. The model focuses on longterm, broad-based development rather than on a particular program. It is an ambitious model, with a direct focus on reducing CAMH problems in Vietnamese children, and an intended macro impact on strengthening CAMH infrastructure in a self-sustaining manner nation-wide.

We do not suggest all CAMH initiatives should follow the same structure of program activities. Rather, our intent is to highlight some considerations that we feel are important for development of CAMH capacity in LMIC. We do believe that the *Capacity Development Goals* of efficacy and sustainability define success in a way that serves the long term public interest, and that to achieve these goals the *Capacity Development Targets* of dissemination, research, etc. often will be of value. Specific program activities and their structure undoubtedly will depend on the country and cultural context within which the initiative resides.

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References

- Anh, H.; Minh, H.; Phuong, D. Social and behavioral problems among high school students in Ho Chi Minh City.. In: Dang, LB.; Weiss, B., editors. Research findings from the Vietnam Children's Mental Health Research Training Program. Educational Publishing House; Hanoi, Vietnam: 2007. p. 111-196.
- Baron N. The 'TOT': A global approach for the training of trainers for psychosocial and mental health interventions in countries affected by war, violence and natural disasters. *Intervention*. 2006; 4:109–126. doi: 10.1097/01.WTF.0000237880.57276.9e.
- Belfer ML. Child and adolescent mental disorders: The magnitude of the problem across the globe. *Journal of Child Psychology and Psychiatry*. 2008; 49:226–236. doi: 10.1111/j.1469-7610.2007.01855.x. [PubMed: 18221350]
- Bolton P, Bass J, Neugebauer R, Verdel H, Clougherty KF, Wickramaratne P, Weissman M. Group Interpersonal Psychotherapy for depression in rural Uganda: A randomized controlled trial. *JAMA*. 2003; 289:3117–3124. doi: 10.1016/j.chc.2008.03.002. [PubMed: 12813117]
- British Psychological Society. Policy guidelines on supervision in the practice of clinical psychology. Author; Leicester, England: 2003.
- Central Intelligence Agency. World Fact Book - Vietnam. Author; Washington, DC: 2009.
- Chambless DL, Hollon SD. Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology*. 1998; 66:7–18. doi: 10.1037/0022-006X.66.1.7. [PubMed: 9489259]

- Cheung FM, Leung K, Fan R, Song WZ, Zhang JX, Zhang JP. Development of the Chinese Personality Assessment Inventory (CPAI). *Journal of Cross-Cultural Psychology*. 1996; 27:181–199. doi: 10.1177/0022022196272003.
- Chorpita BF, Daleiden EL, Ebesutani C, Young J, Becker KD, Nakamura BJ, Starace N. Evidence-based treatments for children and adolescents: An updated review of indicators of efficacy and effectiveness. *Clinical Psychology: Science and Practice*. 2011; 18:154–172. doi: 10.1111/j.1468-2850.2011.01247.x.
- Costa, PT.; McCrae, RR. Revised NEO personality inventory and five-factor inventory professional manual. Psychological Assessment Resources; Odessa, FL: 1992.
- Dang, LB.; Weiss, B. Research findings from the Vietnam Children's Mental Health Research Training Program. Educational Publishing House; Hanoi, Vietnam: 2007.
- Dang, HM.; Weiss, B. Mental health education and training in Vietnam: The role of clinical psychology in Vietnam.. In: Taylor, N.; Littleddyke, M.; Quinn, F.; Coll, R., editors. Health education in context: An international perspective of the development and implementation of health education in schools and local communities. Sense Publishers; Rotterdam, The Netherlands: in press
- Dang HM, Weiss B, Pollack A, Nguyen MC. Adaptation of the Wechsler Intelligence Scale for Children-IV (WISC-IV) for Vietnam. *Psychological Studies*. 2011; 56:387–392. DOI: 10.1007/s12646-011-0099-5. [PubMed: 23833330]
- Eaton J, McCay L, Semrau M, Chatterjee S, Baingana F, Araya R, Ntulo C, Thornicroft G, Saxena S. Scale up of services for mental health in low-income and middle-income countries. *The Lancet*. 2011; 378:1592–1603. PMID: 22008429.
- Falender, CA.; Shafranske, EP. Casebook for clinical supervision: A competency-based approach. American Psychological Association; Washington, DC: 2008.
- Frey KS, Nolen SB, Van Schoiack Edstrom L, Hirschstein MK. Effects of a school-based social-emotional competence program: Linking children' s goals, attributions, and behavior. *Applied Developmental Psychology*. 2005; 26:171–200. doi: 10.1016/j.appdev.2004.12.002.
- Funk M, Lund C, Freeman M, Drew N. Improving the quality of mental health care. *International Journal for Quality in Health Care*. 2009; 21:415–420. doi: 10.1093/intqhc/mzp048. [PubMed: 19841029]
- Gabriele A. Social services policies in a developing market economy oriented towards socialism: The case of health system reforms in Vietnam. *Review of International Political Economy*. 2006; 13:258–289. doi: 10.1080/09692290600625504.
- Graeff-Martins AS, Flament MF, Fayyad J, Tyano S, Jensen P, Rohde LA. Diffusion of efficacious interventions for children and adolescents with mental health problems. *Journal of Child Psychology and Psychiatry*. 2008; 49:335–352. doi: 10.1111/j.1469-7610.2007.01827.x. [PubMed: 18333931]
- Gulbinat W, Manderscheid R, Baingana F, Jenkins R, Khandelwal S, Levav I, Whiteford H. The International Consortium on Mental Health Policy and Services: Objectives, design and project implementation. *International Review of Psychiatry*. 2004; 16:5–17. doi: 10.1080/09540260310001635050. [PubMed: 15276933]
- Hanlon C. Ethical and professional challenges in mental health care in low- and middle-income countries. *International Review of Psychiatry*. 2010; 22:245–251. PMID: 20528653. [PubMed: 20528653]
- Harris R, Kinsinger LS, Tolleson-Rinehart S, Viera AJ, Dent G. The MD-MPH program at the University of North Carolina at Chapel Hill. *Academic Medicine*. 2008; 83:371–377. DOI: 10.1097/ACM.0b013e318166a848. [PubMed: 18367898]
- Hoang-Minh D, Tu HC. The mental health of secondary students in Hanoi and the need for school counseling. *Vietnamese Journal of Social Sciences and Humanities*. 2009; 25:11–16.
- Hong, KM.; Yamazaki, K.; Banaag, CG.; Yasong, D. Systems of care in Asia.. In: Remschmidt, H.; Belfer M., M.; Goodyer, I., editors. Facilitating pathways: Care, treatment and prevention in child and adolescent mental health. Springer; Berlin: 2004. p. 58-70.

