Evaluating a ten years training course in child psychiatry in Jimma, South-West Ethiopia

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Abstract

Background: In Ethiopia, as many other low-and middle income-countries, health professionals, particularly of mental health workers are scarce. The purpose of this paper is therefore to describe the process of developing, establishing and evaluating a training course for child psychiatry within this program.

Method: Cooperation between local and foreign institutions and instructors used to offer the course in child psychiatry between 2010 and 2019. The core elements of the course were to train mental state description from locally produced video examples, make decisions on possible disorders, do occupational activities and design psychosocial interventions. Patient-oriented method of teaching was implemented. The basic structures of course development were a phase of preparation, a focus on case presentations during the course, mutual feedback and evaluation, and a workup after the course. The concept in the method of teaching was adapted in an iterative process according to the needs of patients and evaluations of participants and teachers overtime.

Results: From 2010 to 2019 eight courses were organized. A total of 71 trainees took part in the courses successfully. The initial step was to establish collaboration with guest lecturers and implementation of the teaching program. Each course contributed to expand the course materials subsequently. Main modifications were to elaborate on the mental state description successively to get a feeling for children's problems by age and severity. The second period was a phase of transition from guest lecturers to local trainers. At the request of graduates, a refresher course was held in 2017. Relying on an OSCE format, clinical abilities could be updated within one weekend. Capacity building was a major aim of the program. Three graduates developed to be trainers in child mental health and they subsequently continued the course on their own. Alongside the teaching program, an outpatient clinical service for children established by the lead author is now running at Jimma University.

Conclusion: The establishment of the training program was time consuming. The long-term commitment of local and guest teachers enabled them to develop culturally appropriate solutions for the local context. A similar approach could be applied to other settings.

Background

Health needs of the country

In low and middle-income countries (LMIC), including Ethiopia, access to mental health services, particularly to a child and adolescent mental health, is very limited (1, 2). Despite the high burden of child and adolescent mental health problems in the country, child and adolescent mental health professionals and services are almost non-existent. To date there is only one child and adolescent psychiatrist in the country who guides two outpatient services for children and adolescents in the capital at Addis Ababa University (AAU). Thus provision of training to non-physician health professionals is vital to develop a workforce to meet the existing service needs (3).

In the community there is a broad range of different culturally determined ways of understanding sickness and healing. Healers provide holy water and other spiritual remedies. A university hospital, on the other hand is expected to treat by using a standard western procedures and appropriate medications (4). The Federal Ministry of Health (FMOH) in Ethiopia had set up the National Mental Health Strategy for the years 2012 to 2016 that states, “Academic institutions are expected to train health professionals and provide evidence-based information about the most clinically and cost-effective ways of delivering culturally competent care. Training of staff is a core element to develop service structures”. The national mental health strategy recommends only psychosocial interventions for children with mental health problems (5). This requires the development of culturally adequate psychosocial interventions.

Training Concepts

Training in LMICs has to take into account the scarcity of resources and must be adapted to the local culture and social circumstances. A systematic review by Klasen and Crombag (2012) found only a few interventions for children with mental health problems in low-income countries (6). Their degree of evidence was low for most of them. Majority of studies assessed psychopharmacological interventions only. Kieling et al. (2011) reported a lack of high-quality studies assessing psychosocial or combined treatments for children’s mental health problems in LMIC (7). The limitations in this regard are very critical because such intervention modalities require culture and context- specific evidence (7).

The purpose of the WHO mental health Gap Action Program for mental, neurological and substance use disorders in non-specialized health settings (WHOMhGAP guide, 2008, guide) is to integrate mental health into primary health care system (8). The sections “essential care and practice”, “epilepsy”, “child and adolescent mental and behavioural disorders” and “other significant mental health complaints” as recommended by the *guide* are appropriate teaching material for child and adolescent psychiatry. The target groups are frontline workers in primary health care facilities. Priority conditions are presented by decision trees on assessment and management section. The guide comprises one chapter for the diagnosis and management of Child and Adolescent Mental and Behavioural Disorders.

The second version WHOMhGAP2 (2015) includes a new section on follow-up (9). The revised child section refers to problems by age group and transitions between age adequate behaviour and problem behaviour. Medications for children are recommended by indication and age-adequate dosage. Our training intended to bring an understanding on how to assess the strengths and needs of children and their families as recommended in the guideline.

In the training the textbook of the International Association for Child and Adolescent Psychiatry and Allied Professions is used as a source of knowledge for introductory lectures and further reading materials (10, 11). For training in LMIC one has to take into account that options proposed in the textbook for the assessment and management of children and adolescents with mental health problems may be non-existent or not available. The *guide* and the Ethiopian mental health strategy prioritize the training of health care workers to recognize and handle basic needs.

