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Worldwide child and adolescent mental health begins with awareness: A preliminary assessment in nine countries

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Abstract

To temper untoward mental health outcomes in children and adolescents, the World Psychiatric Association's Presidential Global Child Mental Health Programme, in collaboration with the WHO and the International Association of Child and Adolescent Psychiatry and Allied Professionals, established a Child Mental Health Awareness Task Force headed by Sam Tyano. Its task was to develop methodologies to increase awareness among policy-makers, community leaders, health professionals, teachers, parents, and children. Based on a prior comprehensive international search for effective techniques for information dissemination, an awareness manual was written for use by health professionals in diverse communities so as to guide the design and implementation of location specific awareness campaigns. We assessed the children, parents and teachers both before and after the campaign to determine changes in knowledge, attitudes and understanding of mental health. The school-based studies were conducted in selected communities in nine countries on five different continents distinguished by their different languages, cultures and their differing levels of economic development: Armenia, Azerbaijan, Brazil, China, Egypt, Georgia, Israel, Russia, and Uganda. In the six sites that completed all assessments, indicators of positive change in awareness of child mental health were identified, and results demonstrated an increased willingness to discuss emotional problems freely. These data support the utility of collaborating with schools so as to foster better child mental health in such under-resourced communities.

Introduction

Fortunately, there has been a recent surge of interest in cross-national assessment of psychopathology (Bijl *et al.*, 2003; Jensen, 2006; Kessler, Haro, Heeringa, Pennell, & Ustun, 2006), which will hopefully continue to influence policy (WHO, 2000; WHO, 2004b). For child mental health internationally, there has been only a minimal focus (Belfer & Saxena, 2006; Belfer, 2007; Rahman, Mubbashar, Harrington, & Gater, 2000; Shatkin & Belfer, 2004; WHO, 2003). Although mental health is a fundamental component of the general health of children, awareness of its importance in much of the world remains limited (Miranda & Patel, 2005; US Department of Health and Human Services, 1999; WHO, 2004b). Additionally, the widespread stigma attached to mental disorder impinges upon the quality of life experienced by youths suffering from such problems, and serves as a barrier to prevention and treatment efforts (Hinshaw, 2005; Sartorius, 2002). Clearly, decreasing stigma through increased understanding and awareness effectively reduces ostracism and promotes better mental health (Sartorius & Schulze, 2005).

Despite frequently cited statistics attesting to the global burden of mental illness (Bijl *et al.*, 2003; Kessler, 2000; Lopez, Mathers, Ezzati, Jamison, & Murray, 2006; Murray & Lopez, 1996) too little attention has been focused on promoting mental health awareness, especially in less economically developed nations where the burden is great (Sherer, 2002). Reasons given for ignoring advances in global awareness of children's mental illness include conventions regarding the economic importance and value of children, as well as their inferior position in families, where they have often been viewed as 'property' (National Association of Counsel for Children, 2008). Moreover, there is usually inadequate knowledge transmitted to the general population regarding the developmental course of psychopathology (Black & Krishnakumar, 1998;

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WHO, 2003). This lack of awareness about children and adolescents' mental health problems results in their frequently being ignored and overlooked in the framing of mental health policies in many countries. Hence, policies endorsing mental health care directed specifically for youths are seldom enacted (Shatkin & Belfer, 2004).

Lack of awareness is particularly acute with regard to the unique problems experienced by children and adolescents, so that in some cases even the existence of such conditions may be denied. Mental health problem symptoms may further be thought of as natural features of growth and development and hence neglected or overlooked. Regrettably, it has been argued that despite knowledge about mental ill-health, the priority remains low in some less economically developed countries, partly because of the need of adequate resources or lack of incentive without proof of cost-effectiveness (Sherer, 2002). Yet, it is now known that mental illness can be alleviated, in many cases, through low-cost interventions (Patel & Thara, 2003; Rahman *et al.*, 2000; WHO, 2004b; WHO, 2004c; WHO, 2004a). However, without there being a mechanism to raise the level of awareness about child mental health among policymakers, professionals, and other stakeholders, it is difficult for them to address the need for services (Miranda & Patel, 2005).