- Kerner J, Rimer B, Emmons K. Dissemination research and research dissemination: How can we close the gap? *Health Psychology. Special Section on Dissemination*. 2005; 24:443–446. doi: 10.1037/0278-6133.24.5.443.
- Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*. 2005; 62:593–602. doi: 10.1001/archpsyc.62.6.593. [PubMed: 15939837]
- Korinek K. Maternal employment during Northern Vietnam's era of market reform. *Social Forces*. 2004; 83:791–822. doi: 10.1353/sof.2005.0015.
- Kutash, K.; Duchnowski, AJ. The role of mental health services in promoting safe and secure schools. Hamilton Fish Institute; Washington, DC: 2007.
- Miller S, Binder J. The effects of manual based training on treatment fidelity and outcome. *Psychotherapy*. 2002; 39:184–198. doi: 10.1037/0033-3204.39.2.184.
- Nakamura BJ, Chorpita BF, Hirsch M, Daleiden E, Slavin L, Amundson MJ, Vorsino WM. Large-scale implementation of evidence-based treatments for children 10 years later: Hawaii's evidence-based services initiative in children's mental health. *Clinical Psychology: Science and Practice*. 2011; 18:24–35. doi: 10.1111/j.1468-2850.2010.01231.x.
- Noser K, Bickman L. Quality indicators of children's mental health services: Do they predict improved client outcomes? *Journal of Emotional and Behavioral Disorders*. 2000; 8:9–18. doi: 10.1177/106342660000800102.
- Patel, V. Health systems research: A pragmatic model for meeting mental health needs in low-income countries.. In: Andrews, G.; Henderson, S., editors. *Unmet need in psychiatry: Problems, resources, responses*. Cambridge University Press; NYC: 2000. p. 363-377.
- Patel V. The future of psychiatry in low- and middle-income countries. *Psychological Medicine*. 2009; 39:1759–1762. doi: 10.1017/S0033291709005224. [PubMed: 20162837]
- Patel V, Flisher AJ, Nikapota A, Malhotra S. Promoting child and adolescent mental health in low and middle income countries. *Journal of Child Psychology and Psychiatry*. 2008; 49:313–334. doi: 10.1111/j.1469-7610.2007.01824.x. [PubMed: 18093112]
- Petersen I, Lund C, Stein DJ. Optimizing mental health services in low-income and middle-income countries. *Current Opinion in Psychiatry*. 2011; 24:318–323. PMID: 21546837. [PubMed: 21546837]
- Rahman A, Malikb A, Sikanderd S, Roberts C, Creed F. Cognitive behaviour therapy-based intervention by community health workers for mothers with depression and their infants in rural Pakistan: A cluster-randomized controlled trial. *Lancet*. 2008; 372:902–909. doi: 10.1016/S0140-6736(08)61400-2. [PubMed: 18790313]
- Ruiz-Casares, M.; Heymann, J. Children home alone unsupervised: Modeling parental decisions and associated factors in Botswana, Mexico, and Vietnam. IHSP; Montreal, Canada: 2009.
- Saraceno B, van Ommeren M, Batniji R, Cohen A, Gureje O, Mahoney J, Underhill C. Barriers to improvement of mental health services in low-income and middle income countries. *Lancet*. 2007; 370:1164–1174. doi: 10.1016/S0140-6736(07)61263-X. [PubMed: 17804061]
- Shah AA, Beinecke RH. Global mental health needs, services, barriers and challenges. *International Journal of Mental Health*. 2009; 38:14–29. DOI: 10.2753/IMH0020-7411380102.
- Shapiro ES, DuPaul GJ, Barnabas E, Benson JL, Slay PM. Facilitating school, family, and community partnerships: Enhancing student mental health. *School Mental Health*. 2010; 2:45–51. doi: 10.1007/s12310-010-9033-6.
- Stern, LM. The Vietnamese Communist Party's agenda for reform: A study of the eighth national party congress. McFarlane; Jefferson, N.C.: 1998.
- Tran, T.; Pham, TL.; Harpham, T.; Nguyen, TH.; Tran, DT.; Tod, B.; Nguyen, TVH. Young Lives preliminary country report: Vietnam. Southbank University; London, England: 2003.
- UNICEF. An analysis of the situation of children in Viet Nam: 2010. Author; Hanoi, Viet Nam: 2010.
- United Nations. The Millennium Development Goals Report 2011. Author; New York City: 2011.
- UN-VN Youth Theme Group. United Nations position paper on young people in Viet Nam 2008-2010. United Nations; NYC: 2010.