Keynejad et al. (2018) conducted a systematic review on the implementation and evaluation of the WHOMhGAP guide in LMIC (12). From 33 included studies, three of the studies focused on developmental and behavioural disorders in children (13–15). Their review identified the importance of qualitative reports of contextual challenges in the field, detailed protocols, qualitative studies and randomised controlled trials.

International cooperation

Fricchione et al. (2012) suggested that, “the optimal approach to building capacity in global mental health care will require partnerships between professional resources in high-income countries and promising health-related institutions in low- and middle-income countries”(3). A review on “capacity building to strengthen mental health systems” demonstrated the need for partnership approaches and assessment using longitudinal evaluation and mixed qualitative and quantitative approaches (16). A master program in integrated clinical and community mental health for non-physician clinicians was set up in 2009 in the context of international cooperation between Jimma University (JU) and the Center for International Health (CIH) of Ludwig-Maximilian- University Munich, Germany (LMU) (13, 17, 18). Priorities of the JU-LMU collaboration were **curriculum development and academic staff training**, and improved medical postgraduate training at partner institutions. Participants of the program “Master of Science in integrated clinical and community mental health” are required to have a bachelor degree in health officer or nursing trainings and may come from anywhere in the country. The students gained government sponsorship for tuition fees with a commitment to serve after graduation. The program aims to expand mental health care services in Ethiopia by generating non-physician mental health specialists who can play a role to meet needs of comprehensive mental health service in the country.

Each year about 10–15 participants are enrolled with a requirement to do full clinical training and service provision for two years in the department of psychiatry at JUMC. Furthermore, 16 courses of each with two weeks of lecture duration provide knowledge and skills and, finally, each participant has to do a research project as a master thesis. The course child psychiatry was initially two weeks and is equal to 2 credit hours or 32 hours of teaching. The schedule was modified to three weeks based on the feedbacks from participants during evaluation of the course. Then a clinical training of four weeks takes place in the clinic for child psychiatry at Addis Ababa University. Objectives of the course in child psychiatry are to give an overview of priority conditions and to train competencies for the care of children with mental health problems. A core competency is the assessment of an age-appropriate mental state to be able to decide on the condition of a child and to recommend appropriate psychosocial intervention modalities. Skills in occupational activities are necessary to get in contact and to provide structure in the assessment and management approach. As all participants will be teachers in mental health, a short teaching exercise on a topic from child mental health is included.

Aim of the paper

The present paper describes the iterative process of planning, training, and evaluation of a course on child psychiatry by participants and trainers to help improve outcomes in the approach to child patient assessment and management within a psychiatric clinic and to modifying the training course accordingly

for subsequent trainings. The purpose of this audit process is therefore to improve goal attainment based on empirical data.

Methods

Setting: The study was facilitated in Jimma University, Jimma, Ethiopia. Jimma Zone has about 3 million inhabitants and is one of the zones in Oromia National Regional State. Jimma town, the capital of this sub-region with more than 180,100 inhabitants, is a multi-ethnic and multi-lingual city. Around Jimma, there is a large rural population visiting the town for various needs. The official language is Afan oromo, and Amharic is spoken by most of the inhabitants. However, English is the medium of instruction from high school to University level. Jimma University Teaching Hospital (JUTH) serves as a referral center for mental health problems in the south-western Ethiopia. This training was done at the department of psychiatry, Jimma University Medical Centre, Ethiopia between 2010 and 2019. A prospective follow up of the training program has been employed. No statistical analysis has been applied.

Course Preparation

The course concept was prepared and presented in advance to the local partner and CIH team. The training focused on case or patient-based learning. Material for occupational activities and a concept on what to do with it were prepared. All teaching exercises were accompanied by selected references. The *guide* was regarded as appropriate for the master course for its orientation to practice and priority conditions (8, 9).

The course

At the beginning of the course, participants were asked for their expectations from the course. Then initial lectures on the development of children and on priority conditions provided the student background knowledge. As the course progressed child patients were seen and occupational activities were practised and demonstrated in the clinic. After having obtained informed consent from patients and parents, their activities were documented by video and shown in the classroom sessions. Videos were used to train observation, to describe the scenario and to decide on normal behaviour and abnormal symptoms.

The competences of learners were assessed by weekly tests. The task was to describe the mental state of a child, to set an overall impression and suggest appropriate and specific interventions based on the scenario seen on the test-video. The course was evaluated bi-directionally. Participants rated the course content and the quality of teaching using a structured evaluation sheet and semi-structured questions (Supplementary file 1A). At the end of each week, in group discussions, participants were asked to make suggestions for improvement of the course and for teaching approaches. Similarly, the instructors gave feedback on the learning-teaching progress of the group.

