

Reducing the scarcity in mental health research from low and middle income countries: A success story from Sri Lanka

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Abstract

There is an enormous inequity in global health as well as research. Less than 10% of research funds are spent on the diseases that account for 90% of the global disease burden. This case study of north–south, south–south collaborations in Sri Lanka is a classic example of the issues faced by mental health researchers in low and middle income countries (LMICs). In this paper, work carried out by the Institute of Psychiatry (IoP), King's College London and the Institute for Research and Development (IRD) partnership since 1997 in Sri Lanka is presented to show an example of a successful private research institution based in a LMIC as a product of south–south and north–south collaboration in mental health research. The evidence of scarcity of mental health research and resources is overwhelmingly abundant in the context of Sri Lanka. IRD-IoP partnership showcases a successful north–south partnership with equality and efficiency. It has moved beyond start-up phase and has become a sustainable initiative in terms of funding, collaboration, research output and policy impact. International funding agencies, academics, and other bodies need to address sustaining such initiatives as priorities in reducing scarcity and inequity in mental health research in developing countries.

Introduction

There is an enormous inequity in global health as well as research. Less than 10% of research funds are spent on the diseases that account for 90% of the global disease burden. Though 93% of the world's burden of preventable mortality occurs in developing countries, too little research funding is dedicated to health problems in developing countries (Global Forum for Health Research, 2000). In addition there is a publication divide in medical and mental health research (Sumathipala et al., 2004a; Patel & Sumathipala, 2001). Strengthening health research capacity in developing countries is a critical element for achieving health equity.

A recent paper on mapping mental health research capacity and resources in LMICs published in *Health Policy* discusses the scarcity and unequal distribution of mental health research capacity (Razzouk et al., 2010). The global survey mapped research and researchers from 114 LMIC countries around the globe and found that researchers and publications were concentrated in 10% of the countries surveyed. The paper, based on a project by Global Forum for Health Research, found among other things, that Asian researchers were more likely to be based in

private institutions than their colleagues from other continents. The authors of the paper conclude that the results showed a severe scarcity of mental health research resources, inequitable distribution and inefficient utilization in LMICs. The paper further concludes that low publication rates from LMICs are due to a lack of human resources and cites access to journals and databases, research fellowships and funding as main resources lacking in LMICs (Razzouk et al., 2010).

Although LMICs bear the brunt of the burden of risk factors for mental disorders, evidence presented in the paper shows an under-representation of the most at-risk populations for mental disorders and under-producing of relevant knowledge required to reduce the disease burden (Razzouk et al., 2010).

The authors say that south–south partnerships (A partnership between developing world countries) with northern financial support may be a good strategy to minimize the inequity in research capacity, and call for investments in training researchers, establishing research centres, improving research infrastructure and access to information sources. According to them, collaborative studies with developed countries, south–south partnerships, and

international research networks are important in aiding LMICs to improve their mental health research capacity and state that research funding should address mental health priorities (Razzouk et al., 2010). Furthermore, editorials and articles in *Acta Psychiatrica Scandinavica* have highlighted the mental health research gap and analysed submission and acceptance rates of manuscripts (Konradsen & Munk-Jorgensen, 2007; Patel, 2007; Saraceno & Saxena, 2004). These articles discussed the need for strengthening research capacity both individually and institutionally in lower and middle income countries to carry out priority research; the importance of collaborations to bridge the gap, the need to focus on both mental health and public health professionals to generate high quality research and the development of research capacity. In order for sustainable research infrastructure to be built up in LMICs there is a need to ensure that researchers can receive suitable training, and once trained, researchers have a rewarding academic environment to implement their skills. There are significant difficulties in sustaining funding in countries with limited national resources, and concerns that highly skilled researchers may be lost in a brain drain (Nchinda, 2002). Patel emphasized that 'the universities in the low and middle income countries must reform to permit greater freedom for researchers, and create career tracks for clinical researchers', arguing further that this is necessary to prevent the high rate of acute brain drain (Mullan, 2005).