To respond to this deficit, the Presidential World Psychiatric Association's (WPA) Global Programme on Child Mental Health, in collaboration with the World Health Organization (WHO) and the International Association for Child and Adolescent Psychiatry and Allied Professions (IACAPAP) sought to explore ways to increase the level of awareness by establishing an awareness task force (World Psychiatric Association *et al.*, 2004). The primary aim of the task force was to develop and test a feasible strategy to promote child mental health awareness, one that could inform and guide the implementation of such a programme worldwide. Hence, the objectives of this task force were to: 1) develop a resource manual appropriate for international use, especially in under-resourced countries, 2) guide the implementation of child and adolescent mental health awareness campaigns; and 3) conduct research to assess change in knowledge, attitudes and understanding about child and adolescent mental health resulting from conducting these campaigns.

This paper presents results from the WPA-WHO-IACAPAP pilot study conducted in nine countries, reflecting on change in level of awareness, knowledge, attitude and beliefs of the parents, teachers and students who participated. Each of the nine site-specific campaigns utilized the *Awareness manual* as a guide and resource, but the campaigns themselves were specifically designed on site in collaboration with the local study psychiatrist, who served as the site Principal Investigator. The modus operandi of the study was that to be acceptable and appropriate for each local community, 'one size fits all' approaches were to be avoided.

Methods

Development of an awareness manual

The creation of the *Awareness manual* (Hoven *et al.*, 2004b) was the first step of the WPA-WHO-IACAPAP Program Awareness Task Force. The *Awareness manual* (Hoven *et al.* 2004b) was designed so that it could be adapted locally and utilized in child mental health awareness campaigns directed by either a psychiatrist or other well-trained mental health provider. The manual was designed to inform and guide the campaigns, by providing five critical elements: 1) purpose and contextual issues for planning a campaign; 2) mental health content areas; 3) selection of target populations; 4) campaign implementation methodologies, and; 5) an annotated reference of Websites and other resources. The informational content explores a range of important issues, including healthy child development, mental retardation and epilepsy, as well as common childhood psychiatric disorders, e.g. depression, anxiety, conduct, PTSD, substance abuse and schizophrenia. Suicide was intentionally folded in as an area to focus on in an awareness campaign. Similarly, stigma, service use and treatment issues were also included. The *Awareness manual* elaborates upon and stresses the need to consider local contexts when employing different campaign methods at the least cost. The annotated references of worldwide authoritative sources are divided into potential user groups, e.g. children, parents and families; policy makers and NGOs; and healthcare professionals.

At the core of any awareness campaign is the information to be conveyed. This manual focuses on essential clinical information about child mental health problems and disorders (Rahman *et al.*, 2000; Van Hook & Ford, 1998; Yancey, 1998). For mental health problems and disorders commonly seen in children, such as depression, conduct disorders, and anxiety, the manual offers relevant information such as prevalence, typical course of illness, treatment options, and, most essentially, signs and symptoms (Rutter & Taylor, 2002). The emphasis on prevention and treatment options aims, in part, to dispel the myth that mental health problems are untreatable, and to curb the mystery and stigma that is associated with mental illness (Sartorius & Schulze, 2005; Sartorius, 2002; WHO, 2004c; WHO, 2004a). Stigma receives special treatment in the manual because it often acts as a

formidable impediment to recognizing and treating mental health problems. Moreover, stigma can exacerbate illness, both by compounding the distress of the suffering child and by making the child reluctant to seek help (Hinshaw, 2005; Sartorius & Schulze, 2005). Suicide is addressed as the extreme outcome which could result from leaving children's problems unidentified or unaddressed (Mittendorfer-Rutz & Wasserman, 2004).

In order for any awareness campaign to be effective it needs to consider its target audience(s), which should include children (when mental illness usually begins), families, teachers, other school personnel and community institutions and organizations playing an influential role in children's lives, as well as policymakers, in order to appropriately tailor the content (Rahman *et al.*, 2000). Awareness in all of these groups, it is argued, facilitates early identification and treatment of child mental health problems. Direct targeting of children themselves is considered ideal for increasing awareness. Nonetheless, the manual places special emphasis on primary caregivers and school personnel, because these people are often the ones who have the most direct contact with children, and therefore they are best positioned to recognize a child who is having emotional difficulty (Hinshaw, 2005; Mohit & Seif El Din, 1998; Patel & Thara, 2003).

