"CYSTINET-Africa: an interdisciplinary multinational one-health project focusing on neurocysticercosis in sub-Saharan Africa"

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TSCT represents a neglected and potentially eradicable disease complex in many countries of sub-Saharan Africa with huge impact on human and animal health as well as community livelihood in endemic areas, as outlined above. Therefore, the overall goal of this proposal is to fill gaps on the way to control/elimination of TSCT/NCC investing not only into research, but also capacity building and networking. In addition, the suggested project will create scientific leverage as results can be translated into other zoonotic disease complexes as well as neuroparasitic/neuroinflammatory disorders.

In research we will use a three-pronged approach including human, animal and community health:

Human health

Assessment of the epidemiology of TSCT/NCC in populations of Mozambique, Tanzania and Zambia

Methods: We will investigate the prevalence of TSCT/NCC in almost 15,000 people in four large cross-sectional community-based studies using a locally adapted mobile data collection system. In addition, we will conduct a comprehensive clinical/neurological, parasitological, immunological and radiological (CT scan) hospital-based work-up in people sero-positive for TSCT. We will include vulnerable groups such as children, people living with HIV/AIDS (PLWH/A) and people suffering from epilepsy that so far have not been investigated systematically.

Main result: Prevalence proportions of T. solium cysticercosis, taeniosis and NCC in three African countries and comprehensive clinical data set to study pathomechanisms and treatment responses (see below). Impact: Demonstration of need for policy development and further research into the TSCT complex.

Evaluation of the pathomechanisms involved in the development of symptomatic NCC in immunocompetent and immunocompromised (PLWH/A) individuals

Methods: We will investigate immunological markers that are associated with the development of symptomatic NCC and with different radiological disease stages in immunocompetent people and PLWH/A. We will also evaluate the clinical course and immune responses among PLWH/A with T. solium cysticercosis/NCC after initiation of Highly Active Antiretroviral Therapy.
Main result: Insight into pathomechanisms of HIV/NCC interaction, e.g. immune activation, and the immunological parameters associated with symptomatic NCC (in people with and without HIV/AIDS). Impact: Development of new therapeutic strategies for NCC and adjustment of treatment recommendations for PLWH/A.

Capacity building and networking activities are partly overlapping and will therefore be presented together:

Individual capacity-building: There will be vast opportunities for short-term training of staff working at the African institutions either through courses or practical work mainly pertaining to clinical, laboratory, project management, information technology, epidemiological and statistical skills. A total of over 100 members of staff and students will be trained at the African institutions either through access to university courses or training within the consortium itself (African and German partners). All together 17 students will benefit from scholarships. There will be one postdoctoral fellow (Post-Doc) and two PhD students from Germany, the other students will be distributed over the four African partner sites. In addition, up to five students will get the opportunity to participate in a structured mentorship programme and three students will participate in a German/African exchange programme. The German Post-Doc, who is very experienced in African field epidemiology and network coordination, will be a key player in the consortium and be actively involved in the various field studies, the establishment of the experimental pig model, animal welfare and training of African staff/students as well as networking between all involved countries.

Institutional capacity building: This has been meticulously mapped out with the African partners and harmonized between them at four different meetings during the preparatory period. In short, the areas with most activities pertain to laboratory (upgrading of a regional reference laboratory), information technology (establishment of a virtual one-health centre), data management (establishment of a mobile data management system) and evidence implementation with clear impact on institutional strengthening of all involved African countries. Great care was taken that institutional capacity building does not happen in isolation, but that lateral transfer within and between countries of the CYSTINET-Africa consortium is guaranteed.

System capacity building: The two major areas of system capacity building include a) the establishment of a virtual one-health centre and b) evidence implementation of obtained research results. System capacity building is inextricably linked with institutional capacity building. The virtual one-health centre consists of an interactive CYSTINET-Africa website/platform with an integrated research school and additional applications such a web-based “project finder” and an “electronic case management” tool. All partners will contribute to the establishment of the centre, although one partner (Tanzania II) will take the lead (see fig. 6.2). Evidence implementation will happen at local (where the research will take place), national (through the respective ministries) and international (through participation in the WHO activities of control and elimination of TSCT and management of NCC) level and support strengthening of health systems in the involved partner countries and beyond.