This case study of north-south, (A partnership between developed and developing countries) south-south collaborations in Sri Lanka, is a classic example of the issues highlighted by these various articles. In this paper, work carried out by the Institute of Psychiatry (IoP), King's College London, UK and the Institute for Research and Development (IRD) partnership since 1997 in Sri Lanka is presented to show an example of a successful independent research institution not directly linked to a local university based in a LMIC as a product of south-south and north-south collaboration in mental health research. The paper will also discuss the challenges posed in this endeavour and especially focus on issues related to sustaining such collaborations.

A few facts about Sri Lanka

Sri Lanka has a literacy rate of 90.8% and an average life expectancy of 74 years. The crude death rate is 5.9 per 1000 population and maternal mortality rate is 3.5 per 10,000 live births. Infant mortality is 15.4 per 1000 live births (Ministry of Health, 2005). In these respects Sri Lanka is to a large extent ahead of its south Asian neighbours, and this is in part due to

an extensive public health network with the majority of health services being provided free of charge (Jayasekara & Schultz, 2007). However, an overarching research culture is absent and in terms of measurable research output Sri Lanka ranks as one of the lowest in the region (Waidyanatha, 2002). Sri Lanka has witnessed 30 years of internal conflicts, political violence, the tsunami of 2004, and has a very high suicide rate along with a high per capita alcohol consumption rate (Samaraweera et al., 2008a).

Mental health services and research

In Sri Lanka, mental health was recognized as one of the 17 key components in primary health care as far back as 1980 (Jayasekara, 2001). However, by 2004 Sri Lanka had only around 25 specialist psychiatrists for a population of over 20 million, and had no formal psychology service (Sumathipala & Siribaddana, 2005). Mental health services were based on institutional care and lacked public health, primary care and multi-disciplinary perspective (WHO, 2005a).

No epidemiological data were available until recently to quantify the burden of disease, death and disability due to mental disorders in Sri Lanka (WHO, 2002). A survey revealed that during the previous 5 years, only 47 indexed and 32 non-indexed articles were published on mental health in Sri Lanka (Sharan, Levay, Olifson, De Francisco, & Saxena, 2007).

Research gap and scarcity

The evidence of scarcity of mental health research and resources is overwhelmingly abundant in the context of Sri Lanka. Apart from a clear lack of mental health research being conducted, the lack of human resources along with financial and other material resources has a strong negative effect on the development of country's mental health services. Capacity building in terms of training mental health professionals is limited to the medical postgraduate qualification system, although in recent years steps have been taken to train doctors as medical officers of mental health, a mid career non-psychiatric category tasked with easing the burden of the limited number of specialist psychiatrists working in the country.

The Institute for Research & Development was commissioned in 2007 by the Ministry of Health and the World Health Organization (WHO) to conduct the first National Mental Health Survey to be conducted in Sri Lanka. This survey identified and made policy recommendations for improving disease burden and services across the country (IRD, 2009). Apart from a few small-scale research projects conducted as part of postgraduate degrees, mental

health research is hardly being conducted and the low publication rate is a testament to this situation.

Bridging the gap through collaborations

A partnership between the Institute of Psychiatry, Kings College London, and various Sri Lankan researchers has allowed the development of a portfolio of research to emerge. In 1997 the Institute for Research and Development was founded on the backdrop of a randomized controlled trial (RCT) for medically unexplained symptoms (MUS) (Sumathipala et al., 2000; Sumathipala, 2004b).

The IRD gradually extended collaborative links with local colleagues to gather a critical mass of Sri Lankan academics from diverse disciplines to carry out interdisciplinary research (Sumathipala et al., 2003). The group, a network of Sri Lankan and overseas academics and academic institutions, dedicated to developing an overarching research culture in Sri Lanka was extensively transformed into a cohesive structured research institute by year 2000 (www.ird.lk) (Sumathipala & Siribaddana, 2003).