Workup: A report by instructors after the course was an opportunity for reflection: What was planned? What was done? The comparison gave a feeling for timing and permitted flexible planning and

modifications for subsequent courses. The next course was also a follow-up on clinical activities: What could be put into practice?

Modifications

In the subsequent courses significant improvements were made based on the findings from prior evaluations and follow up observations.

Ethics

Not required for evaluation of teaching methodology

Results

Phase One: Collaboration in development and implementation of a patient-centred curriculum

Guest lecturers were a paediatric psychiatrist and a paediatric nurse. Taking part in the morning round and ward round at the psychiatric clinic helped the guest lecturers to become familiar with the problems of patients. Adult patients suffering from schizophrenia and bipolar disorder are the largest groups of inpatients in the department of psychiatry (19). Treatment of patients relies on medication and psycho-social counselling. None of the students had had prior experience with the mental health problems of children and so the trainers presented themselves as a role model on how to see child patients jointly. In the outpatient department, child patients were seen and presented for discussion. The main approach from the trainers was to observe the child, offer material such as blocks, puzzles, paper and pencils and listen to the parents (Supplementary file 1B) (4, 20). As families and also the students speak different native languages, verbal communication translations and translations from translations were essential. Misunderstandings were minimized by relying on observations of behaviour and emotions.

Activities for occupational therapy seemed uncommon to the staff of the psychiatric hospital. The children's nurse offered occupational activities suitable for children at different ages and to adult patients. They were well accepted by adult and child patients. Nonverbal communication was functioning immediately. Observation and also talking to the child helped to get an idea of cognitive abilities and to understand the meaning of drawings. Children with developmental delay experienced successes by tasks tailored to their abilities. For determining the mental state of a child, it was useful to offer at least two different tasks. To conclude on cognitive abilities from games, paintings and motor abilities one has to consider the complexity of a task and the speed of the child at processing the task. Such a judgement needs a long process of training.

Training observation: Using video observation, training the assessment of a mental state in children was done in successive steps: first consider the scene, observe and reflect. The training aimed at detailed and specific descriptions to get an idea of the developmental, behavioural and emotional status of a child.

Seemingly contradictory descriptions were shown again, observed and discussed for clarification. Questions for clinical reasoning were: What is normal, what is problem behaviour? Which are the main problems? What are the strengths? Which additional information would you like to know? What are the possible context relevant interventions? Participants could compare their solutions with the model solution derived from the descriptions of the group altogether. Describing the activities of a child enabled professionals to develop a relationship with the families. From the activities, small scale interventions plan could be derived from observation. In addition, some parents had good ideas about how to support their child. At the end of the week, student took examination to observe a child case on a video and expected to make description and suggest solution. Then a feedback to the test has been given the next day by showing the video example again for discussion and clarification.

Teaching Exercise

Students can train other health professionals after their graduation only if they have acquired their own experience in handling patients. Five-minute presentations on topics from child mental health served to strengthen teaching abilities. The purpose was to stimulate their reading appetite. Presentations were documented on video. Constructive feedback was given immediately. Teaching exercises were done throughout all courses.

Course and method of teaching evaluation

The students expressed high degree of satisfaction on the practical aspect of teaching the course. They rated case based learning from real patients and videos of their patients as a novel teaching method and as the best elements. Occupational activities also gained very positive feedback from patients and staff. Time allocated to child psychiatry was too short from the view of the students as well as from the teachers (13).

Course development and modifications

Get to know the system and find culturally appropriate solutions

It took time to become familiar with customs in every-day's life and the hospital's environment. The guest lecturers were not familiar with customs on how to bring up children in Ethiopia. Participants were not familiar with children's games such as memory cards. During the first course, the guest lecturers were shown a well-structured program for malnourished children within the paediatric hospital. In the phase of recovery, occupational therapy and counselling for mothers takes place. A visit made to a school for about 1500 children with average class sizes of 50 children and to a rehabilitation program for street children run by social workers were examples of community orientation alongside the clinical and classroom teaching (21). A continuous exchange on experiences from training and on cultural issues took place between teachers and students between CIH-Munich and Jimma University with meetings organised every year.

