INTERCALATED MPHIL PROPOSAL FORM

To be completed by proposed MPhil supervisor

PROJECT TITLE:

The associations between social deprivation and depression in Sri Lanka: a population database study

Key Words
Global Health, Depression, Poverty, Sri Lanka, Low to Middle Income Countries (LMICs), social determinants of health

Which clinical speciality does the project link to? (e.g. primary care, rheumatology, anaesthetics)
Global Health, Mental Health

Theme/Group under which the MPhil proposal will be reported
Global Health

Importance of this research, fit with current priorities and relevance to the RI's programme of work.

Importance of this research

The growing prevalence of mental health disorders in Low to Middle Income Countries (LMICs) like Sri Lanka, represents a prominent global health challenge. There is good evidence to suggest that common mental health disorders such as depression and anxiety are distributed according to a gradient of economic disadvantage across society (Campion, Bhurga, Bailey & Marmot, 2013), and that poor and disadvantaged populations suffer disproportionately from common mental disorders and their adverse consequences (World Health Organisation 2014; Patel, Lund, Hatheril, Plagerson, Corrigall, Funk et al., 2010; Patel & Kleinman, 2003; Melzer, Fryers, Jenkins, 2004).

Rapid urbanisation, ethnic violence and a tsunami have contributed to significant income inequality and an increasing prevalence of mental health disorders in Sri Lanka. Increasing our understanding of social deprivation and poverty indicators associated with mental health disorders can provide opportunities to not only improve population mental health but to reduce the risk of mental disorders associated with social inequalities in Sri Lanka.

Relevance to RI's programme of work and current priorities

The proposed research will be part of the new Global health research programme in the RI. The project compliments the global health research priorities in exploring social determinants of mental health disorders in LMICs in South East Asia. The MPhil will also contribute to the development of the capacity and critical mass of the global health research team. The research fits well with other existing work with the Institute for Research and Development (IRD), Sri Lanka and will further facilitate the expansion of current work between Keele, IRD and Kings College London in the use of an existing large dataset of two waves of data from the Colombo Twin and Singleton Study (CoTaSS).

This proposed research fits well with the strategy of the Mental Health Research Programme and one of its four themes; co-morbid anxiety and depression in long-term conditions

STUDY TEAM:

Name	*Discipline*	*Role within study team*	*MPhil supervisory role*
Dr Tom Shepherd	Global health	Research Associate	Lead supervisor
Prof Athula Sumathipala	Mental health	Co-PI	Second supervisor
Prof Kelvin Jordan	Statistics	Collaborator	Third supervisor

LAY SUMMARY

There is a close relationship between poverty and mental health; poverty increases mental health problems. Poverty can cause mental illness and be a consequence of mental ill health. Mental health is shaped by a wide range of characteristics (including inequalities) of social, economic and physical environments in which people live. Rapid urbanisation, conflict and natural disasters have led to significant income inequality in Sri Lanka, whilst the increasing prevalence and burden of mental health disorders like depression are a prominent global health challenge. This project will identify key indicators of social deprivation and poverty and examine their association with depression in Sri Lanka. Increasing our understanding of social determinants of mental health disorders can not only improve population mental health but can help reduce the risk of mental disorders that are associated with social deprivation.

RESEARCH QUESTION/BACKGROUND/OBJECTIVE/METHODS

Research question

What are the key indicators of social deprivation and poverty and are they associated with depression in Sri Lanka?

Background

There is good evidence to suggest that common mental health disorders such as depression and anxiety are distributed according to a gradient of economic disadvantage across society (Campion, Bhurga, Bailey & Marmot, 2013), and that poor and disadvantaged populations suffer disproportionately from common mental disorders and their adverse consequences (World Health Organisation, WHO, 2014; Patel, Lund, Hatheril, Plagerson, Corrigall, Funk et al., 2010; Patel & Kleinman, 2003; Melzer, Fryers, Jenkins, 2004). As with many other low and middle income countries globally, Sri Lanka has witnessed urbanisation, and changes in demography and health behaviours which has led to income inequality and an altered disease distribution where non-communicable disease, including mental health disorders increasingly represent the prominent public health challenge. Furthermore, Sri Lanka has experienced protracted ethnic violence and a devastating Tsunami, both of which continue to have an ongoing impact on the health and wealth of the country. Increasing our understanding of social deprivation and poverty indicators, and their association with mental health disorders, can provide opportunities to not only improve population mental health but to reduce the risk of mental disorders that are associated with social inequalities (WHO 2014).