Networking: In our project networking is an integrative part of research as well as capacity building. Networking will happen through the virtual one-health centre as well as through many physical meetings at various levels (local, national and international) within the consortium and outside of it. Within the consortium there will not only be north/south, Assessment of pathomechanisms involved in different treatment response in people with symptomatic NCC on standard treatment

Methods: We will investigate clinical, parasitological and immunological parameters in immunocompetent people with symptomatic NCC on standard antihelminthic treatment.
Main result: Insight into pathomechanisms underlying the different responses of people with symptomatic NCC while on treatment and after its discontinuation (rebound). Impact: Adjustment of treatment recommendations.

**Mental Health in Primary Care - Training of Mental Health Workers in Tanzania**

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Mental Health care in Tanzania is mostly done by clinical officers, not by physicians. The reason for that is the lack in medical doctors. In the next time there is no trend for a growing number of psychiatrists.

That was the key for developing an educational program in mental health for clinical officers. In cooperation with the United Evangelical Mission (stimmt das?) we created a part time educational program. After being modified in some points and at least certified by the Tanzanian health ministry the first intake started in Spring 2012 at the Sebastian Korogwe University in Lushotu.

In the presentation we show the structure and some elements of our educational setting, some impressions of the first intakes and give you and update of the progress of the offer.

**Global Mental Health and how to teach it, an example from Mozambique**

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Mozambique has had challenging difficulties like colonisation, a long lasting civil war, natural disaster and poverty. The country has shown significant economic growth during the last decade, for example higher education is developing rapidly. Despite these developments, mental health services, -human resources, -budget and policies are lacking behind. Stigma related beliefs impede patients from seeking help, and the harsh reality of mental health practice often has a demotivating effect on students. The UCM Health Science Faculty in Beira, Mozambique, is contributing to improvements by training future medical doctors and nurses in mental health. How can we best contribute to the development in the field of mental health? How can we contribute to the development of more positive attitude objectives in students, besides skills and knowledge objectives? Using the core psychiatry curriculum as described by the World Psychiatric Association, this presentation will help to reflect upon how student centred medical education can be used to foster the development of community mental health services with special focus on local practice, contextual approach and cultural beliefs.
Attitude towards psychiatrists – a comparison between two metropolitan cities in India

Aditya Mungee/ Berlin

Background: Few patients in need of mental health care have access to psychiatrists in developing countries. Many patients seek help from faith healers and traditional medicine practitioners. Attitudes towards psychiatrists have not been adequately studied in these countries, e.g. India, where there is one psychiatrist for every 300,000 people. The aim of our study was to study attitudes towards psychiatrists in the general population in two metropolitan cities (Chennai and Kolkata) in India and to identify factors that could influence these attitudes in a country as large and diverse as India.

Subjects and methods: Surveys in the context of public attitudes towards psychiatrists were conducted among random subjects from the general population in Chennai (n= 166) and Kolkata (n= 158). Link’s perceived devaluation-discrimination measure was used. The populations were comparable with respect to age, gender, education, religious beliefs, household size and income class.

Results: Comparing the two cities using a multivariate analysis, we found a significantly higher proportion of negative attitudes towards psychiatrists in Chennai compared to Kolkata (p < 0.001). Negative attitudes correlated with lower education levels (p = 0.001) and strong religious beliefs (p < 0.03).

Conclusion: Chennai and Kolkata, in spite of being two metropolitan cities in India with similar lifestyle and population size, but distinct linguistically and culturally, showed different attitudes towards psychiatrists. Our results reflect the heterogeneity regarding the perception of psychiatry in a country as large and diverse as India, where finer local cultural issues may play a very important role.

‘What a psychiatric patient can tell us about psychiatric culture?’ – Reflections on anthropological fieldwork in two psychiatric institutions in Mumbai/India

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In this paper I wish to give an insight into the diverse practices of meaning making in an Indian psychiatric institution. Furthermore I examine the potential of ethnography including its method of participant observation to enhance our understanding of local psychiatric cultures.

I am a PhD scholar who carried out her ethnographic field research in two psychiatric settings in Mumbai/India in 2011/12. My research focuses on describing and analyzing the social structures of and life in the institutions itself: How do on the one hand ‘patients’ live – some of them for decades – in the facilities? How do they structure, perceive and make meaning of their institutional lives? How do on the other hand psychiatrists, doctors, psychologists, social workers, attendants and sweepers perceive patients? And how do professionals understand and interpret their working lives?