Insert Table 1: “Description of the training course child psychiatry”

Table 1
Description of the training course on child psychiatry

Course number	Year	Partici- pants	Capacity building: local trainer CAP	Program development and implementation
First phase of collaboration: program development				
1	2011	5		duration 2 weeks see child patients, demonstrate occupation to adult patients take videos, focus on mental state description, <i>networking</i> : visit to paediatric hospital
2	2012	11	psychiatric hospital: 1 master responsible for child mental health	mental state: assess, manage introduce mhGAP guide <i>networking</i> : visit to school, to rehabilitation centre for street children, consultation to paediatric hospital; <i>case report (22)</i> : An adolescent with significant emotional and medically unexplained complaints. Case report and proposal of an intervention
3	2013	9	staff psychiatric hospital: 2 masters became local trainers CAP	<i>networking</i> : contact to school for dropout <i>case report (23)</i> : Acute loss of vision in a young woman: a case report on psychogenic blindness.
4	2014	8		duration extended to 3 weeks master students scheduled to participate in patient occupation <i>published</i> : A model of training (13)
5	2015	8	<i>network meetings of masters initiated</i>	2 successive courses at one time (the course planned for 2016 has been given together), introduce mhGAP2: plan follow up, participation in occupational activities obligatory
Second phase of collaboration: transition, mentorship				

Note: CIH – Center International health Munich, JU – Jimma University, mhGAP guide - Mental Health Gap Action Programme (WHO 2008, 2015) IACAPAP – International Association of Child and Adolescent Psychiatry and Allied Professions, OSCE Objective Structured Clinical Examination

Course number	Year	Participants	Capacity building: local trainer CAP	Program development and implementation
6	2017	11	local trainers only	<i>network meeting</i> : refresher course CAP by guest lecturers: one weekend, 20 participants OSCE format
7	2018	9	local trainers only 2d local trainer left	
8	2019	10	3d local trainer final contribution of guest lecturers	OSCE format, practice occupation in course, then with patients
Results		71	3 local trainers CAP 3 masters in outpatient department (OPD) for children in Jimma	curriculum CAP established locally produced teaching material available
Third phase: local staff responsibility				
Note: CIH – Center International health Munich, JU – Jimma University, mhGAP guide - Mental Health Gap Action Programme (WHO 2008, 2015) IACAPAP – International Association of Child and Adolescent Psychiatry and Allied Professions, OSCE Objective Structured Clinical Examination				

During course 2, one participant of the first course took part to become a trainer for child psychiatry. Contact with the paediatric hospital took place repeatedly. A 14-year-old adolescent was transferred from the paediatric hospital to psychiatry with unexplained medical and emotional symptoms. She recovered through psychosocial interventions only. Interventions corresponded mainly to “general principles of care” of the *guide* and some elements of “advanced interventions” such as relaxation exercises by breathing and social skills training.

During course 3, an 18-year-old adult woman with psychogenic blindness recovered within a short time with a similar approach. The interventions were documented on teaching videos and in case reports (22, 23). As lectures have the least impact on learning, they were reduced in favour of active learning. References in electronic form were distributed and each student had access to the *guide* and the *textbook* on their computer (9, 10). In the beginning, the master students felt unfamiliar with this approach. Master students were scheduled to participate in occupational activities. Material to support teaching was developed such as self-produced videos which showed examples of occupational activities with patients

of all ages and neurological examinations. A handout of one page explained how to plan a 5 minutes presentation and another one how to plan a 20 minutes presentation of a research project.

Writing up the mental state of a child was practised every day (Supplementary file 1C: Mental state assessment form). The requirement for the final test was extended. The participants had to determine the needs and preferences of child patients and family, to decide on the condition and to develop a management plan. Feedback to the test was given individually and in general remarks to the group. Observations were good and the intervention concepts were detailed and realistic.

Child patients were seen throughout the year. Initially, child patients had come irregularly however, later on, one day per week was fixed for follow up appointments with one of the local trainers.

The duration of the course was extended from two to three weeks in course 4. The first week was held by the two local trainers and the focus of the remaining was conjoint training with the local partners. Participants felt overloaded from the combination of full clinical service and having to participate in afternoon courses and occupational activities in the morning. They missed a reference to the DSM classification system which they apply in everyday practice in adult psychiatry. Participants were disappointed when the teachers' limited discussions in order to be able to reach a decision within the time available. From the view of the trainers, the participants needed guidance to recognize the main aspects of clinical reasoning. Some participants said that before the course they had been anxious about seeing child patients whereas after the course, they felt confident.