The final portion of the *Awareness manual* presents a spectrum of means by which mental health information can be easily and cost-effectively disseminated to target populations. The methods suggested range from the use of local initiatives, such as community meetings and posters in the neighbourhood, to more costly traditional mass media, including newspapers, radio and television. In addition, emphasis is placed on the potential for using more recently developed technologies, such as the Internet, satellite TV and cell phones.

Study methodology

The second step of the WPA-WHO-IACAPAP Global Programme on Child Mental Health was to obtain information about changes in child mental health awareness resulting from pre- and post campaign assessments.

Study design and populations

The target sample for youth was 400 per site, 200 per age group or $N = 3600$. Student questionnaires were to be completed during one classroom session; parent questionnaires were to be completed at the school if possible or sent home and brought back to school by the students. Teacher questionnaires were to be distributed and collected by study personnel.

Using a procedures manual (Hoven, Musa, Wicks, & Mandell, 2004a) developed for this study, students in each age cohort were to be randomly selected from a stratified random sample of schools within the selected campaign area (including large and small schools) at each of the sites. Parents of selected students, as well as all teachers in the selected schools, were also to be surveyed.

Each of the study schools and their associated communities, under the direction of the principal investigator (psychiatrist), designed their own awareness campaign using the *Awareness manual* as a guide: Armenia (Yerevan), Azerbaijan (Baku), Brazil (Porto Alegre), China (Shanghai), Egypt (Alexandria), Georgia (Tbilisi and Rustavi), Israel (North), Russia (Chernoprudsky), and Uganda (Kampala). The wide range of schools (urban and rural), cultures and languages was chosen deliberately in order to test whether the manual would be flexible, useful, and broadly applicable. Also, the several less economically developed countries were included, in part, to investigate whether these economically challenged countries would find the manual useful in campaigns to effectively increase mental health awareness.

Measures

Questionnaires were developed to assess the effect of the campaigns on the mental health awareness of students, parents and teachers. Each of the questionnaires and the *Awareness manual*, and in most cases the *Procedures manual* (Hoven *et al.*, 2004a) as well as the *Data entry manual* (Musa, Doan, & Hoven, 2004) were translated and back-translated for use in the eight local languages: Armenian, Arabic, Azeri, Chinese, Georgian, Hebrew, Portuguese and Russian. The first section of the students' questionnaire, the Mental Health Awareness Questionnaire for Students, consists of six questions which address demographics, including but not limited to age, gender and school grade. The second section utilizes the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1999; Goodman, Ford, Simmons, Gatward, & Meltzer, 2000), an instrument used frequently to assess behaviours, thoughts and feelings of children. The third and final section consists of 28 questions, which was designed to gather information about the student's opinions on child mental health problems. These questions address different aspects of child mental health, including the students' knowledge about it and attitudes towards it. Additional questions assess the students' views of mental health treatment for children. Finally, there are a number of specific baseline and follow-up questions. The baseline asks further about the

Table I. Contents of the mental health awareness questionnaires.

Questionnaire topics	Student	Teacher/parent
Demographics	X	
Youth mental health (SDQ)	X	
Knowledge and opinions about child mental health problems	X	X
Knowledge about mental health treatment	X	X
Attitudes towards mental health	X	X
Baseline only		
Perception of own mental health knowledge	X	X
Desire to know more about mental health	X	X
Thoughts about possible campaign	X	X
Follow-up only		
Exposure to the campaign	X	X
Increase in mental health knowledge	X	X
Change in attitudes towards mental health	X	X

child's knowledge of mental health and his/her desire for more knowledge, as well as the child's thoughts about having a mental health awareness campaign. The follow-up questions concern the campaign and its perceived effectiveness in increasing knowledge about child mental health, and seek to ascertain whether the campaign altered attitudes pertaining to mental health issues. The contents of both the child questionnaire and the one for parents and teachers are outlined above in Table I.

The Mental Health Awareness Questionnaire for Parents and Teachers consists of one section with 33 questions, and is similar in content to the final portion of the student questionnaire. The questions aim to gauge the knowledge and attitudes of parents and teachers towards child mental health issues and treatment. Baseline and follow-up questions pertain to knowledge of child mental health and the awareness campaign. The follow-up questions also attempt to determine whether the campaign played a role in increasing the respondent's knowledge or in changing attitudes about child mental health.