Building institutional capacity

The IRD is a not-for-profit research institution. Its academic members include epidemiologists, psychiatrists, physicians, geneticists, veterinarians, public health specialists and others. It now has over 15 full time research staff, and many other associates involved at various levels while employed in other academic institutions.

A summary of its activities is given in Table 1.

Discussion

Collaborative development

The focus of the collaboration has been on individual projects and fellowships and it has allowed the collaborative to work efficiently. More importantly, this collaboration is based on a symmetrical working partnership with researchers from IoP and IRD who are involved at an equal level in intellectual contribution and resource sharing. Both IoP and IRD are involved in a venture to address globally relevant issues through a multicultural and multinational effort.

Research in developing countries is influenced by a semi-colonial model (Costello & Zumla, 2000), i.e. 'postal research' where developing countries courier biological samples to the west, 'parachute research' where western researchers travel to developing countries and take back data or biological samples, and 'annexed sites research' led and managed by expatriate staff. Undoubtedly these annexed sites

have produced some of the influential and innovative research in tropical medicine. Merger of 'annexed sites' with appropriate national partners would be preferable and mutually beneficial. The IRD-IoP initiative was a 'partnership model', a model which can produce high quality research, with greater influence on national policy and practice. In this model local academic leaders manage the research, and expatriates having active links to both worlds have a significant role to play.

One of the potential threats to these arrangements is when the western partner's motives are driven purely from a need to conduct research cheaply on developing country populations. This is why local capacity building should be the rule rather than an exception. In this regard wider ethical issues should also be regarded as part and parcel of the research enterprise and collaboration. That is why the IRD has embarked on a parallel ethics programme. Both these components were well supported by the partners and funders. The ultimate aim is to prevent exploitation of the population and entrench the idea that ethics is a friend of research.

The Sangath Foundation of India led by Professor Vikram Patel is a similar organization which materialized through north-south partnership, and which has achieved much in mental health and public health in India (www.sangath.com). It is doing valuable work in capacity building and mental health research in India.

Bureaucracy

It has been shown that independent research institutions in Sri Lanka are more cost effective. For example, at the Institute of Fundamental Studies, Kandy, Sri Lanka, the research output in terms of per capita publications in journals quoted in the Science Citation Index in recent years has been nearly ten-fold higher than that of universities and other R&D institutions in Sri Lanka (Waidyanatha, 2002; Samaraweera et al., 2008b). This also coincides with the finding by Razzouk et al. (2010) that most researchers in Asia are based at private institutions. On the other hand, a survey done among Sri Lankan researchers has revealed that some of the outdated practices in government research institutions have made researchers in Sri Lanka 100–200 times slower than their foreign counterparts, despite the fact that they are on a par with their foreign counterparts in terms of competence (Nanayakkara, 2004).

Most universities in Sri Lanka focus on theoretical framework in teaching without any research components. The university system is inundated with outdated teaching and administrative practices. Although certain impressive research has come from the university system, research being conducted

Table 1. Overview of IRD activities.

Performance indicators of IoP-IRD partnership

- Growing publication record (15 data-based publications in 2008, 2009 and 2010).
- Eighteen grants from the Wellcome Trust in mental health, bioethics and public engagement.
- Other grants from Social Psychiatry Research Trust, WHO, World Bank and CDC Atlanta.
- International research supervision (3 IoP PhD students, Wellcome Trust Masters Fellowship of CS).
- Local research supervision (9 MD and MSc, PGIM students).

Conducting priority research

Research at IRD spans from observational epidemiology in mental health to interventional studies, genetic studies, twin studies, ethics studies and utilize quantitative and qualitative methods.