Elaborating on a case study of a ‘criminal’ psychotic patient I intend to show how the analysis of patients’ narratives provides access to an alternative understanding of the respective ‘psychiatric culture’ of institutions. Patients admitted and often abandoned by their families make their own meaning out of their lives within the total institution and in this way manage to emancipate themselves from the rigid hierarchical structures. In contrast professionals often perceive the speech of patients as irrelevant and incomprehensible or at times even seem to simply ignore it. Finally the experiences of the
Integrating Mental Health Care with Non-Communicable Disorders Prevention in a Developing Country-India

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Countries around the world are facing the challenge of ageing populations, the rapid rise of non-communicable diseases (NCD’s) and the continuing threats of viral diseases, tuberculosis, HIV/AIDS and other infectious conditions. The disproportionately higher rates of disability and mortality due to NCD’s are possibly due to the presence of comorbid mental health conditions as people with major depression and schizophrenia have a 40% to 60% greater chance of dying prematurely than the general population. The WHO’s Global Action plan for NCD’s (2013-2020) coupled with the WHO Comprehensive Mental Health Action plan (2013-2020) is a positive call to action for nations around the world to urgently address these emerging and co-morbid health problems. The action plan covers a wide range of areas including services, policies, legislation, plans, strategies and programs based on a multi-sectoral approach with an emphasis on promotion, prevention, treatment, rehabilitation, care and recovery.

India, a country with a population of over 1.2 billion, has less than 10,000 trained mental health professionals. India has a National Mental Health Program that was formulated in 1982 and a Mental Health Act in 1987; which is being revised as the Mental Health Care Bill. In 2014, the government launched the Mental Health Policy and an Action plan which is in keeping with the WHO directives. With all these documents namely a Policy, a Program and legislation, India is one of the developing countries that has the WHO requisites for dealing with its NCD and Mental Health problems.

The Government has recognised the importance of the WHO call and is making attempts to integrate the management of mental disorders with the NCD’s in the recently launched National Health Mission. The present 5-year plan proposes that mental health care delivery occurs in an integrated fashion with the launch of the NCD flexipool funds to all the States. In addition to the National Program for the Prevention of NCD’s and the National Mental Health Program, the plan also includes many programs relating to mental health like the National Program for Health Care of the Elderly, National Tobacco Control Program, reduction of harmful use of Alcohol and Suicide prevention programs. This presentation will look at how some of these ideas may be employed in other developing countries.

Monitoring the mental health of populations: illustrations from WHO’s multi-country studies

Somnath Chatterji/Geneva

Besides monitoring the burden of mental disorders globally, there is an increasing interest in understanding and monitoring the ‘mental health’ of populations or their subjective well-being (SWB). An increasing body of evidence points to the bidirectional relationship between an individual’s health and SWB and the ability to predict future fatal and non-fatal
health outcomes based on an individual’s SWB. The majority of research though comes from high income countries. The Study on global AGing and adult health (SAGE) is the first longitudinal study to simultaneously measure levels of health and both experiential (or emotional) and evaluative components of SWB in low and middle income countries in a detailed and comparable manner. Associations between age, other sociodemographic variables, health and evaluative and experiential well-being, will be presented. The differential effect of evaluative well-being, and positive and negative emotions on health will be shown. Illustrative data from WHO’s World Mental Health Surveys will also be presented. Implications of these results for population health and social policy will be discussed including specific actions to enhance the well-being and mental health of populations.

Mental Health Services in Somaliland: Case study of Borama

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Introduction

Somaliland is a self declared state in Northwestern Somalia. It has suffered civil war in late 1980s and early 1990s. Now, relatively stable with weak health systems, mental Health remains one of the most neglected and widely prevalent health problems in the country. Odenwald et al (2005) study estimated that 2 out of 5 residents in Somaliland suffer from mental health disorder. Mental Health services are available in major towns in the country. Borama, a town in Somaliland has unique mental health service in comparison to Somali standards. The mental health service in Borama is conducted in Borama Hospital, teaching hospital of the Amoud University School of Medicine and in the primary care settings within Borama district. The mental health services were established in January 2011. The program is the first in Somalia where a teaching hospital offers mental health service with teaching and service purposes.

Methods

Mental health services are in outpatient and inpatient settings with no traditional healers practice. It has also home based and community mental health practice.