Ethics

This study and all of its components were monitored for compliance with human rights standards at several different levels. Each of the nine study sites obtained an Institutional Review Board (IRB) approval at the local level, which included clearly defined procedures for obtaining consent from all participants. Furthermore, each of the local study sites was required to have a mechanism in place that provided clinical back-up in the case of an emergency, and all sites were required to institute mechanisms to ensure that all data collected would be kept confidential. Survey respondents were not allowed to provide any identifying information. Mechanisms were also established to ensure the secure transfer of data between the study sites and the International Coordinating Center (ICC), Columbia University. The ICC obtained IRB approval for the study before any of the participating sites initiated data collection.

Procedures

Awareness Campaign Evaluation

The *Procedures manual* describes the methods and procedures for conducting a school-based evaluation of a child mental health awareness programme. The pilot evaluation of the nine awareness campaigns followed the steps outlined in the *Procedures manual* (see Figure 1). Approval for the pilot was first obtained from the highest authority, such as an Education Department or Health Department, followed by a local authority (if needed) and the individual school authority. Once pilot approval had been obtained, a pre-campaign awareness survey was administered to students, parents and teachers within a pre-determined campaign awareness area (i.e. city, urban borough, rural province, etc.) determined by each participating site.

Pre- and post-assessments

Each site performed two evaluations of mental health awareness in its target populations, one before the campaign and one after. Reflecting the range of suggestions adopted from the *Awareness manual*, the nine child mental health campaigns employed a diversity of approaches, both in terms of content selected and in terms of the means selected to reach target populations. The target populations for the different campaigns, however, were similar, and included children, parents, and teachers, though some sites targeted additional groups (e.g., community members) and two sites (Brazil and China) chose not to include parents. All campaigns focused primarily on school-based populations.

Approximately one month following the pre-campaign assessment, the nine awareness campaigns were launched. Approximately one month following the completion of the campaign, a post-campaign assessment was administered to a similar number of selected students, parents and teachers. As with the data for the pre-campaign survey, data entry followed according to procedures outlined in the *Data entry manual* and was submitted to the IRCS for processing. (See Figure 1).