Medically unexplained symptoms

- IRD carried out the first ever RCT reported from a developing country using psychological intervention; cognitive behaviour therapy (CBT) followed by another RCT and achieved national and international impact (WHO, 2005b; Sumathipala et al., 2004b; Sumathipala et al., 2006a; Sumathipala et al., 2008a).
- WHO Inter-Agency Standing Committee (IASC) guidelines on mental health and psycho-social support in emergency settings have incorporated IRD work as an important post-disaster intervention (IASC, 2007).

National Mental Health Survey

- Commissioned in 2006 by the Ministry of Health of Sri Lanka to conduct the first ever island-wide national mental health survey (Community sample 6000, School sample 4000) (IRD, 2009).

Twin studies

- In 1997, a voluntary twin register was initiated and later expanded into the first twin registry to be population-based in the developing world with over 10,000 twin pairs (Sumathipala et al., 2000; Siribaddana et al., 2006).
- State-of-the-art molecular biology and genetics laboratory has been established (Siribaddana et al., 2008).

Suicide studies

- Studies on prevalence of suicidal ideations and suicides, psychological autopsy and a pilot RCT carried out (Samaraweera et al., 2007; Samaraweera et al., 2008).

Mapping health research

- Global Forum for Health Research mapping in mental health research (Sharan et al., 2007).
- PANOS HIV and TB media coverage global mapping.
- Mapping publications on pesticide poisoning.
- Mapping developing world research publications in high-impact general medical and psychiatric journals.

Dementia

- The 10/66 dementia project was initiated in Sri Lanka recently.

Cultural adaptation of instruments

- Adaptation of cross-cultural research instruments using qualitative research, instead of translation and back translation (Sumathipala & Murray, 2000).

Bioethics initiative

- Initially connected to the establishment of the Sri Lankan Twin Registry, due to lack of ethical framework adequate for twin and genetic research (Sumathipala & Siribaddana, 2003; Sumathipala et al., 2000).
- Senior and mid-career academics attached to universities and other institutions from veterinary, nursing, law, sociology, medical and educational disciplines lead bioethics related capacity building and research (Sumathipala et al., 2003; Sumathipala & Siribaddana, 2004; Sumathipala et al., 2008). 'Working Group on Disaster Research and Ethics (WGDRE)' consisting of experts from India, Pakistan, Bangladesh, Thailand, Philippines and Indonesia was formed in 2007 producing a draft guideline for disaster research and ethics encompassing 12 areas (Sumathipala et al., 2007).
- The bioethics initiative contributed to the Nuffield Council of Bioethics discussions in 2003 and 2005 on the ethics of research related to healthcare in developing countries (www.nuffieldbioethics.org).
- A wide-ranging study on informed consent and ethics committees was conducted (Sumathipala et al., 2008; Sumathipala et al., 2008; Sumathipala et al., 2010).

Mental health training

- A training programme and a manual was developed, executed and evaluated for primary care doctors in Eastern province in identification, treatment and referral of epilepsy, psychosis, severe depression, MUS and heavy alcohol use (Sumathipala et al., 2009).
- A two-year community-orientated project designed to improve identification and management of mood disorders in collaboration with the Black Dog Institute was established.

Working for policy impact

Tsunami experience

- A crisis intervention plan was presented after the 2004 tsunami and IRD members contributed to post-tsunami psychosocial work.
- Advocacy for a multi-disciplinary, culturally sensitive and locally appropriate approach.
- Contribution to post-tsunami formation of a National Mental health Policy through disaster victim identification, children-related services and ethics in research (WHO, 2005b; Sumathipala et al., 2006; Costello & Zumla, 2000).

Public engagement and dissemination

- Public engagement component is embedded. As one strategy, a quarterly tri-lingual research journal (*Gaveshana – Explorer*) is published.
- Collaborative partnership with Science Development Network (www.scidev.net) established.
- Current programme in engaging twins and multiples for research through cultural activities.