The main clinical problems encountered in the outpatient department (OPD) and the paediatric department of the hospital were children suffering from developmental delay, autism spectrum disorders, seizures, dissociative disorders, emotional disorders and somatic diseases. Follow-up in consecutive courses showed what could have been applied in practice meanwhile. For some children with mental retardation, progress in development without any specific treatment could be seen. The main influences were caring mothers or parents, who were very good observers, older siblings and school teachers. Furthermore recognition and understanding of children with dissociative disorders had developed. We discussed how to handle drop out of school and female circumcision. Stigma is a scarring experience associated with mental health problems. Clinicians could express understanding by indicating the strengths of child and family as well as acknowledging the burden of a mental health problem. Support for families can be improved by community orientation (24–28). Possible partners were encountered throughout the courses. For instance, volunteers accompanied families for support and translation. An adolescent from an SOS childrens' village for homeless children was presented by her foster-mother. Occupational activities were appreciated by master students and clinical staff. Initially, different nurses took part. However, after four courses it turned out that several attempts to implement occupational activities to the nursing staff were not successful. The guest lecturers learned that it takes time to make a key person familiar with the use of material. At the end of the first phase of collaboration a reflection on this "model of training" was published (13).

Phase Two: Collaboration for transition

When the first phase of collaboration period had ended in 2015, most of the courses were taken over by local trainers from Jimma University. For the second phase of collaboration, the local partners wished to have further support for teaching forensic psychiatry and ethics, for substance use disorders and child psychiatry. The focus of support changed from teaching students to mentorship for the local trainers. As there were few participants in 2015 (course 5) participants of year one and year two of the program were trained together. Participation in occupational activities was announced as obligatory. We started to identify interventions on the videos such as listening, waiting for a reaction, attracting attention, appraisal and reward of the child and acknowledgement of activities of parents. Participants were able to develop case-specific suggestions for diagnostic appraisal and management. Descriptions of test videos of all participants of a course were compiled. The pooled descriptions can be regarded as standardized ratings from trained observers for future courses.

Epidemiological research on children was done accompanying the master program. Two of the local trainers had done research on behaviour problems in schools and on the view of school teachers (29). Other studies referred to parents' perceptions of child mental health problems and their choice of treatment (20), to patterns of treatment-seeking behaviour for mental illness (4) and to post-traumatic stress disorder in street children (21). The graduates have to find a new role when they go back to their places of origin. Follow up showed that masters were overburdened being a first and single mental health specialist in a new environment. In 2015 network meetings of graduates started. The major goals of the meetings of graduates that were held once a year were to get to know each other, to exchange experiences and to give mutual support by establishing an efficient mental health network in Ethiopia. Out of 32 graduates, 28 attended the first meeting in 2015 (male 23, female 5). The three most cited activities were teaching – n = 22, clinical work – n = 21 and research – n = 19 ((30) Soboka et al. 2018).

In March 2017 (course 6), due to external circumstances, the guest lecturers were not able to come. The course was held by the two local trainers. They felt comfortable practicing the method of teaching as in previous years. Feedback from the instructors of the four weeks of training in Addis confirmed that the participants were well prepared for clinical activities.

Refresher child psychiatry course (November 2017)

The master graduates, who had participated in former meetings, wished to have a refresher course in child psychiatry. During the weekend of the third network meeting in Debre Berhan, 20 graduates took part. Time since graduation had been between 2 to 6 years. The local partner defined the aims of the workshop as to present the main mental health problems of children and adolescents in Ethiopia. On day 1, the first session dealt with developmental delay and the second session with autism. On day 2, session three was devoted to behaviour problems and session four to somatic problems/– epilepsy. Case examples on the same topic showed variations by age of the child and by the severity of the problem. During this phase, three groups were working in parallel. The concept underlying the workshop was the multistep approach of an Objective Structured Clinical Examination (OSCE, attachment). The three groups performed the tasks in different order as presented in the flowchart which helped the occupational activity expert to fully

engage to a team than to all at a time. Presentations were given one after another to share the examples from peer to peer with all participants. Feedback was given to all presenters. The general discussion covered clinical as well as didactic aspects.

Insert Table 2: Flowchart OSCE

Table 2
Training format Objective Structured Clinical Examination (OSCE)

Group of trainees – 2 trainers				
Time table	Subgroup A	Subgroup B	Subgroup C	Divide in subgroups
	Example 1	Example 2	Example 3	
20 minutes	Occupation	Mental state from video	History/reference	Trainers give support when necessary
20 minutes	History/reference	Occupation	Mental state from video	
20 minutes	Mental state from video	History/reference	Occupation	
30 minutes	Case formulation and prepare presentation	Case formulation and prepare presentation	Case formulation and prepare presentation	
Whole group				
10 minutes	Presentation Example1			Instructors facilitate - Peer to peer presentation
10 minutes	Presentation Example 2			
10 minutes	Presentation Example 3			
30 minutes	General discussion			
Total 150 minutes	Share presentations!			
History and corresponding reference are presented by split screen. The three subgroups perform the activity in different rank order. The OSCE pattern is repeated throughout all sessions.				