- Weiss, B. A program for research training on Vietnamese children's mental health.. In: Dang, LB.; Weiss, B., editors. Research findings from the Vietnam Children's Mental Health Research Training Program. Educational Publishing House; Hanoi, Vietnam: 2007. p. 37-59.
- Weiss B, Dang HM, Ngo V, Pollack A, Sang D, Lam TT, Do KN. Development of clinical psychology and mental health resources in Vietnam. *Psychological Studies*. 2011; 56:185–191. doi: 10.1007/s12646-011-0078-x. [PubMed: 21785513]
- Weiss B, Harris V, Catron T, Han SS. Efficacy of the RECAP intervention program for children with concurrent internalizing and externalizing problems. *Journal of Consulting and Clinical Psychology*. 2003; 71:364–374. doi: 10.1037/0022-006X.71.2.364. [PubMed: 12699030]
- Weisz JR, Hawley KM, Pilkonis PA, Woody SR, Follette WC. Stressing the (other) three Rs in the search for empirically supported treatments: Review procedures, research quality, relevance to practice and the public interest. *Clinical Psychology: Science and Practice*. 2000; 7:243–258. doi: 10.1093/clipsy/7.3.243.
- Weisz JR, Weiss B. Assessing the effects of clinic-based psychotherapy with children and adolescents. *Journal of Consulting and Clinical Psychology*. 1989; 57:741–746. doi: 10.1037/0022-006X.57.6.741. [PubMed: 2600245]
- World Bank. Gross national income per capita 2009. Author; Washington, DC: 2010.
- World Health Organization. Monitoring and evaluation of mental health policies and plans. Author; Geneva, Switzerland: 2007a.
- World Health Organization. Mental health policies and action plans. Author; Geneva, Switzerland: 2007b.
- World Health Organization. Task-shifting: Rational redistribution of tasks among health workforce teams. Author; Geneva, Switzerland: 2008.
- World Health Organization. Mental health and development: Targeting people with mental health conditions as a vulnerable group. Author; Geneva, Switzerland: 2010a.
- World Health Organization. mhGAP intervention guide. Author; Geneva, Switzerland: 2010b.
- World Psychiatric Association, World Health Organization. International Association for Child and Adolescent Psychiatry and Allied Professions. Atlas: Child and adolescent mental health resources. WHO; Geneva, Switzerland: 2005.

Figure 1.
VCMHRTP Implementation of Sustainable CAMH Development Model