Partnership and capacity building

- The focus is always on building sustainable, long-term partnerships with individual academics and institutions across developing and developed worlds.
- Significant effort is dedicated to capacity building through training and supervision of local and international postgraduate students.

is patchy and fragmented, clearly lacking an overarching research culture (Waidyanatha, 2002).

In recognizing the inefficiencies existent in the university system, the few genuine and aspiring academics left toiling within the system for various reasons must be also acknowledged. Countering deep-rooted malpractices and ideas within the system is a singularly difficult task requiring innovative thinking and effective methods. Therefore, IRD was established with an aim of developing capacity at individual, group, institutional and national level. The main aims were to provide a 'bureaucracy-less' environment to carry out research, to influence policy by concentrating on high quality policy relevant research, working with people standing to benefit from research and by establishing strategic partnerships with individuals and institutions having similar aims.

Negative research culture

Individuals and individual factors such as envy play a significant role in either hindering or supporting research efforts in Sri Lanka. Hence, individuals in managerial positions can influence research either negatively or positively. However, obstacles created due to envy can be subtle, long-lasting and unpredictable. The IRD has faced heavy resistance in establishing a genetics laboratory and more than five years taken to establish it is ample evidence. This laboratory has been established to conduct twin genetic studies connected to the Colombo Twin Registry. It was funded by a grant from the Wellcome Trust and has state-of-the-art equipment necessary to conduct advanced genetic studies. The establishment of this lab has been an uphill struggle due to academic bureaucracy and tunnel vision in certain sections of the university system and it required hard work and dedication in the face of adversity on the part of the IRD members to achieve this goal.

Apart from that, opportunities for full-time (mental) health research at local universities are almost non-existent in Sri Lanka (Konradson & Munk-Jorgensen, 2007). Research is not a popular career option for mental health professionals; many are often unhappy and seek ways of leaving the country, contributing to the brain drain.

Sustainability

The risks in the start-up phase of the partnership model may be high, but in the longer term the developmental impact of a balanced and equal research partnership is great, and the scope for broader, multidisciplinary research increases. Our case study provides evidence of a successful partnership model. It has moved beyond start-up phase

and has become a sustainable initiative in terms of funding, collaboration, research output and policy impact. The key to any similar collaboration is continuous project funding. Funding provides opportunities to build capacity by training and employing competent staff and to build infrastructure and resource pools. But more often than not project funding is insufficient to achieve a multitude of such goals in the longer run. Therefore, funding bodies need to come up with new strategies to invest in sustainability of north-south and south-south collaborations.

Recently the Wellcome Trust rolled out their new funding scheme, investigator awards, which according to the Trust, aims to provide flexible resources and funding to researchers enabling them to focus on conducting challenging research rather than worry about securing the next grant. This initiative should be lauded and appreciated as it addresses a fundamental problem all researchers face: keep the grant cycle going or risk losing work and a living. If flexible and long-term funding sources are available, researchers can dedicate more energy and time to tackle important and critical research questions.

Such an initiative would be the answer to the dilemma faced by institutions such as the IRD, especially from the developing world. The sustainability of north-south and south-south partnerships would be assured through such funding initiatives from international funding bodies and would aid achieving long-term capacity and infrastructure building goals and prevent stagnation and total collapse of valuable work being conducted. It would also guarantee researchers and other workers with reasonable job continuity and encourage them to engage more enthusiastically in research. Such initiatives stand to help prevent brain drain by providing a stable working environment for academics from developing countries within their socio-cultural context and will encourage academics living in developed countries to return to their own countries and aid the development process with their specialist knowledge.

However, the downside of moving away from project-based funding must be also mentioned. The IRD was established and functions on project grants. In fact, The IRD was started with a Wellcome Trust project grant awarded to A.S. in 1997. There is an immense value to project grants that funding agencies such as the Wellcome Trust awarded, where they helped initiatives like the IRD and Sangath flourish. Funding agencies must consider developing country initiatives such as the IRD and Sangath and their future when they introduce new schemes similar to investigator awards. That will be a tribute to the immense individual commitments and personal

sacrifices of those who initiated such endeavours in the developing world.