Concept OSCE

Step Occupation

The children's nurse provided equipment and asked participants to prepare material for future use with patients. As indicated in additional file 1, the participants practiced "make your own memory cards" activity. The participants then practiced a variety of tasks which would enable them to structure situations for children according to the children's level of development and to enable the clinician to recognise the abilities of a child as well as to demonstrate these to parents.

Insert "Additional file 1": Make your own memory cards

Step Video Observation

The participants were asked to write down what they thought the mental state of a child was and to estimate the age of development of this child. Then they needed to decide what is normal or abnormal at that age and if there is a pattern of behaviours.

Step History and Selected Reading

A short history accompanied all video examples. A selected passage from the *guide* and the *textbook* was indicated. As indicated in additional file 2, using the "split screen" the participants has made comparison between case description and reference on *the guide*).

Step Case Formulation: The participants had to decide: What is the main problem? Answer to the needs of the family. What can you do by yourself? Who do you need for cooperation? Make a plan for follow up.

Step Presentation

In each group a volunteer had to prepare a presentation of 10 minutes on 1 page only and a segment of video scene of 30 to 60 seconds for discussion. This is a peer to peer presentation and helps to share all clinical cases to the whole group and the discussion helps how good the presentation could be understood (see Table 2).

Evaluation

All participants understood the system quickly. They were self-organised, independent and engaged in all activities and the clinical reasoning was good. At the end of the refresher course all participants seemed well prepared to see child patients. The feedback from participants referred to clinical and didactic aspects

Various methods of teaching demonstrated how training can be provided. Different tasks were useful for practice. Interactive training is a good experience, is appropriate for adult learning.

Insert "Additional file 2": Split screen Compare case description and reference the guide

A follow up was done after two months. The response rate after three mailings was 10 out of 20 (50 %). There was a discrepancy between the active involvement of all participants during the workshop and the scarcity of reactions at follow up. The respondents reported that child patients are seen in Jimma and also in Bahir Dar in the northern region of Ethiopia. Graduates consider the department of psychiatry in Jimma University as their source of reference. The refresher course has shown that catching-up is possible within a short time.

In March 2019 (course 7) we applied the OSCE approach developed for the refresher course. The second trainer had moved. A master, who had graduated in the previous year, joined in. As trainers, we decided to incorporate occupational activities into the teaching time on two afternoons per week. The participants practised different techniques themselves. The next day they applied these with patients in the hospital. Participants appreciated this kind of practical experience. Each participant documented one child patient on video and wrote a report on this child. Each course had contributed to the development of the course program. Taken together the series of case examples covers all priority conditions and a broad range of clinical problems.

Originally, the course had been scheduled early in the first year. Due to constraints from the side of the guest lecturers, the course was postponed to the second year. The assumption was that, in the meantime, the trainees had acquired more clinical experience. Recently the original timetable was restored. It turned out that there was much more time to practice on child patients. The “second years” were able to support the newcomers. Thus, early exposure to the course is better.

Capacity building

Initially, in 2010, staff had consisted of a single psychiatrist responsible for clinical activities, research and teaching, and two psychologists and nursing staff. In 2013 a second psychiatrist started to work in the department. Four masters from the first course had graduated in 2012 and had become members of the staff. In 2019 there were three psychiatrists, ten master graduates in mental health, two psychologists and nursing staff. During the long-term cooperation, mutual understanding and a trusting relationship had developed between the trainers. For the guest lecturers, the net time of training in Jimma was 4 months over the ten years collaboration. Within about ten years, the local trainers had acquired enough experience to enable them to continue the course on their own.

From 2010 to 2019 eight courses had taken place. Overall 71 master students had participated with a male/female ratio of 5:1. All trainees had practised teaching exercises on child mental health. Twenty graduates had taken part in a refresher course in 2017. Three graduates had joined in as local trainers in courses two, three and seven to eight and developed as trainers for child mental health. The local trainers had become specialists in child mental health, and an outpatient department for children is running. Jimma University acknowledged the activities on child mental health by expanding the staff and by providing rooms for an outpatient department for child mental health.

Phase Three: Beginning of Independent Work

Currently the local instructors are running the teaching and clinical service independently. In 2020 the course was managed by the local trainers and the plan is made for 2021. The first graduate of the program has specialized in paediatric nutrition, child development and mental health and is managing the course and continued in improving the service for child and adolescent mental health. A working team is established comprised of nurses, mental health specialists and psychiatry residents. The service for child and adolescent mental health is now provided regularly.