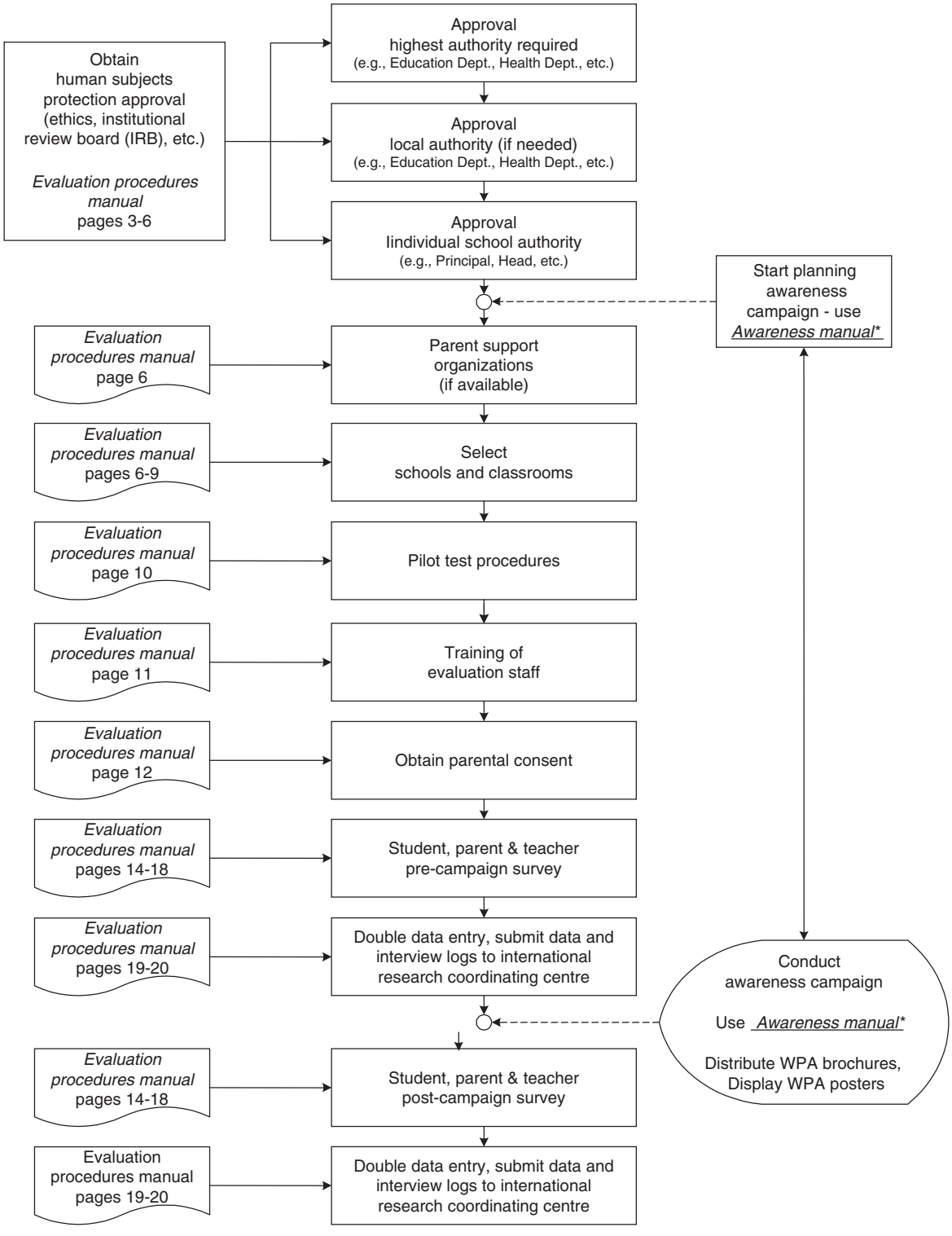

Figure 1. Awareness campaign study design.

Data management and analysis

A data entry manual (Musa *et al.*, 2004) was developed for this study by the ICC to guide the sites. Data entry followed a double-entry format using a data entry application developed by the ICC, using the publicly available CSPro software (see http://www.census.gov/ipc/www/cspro/index.html). All programmes and manuals were disseminated to each site via a website developed and maintained by the ICC (www.childepi.org/awareness). Data was submitted to the ICC by each site in ASCII format

via e-mail. Each site maintained evaluation questionnaire logs for administrative purposes.

To guarantee the confidentiality of the information, questionnaires were not uniquely identified in the pre- or post-campaign assessments. For this reason, descriptive analyses were performed on pre- and post-campaign data independently. Results are therefore interpreted as indicators only of the impact of the awareness campaign in general, on students, parents and teachers respectively.

Results

In Table II, information about participants in the pilot evaluation is provided by site. Baseline (pre-campaign) assessment included $N = 3574$ participants: 2472 students, 607 parents, and 495 teachers. Participation at follow-up ($N = 2715$) included 2068 students, 328 parents, and 318 teachers. The number of students enrolled in the pre-campaign surveys ($N =$ ranged from 100 to 541) had a mean age varying from 13.3 to 15.8. For three countries, post-campaign data were not collected (Armenia, Egypt and Israel). The similar gender and age distribution of the pre- and post-campaign survey population of students, conducted in the same classrooms each time, provides a strong indication that even if the same students the re-assessment group was not made up of, a comparable population was in fact assessed in the post-campaign phase.

When the various methods of reaching the target populations in these countries are viewed in aggregate (see Table III), notable trends become apparent, with the first being that the various types of print media and local meetings/training sessions were the dominant approaches used to promote awareness. These are the lowest cost methods. The next most commonly employed approaches were the media of television, radio and the Internet. Finally, the forms of information dissemination that are most novel, such as cell phones, were the least utilized.

Table IV describes pre- and post-campaign impressions by students, parents and teachers. Note that pre-campaign data is based on nine countries, and post-campaign data on six countries. Before the campaign was conducted, slightly more than one fourth of students and parents, and about one fifth of the teachers, reported they knew enough about mental health. The vast majority of the respondents thought that conducting a mental health campaign would be a good idea (varying from 80.9% of the students to 99.6% of the parents) and wanted to know more about mental health.