A sound research question and a protocol along with generous funding are necessary but not sufficient to develop research infrastructure or build capacity. Experiences from Sri Lanka and other developing countries suggest that there are many other factors that contribute and play a decisive role, such as the ability to conduct team work and establish networks, negotiating skills, and supervising and training others. Building collaborations is also necessary to produce high quality research that can influence national policy and practice. If all these ingredients are available, it would be possible to produce high quality research in developing countries. However, providing reasonable opportunities for publication of biomedical research and increasing the proportion of articles from developing countries is also critical. Furthermore, it must be stated that increasing resource allocation or capacity building alone will not improve the research capacity in a developing country. A radical reform of the agendas of the scientific community and of policy makers to create an environment conducive to research is needed.

The IRD-IoP partnership showcases a successful north-south partnership with equality and efficiency. It already addresses the call to meet challenges in mental health research in LMICs by investing in capacity building by the Global Health Forum survey team (Razzouk et al., 2010). It stands as a role model for successful south-south partnerships in mental health research and other research areas. It also stands as a perfect example of how northern financial support can be successfully utilized to improve southern research resources, capacity and output. The IRD work provides a model and example as to how international funding could be secured even if local funding is not available.

Finally, as with so much in the modern world, the question comes down to money. How to sustain a successful institution such as the IRD in the developing world? Should the fate of these institutions hang in perpetual balance of securing project grants? Or should they be supported with more robust, long-term funding initiatives enabling continuous and unhindered progress of their work? International funding agencies, academics, and other bodies need to address sustaining such initiatives as priorities in order to reduce scarcity and inequity in mental health research in developing countries.

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References

- Costello, A., & Zumla, A. (2000). Moving to research partnerships in developing countries. *British Medical Journal*, *321*, 827–829.
- Global Forum for Health Research (2000). *The 10/90 Report on Health Research*. Geneva: Global Forum for Health Research.
- IASC (2007). *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*. Geneva: Inter-Agency Standing Committee, World Health Organization.
- IRD (2009). *National Mental Health Survey Report*. Colombo, Sri Lanka: Institute for Research and Development.
- Jayasekara, R.S. (2001). Community nurses: An urgent need. *Nursing Health Science*, *3*, 101–104.
- Jayasekara, R.S., & Schultz, T. (2007). Health status, trends, and issues in Sri Lanka. *Nursing Health Science*, *9*, 228–233.
- Konradsen, J., & Munk-Jorgensen, A. (2007). The destinies of the low and middle-income country submissions. *Acta Psychiatrica Scandinavica*, *115*, 331–334.
- Ministry of Health (2005). *Annual Health Bulletin*. Colombo, Sri Lanka: Ministry of Health.
- Mullan, F. (2005). The metrics of physician brain drain. *New England Journal of Medicine*, *353*, 1810–1818.
- Nanayakkara, T. (2004). Stimulating technological innovation in Sri Lanka: A study on the research culture in Sri Lankan universities. *Gaveshana Research Journal*, *3*, 45–47.
- Nchinda, T. (2002). Research capacity strengthening in the south. *Social Science & Medicine*, *54*, 1699–1711.
- Patel, V. (2007). Editorial: Closing the 10/90 divide in global mental health research. *Acta Psychiatrica Scandinavica*, *115*, 257–259.
- Patel, V., & Sumathipala, A. (2001). International representation in psychiatric literature. Survey of six leading journals. *British Journal of Psychiatry*, *178*, 406–409.
- Razzouk, D., Sharan, P., Gallo, C., Gureje, O., Lamberte, E.E., Maria, J., . . . , Saxena, S. (2010). World Health Organization – Global Forum for Health. Research Mental Health Research Mapping Project Group. Scarcity and inequity of mental health research resources in low-and-middle income countries: A global survey. *Health Policy*, *94*, 211–220.
- Samaraweera, S., Siribaddana, S.H., Sivayogan, S., Sumathipala, A., & Bhugra, D. (2008a). Psychological autopsy on completed suicides of Sinhalese in Ratnapura. *Suicide & Life Threatening Behaviour*, *38*, 221–228.
- Samaraweera, S., Siribaddana, S.H., Sumathipala, A., & Bhugra, D. (2007). RCT of cognitive behaviour therapy in active suicidal ideation – A feasibility study in Sri Lanka. *European Journal of Psychiatry*, *21*, 175–178.
- Samaraweera, S., Siribaddana, S.H., Sumathipala, A., & Bhugra, D. (2008b). Prevalence of suicidal ideations from Sri Lanka. *Suicide & Life Threatening Behaviour*, *38*, 221–228.
- Sangath (<http://www.sangath.com/>).
- Saraceno, B., & Saxena, S. (2004). Editorial: Bridging the mental health research gap in low- and middle-income countries. *Acta Psychiatrica Scandinavica*, *110*, 1–3.
- Sharan, P., Levav, I., Olifson, S., De Francisco, A., & Saxena, S. (2007). *Research Capacity for Mental Health in Low- and Middle-Income Countries: Results of a Mapping Project*. Geneva: World Health Organization & Global Forum for Health Research.
- Siribaddana, S., Ball, H., Hewage, S., Glozier, N., Kovas, Y., Dayaratne, D.A.R.K., . . . , Hotopf, M. (2008). Colombo Twin and Singleton Study (CoTASS): A description of a population based twin study of mental disorders in Sri Lanka. *BMC Psychiatry*, *8*, 49.