Discussion

The courses aimed to promote the skills and knowledge of participants on identification, support of children and families with mental health problems and to develop their self-confidence and leadership skills.

Successive Evaluation

A comparison of data across different points in time within the same setting provides feedback about whether or not a practice is being sustained in the long term (31). Successive evaluations were directed at the performance of participants and of trainers and on content and the quality of the course program. A set of tools such as tests, structured and semi-structured questionnaires, group discussions and video feedback were used. After each course, objectives and evaluations were compared and resulted in modifications of the next cycle. A precondition for the OSCE approach are local clinical examples. The rhythm how to proceed has to be adapted to the level of expertise of participants. The process appeared slow and was finally successful due to a long-term commitment of partners from both sides. The audit process underlying the course development resulted in a stable concept.

The mental state descriptions of the trainees gradually became more intervention oriented as patient care opportunities to relate specialized and basic care were encountered repeatedly (32, 33). Almost in all of the trainings, implementation of occupational activities needed the biggest effort.

At the conclusion of the first phase of our collaboration, we have published our model of teaching developed for this course (13). The main focus and findings of the paper was mainly on successful implementation of collaborative work to develop and cascade the new model of teaching for child and adolescent psychiatry in Jimma Ethiopia. The current paper however emphasizes about successful continuity and transition from collaborative phase into independent phase to implement teaching and clinical service by the local staff. While the master-program and child psychiatry course in Jimma was running, other experiences on training child mental health were published.

Comparison with other trainings

To compare trainings one has to consider target populations, training methods, hours of training, evaluation and follow up/ outcome.

The Health Education and Training (HEAT) program (integrative program of Open University, UK, with Federal Ministry of Health FMOH, Ethiopia) is used by the Ethiopian government to upgrade rural health extension workers to the level of diploma in Ethiopia. The training component on mental health comprises 10 sessions, equivalent to 2 weeks of fulltime training. One session focuses on child development and child mental health, including a discussion on developmental problems (34). As of 2018, 25,000 health workers have been trained or were in training using the HEAT curriculum. A group of 104 health extension workers were interviewed after a brief training session on child mental health. At follow up four months after the training, 52 out of the participants reported that their knowledge had improved. Fourteen felt that they are able to identify mental health problems in children and 22 felt to be able to provide service. The authors conclude that the training appeared to have some impact on improving knowledge and skills of health care providers (34).

Rural health extension workers in the Southern Nations were trained more extensively by HEAT + for children with developmental disorders. The enhanced HEAT + includes five short video scenarios in English and in Amharic modelling a health extension worker interviewing mothers of children with autism or intellectual disability. In a Randomised Controlled Trial (RCT), the participants of two groups with training and with enhanced training showed fewer negative beliefs and decreased social distancing towards children with autism compared to a group of untrained health extension workers (35).

The International Association of Child and Adolescent Psychiatry and Allied Professions IACAPAP has set up a “Massive Open Online Course essentials of child and adolescent psychiatry across the world” (MOOC). The aim is to enable whoever is interested worldwide to learn most basic notions of common child & adolescent mental health problems (36). Courses are given through online platform for self-study and 4 to 5 themes are treated per week for 5 weeks. The estimated effort is 4 hours per week, with an overall time of 20 hours. Evaluation is done by quiz questions and by open questions and feedback by trainers at weeks four and five. The last step is a week of local personal training. It was not possible to identify any reports on the results of the online training.

Primary school teachers in Nigeria were trained to recognise and handle ADHD symptoms in the classroom. The WHOMhGAP module on behavioural disorders was used in a three-hour session and a booster session in two weeks later. Compared to the control group in the waiting list, the intervention group had higher post-intervention scores on knowledge of ADHD, less negative attitudes towards ADHD and higher scores on knowledge of behavioural interventions (15).

In another setting, family volunteers in Pakistan were trained for support of children with intellectual disability and pervasive developmental disorders from the WHOMhGAP module. The duration of the training through a tablet-based training was 8 days, and the intervention as a whole was for 6 months. Pre and post intervention data from 68 families indicated an improvement in disability and socio-emotional difficulties in the child, reduction in stigmatising experiences and greater family empowerment to seek services and community resources for the child (14).

The concept of the WHOMhGAP training manual is a cascade of training trainers, who train health care providers (37). Trainers will be trained during five days by an interactive teaching approach. Supporting material consists of personal stories, role plays, multiple-choice questions, video links and follow-up. The content of the training is accompanied by a timetable. The section child psychiatry is scheduled for 5.8 hours. Taken together the ten modules of the training last about 46 hours and can be achieved during 5 or 6 consecutive days.