In the post-campaign questionnaire, about 70% of students and teachers reported that a campaign occurred in their schools. When students, parents and teachers were asked, after the campaign, to report their knowledge about mental health before the campaign, roughly the same proportions acknowledged far lower prior campaign knowledge about mental health. More than half of the students (50.7%) reported knowing enough about mental health after the campaign. Changes seem also to have occurred at the behavioural level: 70% to 90% of the students, parents and teachers reported, in the post-campaign assessment, that they now felt more comfortable discussing their own (student) or their child(ren)'s mental health problems with people who could be helpful. This is, perhaps, the most significant and heartening result. With 'tongues loosened', the chances for discovering mental health problems and seeking help increased (Table IV).

Table II. Number of participants: Pre- and post-campaign surveys, by country.

	Pre-campaign					Post-campaign				
	Student			Parent	Teacher	Student			Parent	Teacher
Country	(*N*)	Fem. (%)	Age (Mean)	(*N*)	(*N*)	(*N*)	Fem. (%)	Age (Mean)	(*N*)	(*N*)
Armenia	100	53.0	13.3	100	100	0	–	–	68	82
Azerbaijan	400	51.5	13.5	51	50	382	52.1	13.5	49	45
Brazil	119	53.8	14.0	0	7	106	53.8	14.0	0	5
China	541	48.6	15.8	0	114	541	48.6	16.3	0	115
Egypt	174	54.6	13.6	94	39	0	–	–	0	0
Georgia	432	55.0	13.9	53	43	364	57.9	13.6	42	34
Israel	143	60.6	15.1	31	60	0	–	–	0	0
Russia	159	57.6	13.9	129	26	144	49.6	13.4	96	15
Uganda	403	56.3	13.4	149	56	418	55.8	13.3	73	22
Total	2472	53.1	14.2	607	495	2068	52.9	14.3	328	318

In an effort to determine individual change from baseline to follow-up, which was otherwise limited to aggregate data, post-campaign increased awareness was also determined based only on the children's post-campaign answers. A child was considered as having increased her/his mental health awareness in the post-campaign period if she/he reported currently knowing enough about child mental health while not knowing enough about it before the campaign. The percentage of students reporting increased mental health awareness is displayed in Figure 2 for each one of the six countries for which post-campaign data were available. Increased student mental health awareness varied considerably by site, with the lowest level of increase occurring in China (17.8%) and the highest in Uganda (51%).

Overall, most sites had a positive outlook regarding the success of the campaigns. In addition to student, parent and teacher surveys, brief questionnaires were sent to each site's principal investigator (PI) to describe the campaigns and their outcomes. Seven of the nine PIs (77.8%) reported that they 'liked' the approach of the campaigns, while one was neutral and one had mixed feelings. Of the nine PIs surveyed, eight reported they planned on conducting more campaigns (one depending on funds) in the future. Five of the seven PIs who intend to conduct a local campaign also intend to implement a national campaign as well.

Table III. Awareness campaign methods.

Awareness campaign methods	Number of sites
Local meetings/training	7
Other written material	7
WPA brochures	5
Newspapers/magazines	4
Posters	3
Radio	3
Television	3
Internet	3
Cell phones	1
Other media	1
Other	1
Total	38

Discussion

The goal of this paper is to describe the development and implementation of a pilot study to assess changes in child mental health awareness following campaigns conducted in nine countries based on the child mental health *Awareness manual*. The challenge of using a similar methodology in nine very different situations was considerable, considering the stringent time constraints and very limited funds. Our results are, nevertheless, very encouraging regarding the use of cost-efficient methods to advance knowledge about child mental health problems around the world.

Overall, post-campaign survey participants in every country, despite variation in cultures, campaign methods, and, economic well-being, reported increased knowledge and understanding of child mental health issues. The *Awareness manual* explicitly provides guidance for and encourages individualized campaigns. The pilot evaluation was designed to test whether the *Awareness manual* could indeed be an effective guide in the design and implementation of campaigns in such a wide range of environments. The finding of increased awareness in each of the six countries that completed both pre- and post-study requirements indicates the effectiveness and intended flexibility of the *Awareness manual*. Moreover, the evaluation suggests the feasibility of low-cost awareness campaigns in a wide variety of cultures. These preliminary data thus indicate that

Table IV. Pre- and post-child mental health awareness campaign impressions: Student, parent and teacher.