- Siribaddana, S., Hewage, S., Siriwardena, D., Athukorale, M., Sumathipala, A., & Hotopf, M. (2006). Update from Sri Lankan twin registry; Establishment of population based register and ongoing project on common mental illness, alcohol and suicidal ideation. Invited data based article in the special issue on twin registers. *Twin Research & Human Genetics*, 9, 868–874.
- Sumathipala, A. (2004). Cognitive behaviour therapy for medically unexplained symptoms. PhD thesis, University of London.
- Sumathipala, A., Fernando, D.J.S., Siribaddana, S.H., Abeyasingha, M.R., Jayasekare, R.W., Dissanayake, V.H., & De Silva, N. (2000a). Establishing a twin register in Sri Lanka. *Twin Research*, 3, 202–204.
- Sumathipala, A., Hewage, S., Hanwella, R., & Mann, A.H. (2000b). Randomised controlled trial of cognitive behaviour therapy for repeated consultations for medically unexplained complaints: A feasibility study in Sri Lanka. *Psychiatric Medicine*, 30, 747–757.
- Sumathipala, A., Jafarey, A., De Castro, L., Ahmad, A., Marcer, D., Srinivasan, S., & Siriwardhana, C. (2007). Ethical issues in post-disaster clinical interventions and research: A developing world perspective. Key findings from a drafting and consensus generation meeting of the Working Group on Disaster Research and Ethics (WGDRE). Special issue on disasters. *Asian Bioethics Review*, 20102, 124–142.
- Sumathipala, A., & Murray, J. (2000). New approach to translating instruments for cross-cultural research: A combined qualitative and quantitative approach for translation and consensus generation. *International Journal of Methods in Psychiatry Research*, 9, 87–95.
- Sumathipala, A., & Siribaddana, S. (2003). *Research Ethics from a Developing World Perspective*. Colombo, Sri Lanka: Vijitha Yapa.
- Sumathipala, A., & Siribaddana, S. (2004). Revisiting freely given informed consent. Role of an ombudsman. *American Journal of Bioethics*, 4, W1–W7.
- Sumathipala, A., & Siribaddana, S. (2005). Research and clinical ethics after the tsunami: Sri Lanka. *Lancet*, 366, 1418–1420.
- Sumathipala, A., Siribaddana, S., Abeyasingha, M.R.N., De Silva, P., Dewey, M., Prince, M., & Mann, A.H. (2008a). A randomised controlled trial of cognitive behavioural therapy versus structured care for medically unexplained symptoms in a primary care setting in Sri Lanka. *British Journal of Psychiatry*, 193, 51–59.
- Sumathipala, A., Siribaddana, S., & De Silva, N. (2003a). Qualitative research, a review. *Ceylon Medical Journal*, 48, 136–139.
- Sumathipala, A., Siribaddana, S., Hewage, S., Lekamwattage, M., Athukorale, M., Siriwardhana, C., . . . , Prince, M. (2008b). Informed consent in Sri Lanka: A survey among ethics committee members. *BMC Medical Ethics*, 9, 10.