Objective

To determine whether depression is associated with social deprivation and poverty indicators such as marital and occupational status, education, financial hardship/debts, household tenure, building construction and basic facilities including water and toilet in an urban and semi-urban Sri Lankan population sample.

Setting

COTASS is a population based twin study, with a comparable singleton sample from Colombo District, Sri Lanka. The first wave (COTASS-1) survey focussed on mental health, particularly depression, anxiety and alcohol use. During the first wave 4,024 twins and 2,019 singletons were interviewed. In the second wave we achieved a 91% participation rate for a carefully ascertained population of twins residing in Colombo District, and an 87% participation rate for singletons recruited from the same

area. The second wave (CoTASS-2) included questionnaire data plus anthropometric and blood pressure measurements, heart rate variability recordings, actigraphy data, clinical investigations, and collection of serum and DNA for bio-banking. Questionnaires covered socio-demographic and poverty factors (including marital and occupational status, education, financial hardship, household tenure, building construction and basic facilities including water and toilet).

Methods

The student will start by performing a rapid review of existing studies examining the relationship of poverty and deprivation with depression; and determine from existing literature and COTASS data the key indicators of poverty and deprivation. They will then analyse the COTASS data. First, to determine prevalence of depression, stratified by key socio-demographic, deprivation, and poverty variables. Second, to determine the association of depression with neighbourhood and individual measures of poverty and deprivation; adjusting for other socio-demographic variables. Analysis will be descriptive to start with, and then use linear or logistic regression (as appropriate) to determine the independent association of these measures with depression. If feasible, multilevel models will then be used to capture and model the clustering of participants within geographical areas to assess how much the association of depression with poverty varies between geographical areas.

PROPOSED STUDY TIMETABLE (outline the plan of work and when key events (e.g. first full draft of thesis, viva) will occur within the 12 month period)

1-4 Review of literature; familiarisation with COTASS data
5-6 Prevalence analysis
6-9 Analysis of association of depression with poverty and deprivation variables
10 Complete first draft of thesis for comments from supervisors (Chapter writing will occur over the full 12 months)
12 submit final version of thesis

Research Training Plan (provide detail on proposals for formal and informal training provision. Outline any additional costs (if any), and how these may be met.)

Attendance on Statistics and Epidemiology module run by the iPCHS (November/December)
Attendance at systematic review workshops run by the iPCHS
Attendance at relevant journal clubs (e.g. statistics and epidemiology); global health and mental health research programme meetings; internal and external seminars
Formal monthly meetings with supervisors; other meetings as and when necessary for further support.

Feasibility of the proposal as an Intercalated MPhil: (What makes this a good Intercalated MPhil, provide detail on existing data/resources that will be accessed).

This is a highly feasible intercalated MPhil project. The data needed to complete the MPhil has already been collected and is ready to be analysed. The candidate will develop a range of expertise in conducting a rapid review and evidence synthesis of the existing literature, statistical analysis techniques and report writing. The student will also gain the opportunity to publish the work in a peer reviewed journal and present at an academic conference. The supervisory team have a range of expertise in global health, mental health, epidemiology and statistical analysis to support the candidate.

References

Campion, J., Bhurga, D., Bailey, S. & Marmot, M. (2013) Inequality and mental disorders: Opportunities for action. *Lancet.* 382(9888), 183-184.

Melzer, D., Fryers, T. & Jenkins, R. (2004) Social inequalities and the distribution of Common Mental Disorders. Hove: Psychology Express.

Patel, V. & Kleinman, A. (2003) Poverty and common mental disorders in developing countries. Bulletin World Health Organisation 81(8), 609-615

Patel, V., Lund, C., Hatheril, S., Plagerson, S., Corrigall, J., Funk, M. et al., (2010) Mental disorders: equity and social determinants. In: Blas E, Kurup AS, Eds. Equity, social determinants and public health programmes. Geneva: World Health Organisation

World Health Organisation and Calouste Gulbenkian Foundation. Social determinants of mental health. Geneva, World Health Organisation, 2014.