	Informant		
	Student	Parent	Teacher
Pre-campaign (all countries)			
Knows enough about mental health	26.6%	28.4%	19.8%
Mental health campaign is a good idea	80.9%	99.6%	91.8%
Wants to know more about mental health	74.1%	90.6%	93.3%
Post-campaign (six countries)			
A campaign occurred in the school	70.1%	60.2%	72.0%
Mental health campaign was a good idea	88.3%	90.1%	98.1%
Knew enough about mental health before campaign	24.8%	34.3%	14.1%
Now knows enough about mental health	50.7%	46.5%	40.7%
Now feels more comfortable talking about student's mental health problems:			
with parents	54.6%		68.2%
with students		60.2%	75.2%
with teachers	58.5%	46.2%	

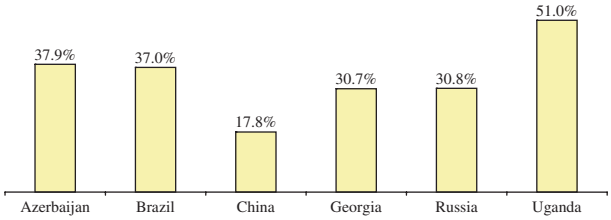

Figure 2. Student self-reported increased mental health awareness at six sites: Post-campaign survey (N = 1522).

the WPA-WHO-IACAPAP Child Mental Health Awareness Campaign had a positive impact and warrants refinement, expansion and further application and evaluation.

In trying to increase child mental health, the next logical step would be to use the resources developed for this preliminary investigation and the evidence presented here to stimulate more permanent efforts. Although 'awareness' is an essential first step, it has to be combined with treatment and prevention initiatives, so that improving child mental health can be addressed worldwide. Fortunately, others, including the work of a different WPA task force, have developed usable tools to expand the delivery of child mental health prevention, intervention and treatment where it has previously been unavailable (Bauermeister, So, Jensen, Krispin, & El Din, 2006; Befrienders International, 2001; Hoagwood, Kelleher, Murray, & Jensen, 2006; Jellinek, Patel, & Froehle, 2002; Jensen, 2006; Miranda & Patel, 2005; Mohit & Seif El Din, 1998).

It should be noted that this pilot study also faced significant limitations. First, stringent time constraints may have limited the impact of the campaign in most settings. Second, for ethical reasons, given the constraints of this study, the surveys had to be anonymous. Consequently post-campaign assessments could not be directly linked to pre-campaign assessments. A third limitation concerns problems that arose from the need to translate and back translate documents for use in the local language. This important activity unfortunately consumed a significant portion of the cross-national study budget. All questionnaires were appropriately translated and back translated but because all site-specific principal investigators were fluent in English, some of the procedure manuals and data entry manuals were not translated or back translated. It is not known how this might have affected the study findings. A fourth limitation was the difficulty some sites experienced recruiting the proposed sample sizes, particularly parents, who, for a variety of reasons, including distance, language differences and literacy were not always well-represented here.

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In collaboration with the Awareness Task Force, this study was carried out by: M. Yeghiyan (Yerevan, Armenia), A. Apter (Tel Aviv, Israel), Y. Du (Shanghai, China), T. Dmitrieva (Chernoprudsky, Russia), A. S. El Din (Alexandria, Egypt), F. Ismayilov (Baku, Azerbaijan), L. A. Rohde (Porto Alegre, Brazil), T. Jaliashvili (Tbilisi and Rustavi, Georgia), E. Ovuga (Kampala, Uganda). These psychiatrists served as the principal investigators at their respective sites, conducted the local studies and supervised the awareness campaigns. At the International Coordinating Site (Columbia University), George J. Musa and Thao Doan provided Web-based site coordination, as well as data transfer and management; P. David Wilkin supervised the *Awareness manual* writing team, of which major contributors were Carol Herbig, Kathleen Merrill, Cynthia Weinstein, and Donald J. Mandell.

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