Mental health services are in place for schools, Prison, antenatal clinics and in the community. Firstly, the UK government funded the project in partnership of Amoud University with King’s College London and now the second phase is a partnership between Amoud University and the Somali Swedish Research Association with Swedish government funding. The second phase trained 10 female community health workers in 2012-13 and in March-June 2015, other new FCHWs were trained to raise awareness in mental health along with child and maternal health in another third phase now integrating mental health into maternal and child health services. Community elders worked with the mental health team as advisors on best approaches to reduce stigma and maximize care.

Results

Mental health services and awareness program raised community awareness of mental health needs and treatment gap. The Diaspora community raised enough money to build inpatient unit in 2012 having 26 beds for acute stabilization only. We offered treatments in primary care settings and homes with the patient education of the FCHWs and follow up of medications by them. We set up community-mental health partnership where local community donations raise enough funds for medications. 1000 inpatients and 6000
Conclusion

This approach of setting up mental health service in a fragile post conflict setting shows mental health services can be established in a public private partnership and possibly between a North and Southern partnership for skills exchange. When mental health services are owned within the community both local people brings in expertise in service improvement. The grassroots improvements in the perception of society, empowering them to take lead in their health needs and public health approach to mental health problem had this impact.

The Impact of Lifestyle on Mental Health among Young Men in the Gilgel Gibe Field Research Center, Ethiopia


Introduction: Khat is a plant with a natural distribution limited to East Africa and countries on the Arabian Peninsula. Khat leaves are chewed for their stimulant and euphoric effects. Studies of the chemical constituents of khat have revealed that it contains different alkaloids such as norephedrine which have CNS stimulating effects. The psychotropic effects of khat are caused by the amphetamine-like compounds, which influence the dopaminergic pathways.

Jimma University in southwestern Ethiopia has a unique health and demographic surveillance system called „Gilgel Gibe Field Research Center“ with a catchment area of about 50,000 people. In this setting, we studied the effect of khat use as risk factor for the development and the stability of psychotic symptoms as well as of symptoms of common mental disorders among young men in the community.

Design: In this prospective study, trained local interviewers screened a representative cohort (N=852) of young men twice within a period of six months (T1, T3) to determine the presence and stability of distinct psychiatric symptoms. As part of the screening, urine samples were collected (T1) and analyzed for khat alkaloids by immunoassay tests for amphetamine. In a clinical validation interview (T2), to be conducted in a short period (1–3 days) after T1, a psychiatrist or mental health specialist reassessed the psychiatric symptom presentation in a randomly selected subgroup of 126 individuals of those persons who had been screened at T1. The validation study took also urine of this subgroup in order to validate the urine screening by a more extensive analysis of khat alkaloids (HPLC).

Results: A total of 126 urine samples were extracted by using solid-phase extraction (SPE) apparatus and analyzed by using HPLC. The results indicated that 81 (64.3%) were positive and the remaining 45 (35.7%) samples were negative for norephedrine. For positive urine samples, the norephedrine content ranges from 2.3 to 161.1 µg/ml, with an average norephedrine content of 36.7 µg/ml.

Status quo: Further statistical analyses should be accomplished to see the effect of khat use as risk factor for the development and the stability of psychotic symptoms. The last part of the study (T3) will be conducted in November 2015.
The Millennium Development Goals and Mental Health

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In the year 2000, a set of eight Millennium Development Goals (MDGs) were established following the Millenium Summit of the United Nations. These included eradication of extreme poverty and hunger, education, gender equality, reduction of child mortality, maternal health and to combat HIV/AIDS, malaria, and other diseases. Mental health was not specifically mentioned. In developing countries mental disorders are among important causes of sickness, disability. Mental health-related conditions, including depressive and anxiety disorders, alcohol and drug abuse, and schizophrenia, contribute to a significant proportion of disability adjusted life years (DALYs) even in poor countries. Mental illness is closely associated with social determinants, notably poverty and gender disadvantage, and with poor physical health, and poor maternal and child health. Only in 2010 the UN(DESA)-WHO stated: "Including mental health as an integral part of development is relatively new to the United Nations and its development partners. There is growing recognition within the international community that mental health is one of the most neglected yet essential development issues in achieving the Millennium Development Goals (WHO 2010)". The MDGs are followed by the sustainable development goals (SDG) Mental health is mentioned in Goal 3 of the agenda which seeks to ensure healthy lives and promote well-being for all at all ages. The future will show, how mental health can be implemented.