- Sumathipala, A., Siribaddana, S., Hewage, S., Lekamwattage, M., Athukorale, M., Siriwardhana, C., . . . , Prince, M. (2008c). Ethics Review Committee approval and informed consent: An analysis of biomedical publications originating from Sri Lanka. *BMC Medical Ethics*, 9, 3.
- Sumathipala, A., Siribaddana, S., Hewage, S., Lekamwattage, M., Athukorale, M., Siriwardhana, C., . . . , Prince, M. (2010). Understanding of Research: A Sri Lankan Perspective. *BMC Medical Ethics*, 11, 7.
- Sumathipala, A., Siribaddana, S., Mangava, S., & De Silva, P. (2006a). *Cognitive Behavioural Therapy for Medically Unexplained Symptoms*. Colombo, Sri Lanka: Forum for Research and Development Publication.
- Sumathipala, A., Siribaddana, A., & Patel, V. (2004a). Underrepresentation of developing countries in the research literature: Ethical issues arising from a survey of five leading medical journals. *BMC Medical Ethics*, 5, 5.
- Sumathipala, A., Siribaddana, S., & Perera, C. (2006b). Identification and management of dead bodies as a component of psychosocial interventions after the tsunami; A view from Sri Lanka. *International Review of Psychiatry*, 18, 249–257.
- Sumathipala, A., Siribaddana, S., Prince, M., & Mann, A.H. (2008d). Understanding the cognitive representation of medically unexplained symptoms and its implication on treatment development research: A Sri Lanka study. *BMC Psychiatry*, 8, 54.
- Sumathipala, A., Siribaddana, S., & Samaraweera, S. (2004b). Do patients' volunteer their life weariness and suicidal ideations? A Sri Lankan Study. *Crisis*, 25, 103–107.
- Sumathipala, A., Siribaddana, S., Samaraweera, S., & Dayaratne, D.A.R.K. (2003b). Capacity building through multi-disciplinary research: A report from Sri Lanka. *British Journal of Psychiatry*, 183, 457–458.
- Sumathipala, A., Siribaddana, S., Samaraweera, S., Ponnampereuma, G., & Siriwardhana, C. (2009). *Psychosis, Severe Depression, MUS, Epilepsy and Heavy Alcohol Use: Identification, Treatment & Referral – Training Manual*. Colombo, Sri Lanka: Institute for Research & Development.
- Waidyanatha, U.P.S. (2002). Getting scientific research moving. *Daily News*, 13 August. Available at <http://www.dailynews.lk/2002/08/13/fea03.html>
- WHO (2002). *Prevention and Promotion in Mental Health*. Geneva: World Health Organisation.
- WHO (2005a). *Mental Health and Psychosocial Relief Efforts after the Tsunami in Southeast Asia* (p. 109). New Delhi, India: World Health Organization.
- WHO (2005b). *Psychosocial Care of Tsunami-Affected Populations Manual for Community-Level Workers*. New Delhi, India: World Health Organization Regional Office for South-East Asia.