Across all trainings mentioned above, time allocated to child mental health is momentary to have a lasting effect. The evaluation and outcome of the trainings demonstrated that knowledge is accumulated and that there is better understanding of mental health problems in children. However, there is a gap between knowledge and practice. In a teaching pyramid, acquiring knowledge is the first step. The next steps are to have seen, to see and treat patients with guidance and finally to practice. It seems that the strategy to train primary care professionals necessarily needs support and backup from specialists. The National mental health strategy Ethiopia (2012) (5) recommends an intervention pyramid based on primary mental health care with specialist support. The mhGAP-training manual published in 2017 recommends a cascade of training by training trainers. Our approach, which had started in 2010, is quite similar to this approach. Therefore, a comparison of policy and practice is needed. An audit in districts around the City of Johannesburg, South Africa, using a regional health information system, revealed that Community mental health services did not meet any of the norms cited by the Mental Health Policy (38).

For child mental health, cooperation between different systems other than the health system is needed: schools, in broader sense professionals from the educational system, social work and psychology and families and communities. An example of cooperation exists for children with autism. Four types of service providers were identified: clinics, autism centers, schools with inclusive programs and community-based rehabilitation organisations. Most providers are located in Addis Ababa. They cooperate well, however they are inaccessible for the majority of the population in rural areas (39).

Limitations

Several studies in low and middle income countries have indicated similar challenges and barriers in achieving the intended outcome for mental health related trainings. Examples are stigma, lack of competence, institutional constraints and practical problems such as shortages of rooms and child friendly environment in a clinical setting (34, 39–41). The child psychiatry course is one out of 16 courses within the master program. It can be expected that only a few of the participants are motivated to pursue a career in child and adolescent mental health. At a University it is a continuous challenge to find a balance between clinical work, teaching and research. To upgrade their training, some graduates started a PhD program.

However there is a lack of clear and well defined clinical career opportunities in child and adolescent mental health program in the country and in most low and middle income countries, which makes it difficult to continue practical clinical work for the graduates.

Thus the high turnover of staff has to be taken into account. Since the beginning of the master program, three psychiatrists had followed in succession in the role of head of the department. Although distant learning via the internet was offered, restricted access to the internet and constraints of time and motivation due to an overwhelming high burden of workload were limiting factors (42, 43).

In the present project, favourable influences by far predominated. There was continuous support and backup from trainers and students and from Universities on both sides. Mutual understanding and a trusting relationship had developed between trainers. Patient care for children and families was done throughout all courses and is being practiced in the department. The development and implementation of culturally appropriate psychosocial interventions took a long time. We were able to “address the specific kinds of problems, modes of clinical presentations and social predicaments seen in the local population” as suggested by Faregh et al. (2019) (44).

Conclusions And Recommendations

To our knowledge, this paper reports on the longest series of successive training courses on child and adolescent mental health in Ethiopia published to date. Further efforts are needed to establish an accessible system for child and adolescent mental health. We conclude that early exposure to child and adolescent mental health training has more advantage. Thus, the initial step could be to integrate and adapt the training method for child and adolescent psychiatry course in all clinical training programs in health and medical sciences and most importantly for nurses, health officers and paediatric residents. A big step for children’s health in the future is to set up a master and residency program in child and adolescent psychiatry. Approaches to train professionals at different levels have shown to be successful. They will be powerful if they are combined. The ultimate goal and measurable outcome is whether children and parents have access to qualified services in the long-term.

Abbreviations

ADHD

Attention Deficit Hyperactivity Disorder

CIH

Center for International Health

DSM

Diagnostic and Statistical Manual for Mental Disorders

HEAT

Health Education and Training program

HEW

Health Extension Worker

IACAPAP

International Association for Child and Adolescent Psychiatry and Allied Professions

JU

Jimma University

JUMC

Jimma University Medical Center

JUTH

Jimma University Teaching Hospital

LMIC

Low and Middle Income Countries

LMU

Ludwig-Maximilian University

mhGAP

Mental Health Gap Action Program

MOOC

Massive Open online Course

MSc

Master of Science

OPD

Outpatient Department

OSCE

Objective Structured Clinical Examination

RCT

Randomised Controlled Trial

WHO

World Health Organization

WHOmhGAP guide

WHO mental health Gap Action Program for mental, neurological and substance use disorders in non-specialized health settings

Declarations

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Authors' contributions

“RF conceived of the study, designed and wrote the initial draft. MA conceived of the study, and participated in its design and coordination and helped to draft the manuscript. All authors read and approved the final manuscript.”

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