



UPPSALA
UNIVERSITET



SIDA/SAREC research programme

Health and Social Care for Socially Marginalised People

Achievements and impact
2004 to 2010



A Collaboration between

Department of Community Medicine & Family Medicine
Faculty of Medical Sciences
University of Sri Jayewardenepura, Sri Lanka

Department of Women's and Children's Health
International Maternal and Child Health (IMCH)
Uppsala University, Sweden

Health and Social Care for Socially
Marginalized People
A Sri Lanka – Sweden research collaboration

Report
Achievements and Impact
2004 - 2010

Collaborating Institutes

Department of Community Medicine & Family Medicine

Faculty of Medical Sciences

University of Sri Jayewardenepura, Sri Lanka

Principal investigator: Professor Kumudu Wijewardena

Department of Women's and Children's Health

International Maternal & Child Health (IMCH)

Uppsala University, Sweden

Principal investigator: Professor Gunilla Lindmark

Financial support

Sida/SAREC

Department of Community Medicine
Faculty of Medical Sciences
University of Sri Jayewardenepura
Gangodawila

© University of Sri Jayewardenepura, Department of community
Medicine, Faculty of Medical Sciences

Publisher: Department of women's and Children's Health, Uppsala
University, Uppsala, Sweden

ISBN: 978-91-978677-2-6

Content

SRI LANKA – COUNTRY SITUATION	5
THE SIDA/SAREC RESEARCH PROGRAMME	5
Overall purpose and objectives	6
ACHIEVEMENTS	7
COORDINATORS.....	13
SUPERVISORS	14
POSTGRADUATE DEGREES AWARDED	17
Doctor of Philosophy	17
The effect of overseas maternal employment on the executive functions of children	18
Menopausal symptoms, quality of life, postural balance and cognitive functions in a community based population of Sri Lankan women	20
Doctor of Medicine (Community Medicine)	22
Mental Health of Adolescents in Jaffna District and some of their Psychosocial Correlates	23
The prevalence and factors associated with IPV against women in the Western Province.....	25
Mental Health Status of Female Overseas Workers' Children in the Colombo District	27
Effects of an intervention to enhance the quality of intrapartum care in secondary level hospitals in Sri Lanka	30
Quality of field antenatal clinics in the Colombo District	32
Children aged eighteen months at risk of mental disability in the Colombo district: validation of a screening tool, their parents' perceptions on their roles and needs in care giving and facilities currently available for them.....	34

POSTGRADUATE DEGREES TO BE AWARDED	38
<i>Doctor of Philosophy</i>	38
The effects of iron deficiency on cognitive and neurophysiological function in early adolescent females	39
War Widows in Sri Lanka: Problems of Adaptation	43
MASTERS DEGREES AWARDED	44
A Criminological Study on Sexual Crimes against Women (With special reference to Colombo and Ratnapura Districts)	45
Health care provider's perception's of adolescent reproductive health in Colombo, Sri Lanka	49
Quality of perinatal care in Sri Lanka: A study in general hospital of Kegalle	51
Factory Workers' Perceptions of Reproductive Health Issues in Free Trade Zones, Sri Lanka	55
PUBLICATIONS	57
<i>Books</i>	57
<i>Papers</i>	58
<i>Abstracts presented at International and National conferences</i>	60
WORKSHOPS & TRAINING	63
AWARDS RECEIVED	80

Sri Lanka – country situation

Sri Lanka has a population close to 21 million with a male to female ratio of 0.97 and 23.9 % below 14 years. According to 2001 census (provisional) data the ethnic distribution is 74.5% Sinhalese, 8.3% Lankan Moors, 4.6% Indian Tamil, 11.9%, Sri Lankan Tamil, and 0.7% others. The GDP growth rate for 2008 was 6%, and 22% live below the poverty line. Over 450,000 men and women work in Middle Eastern countries and the remittance they send back has become the main source of foreign exchange for Sri Lanka.

Nearly 30 years of the civil war that was a conflict between LTTE (Liberation Tigers of Tamil Elam) and the government of Sri Lanka and ended in May 2009 had a serious effect socially and economically on all citizens of the country at different degrees and thousands of people have been internally displaced (both Tamils and non-Tamils). In late December 2004, the country was affected by the tsunami causing 31,000 deaths and nearly 450,000 displaced.

However, compared to most South Asian countries health statistics are better with a life expectancy of 75 years, death rate of 6.1 and birth rate of 16.1 per1000, infant mortality rate of 18.1 per1000 live births and maternal mortality ratio of 60 per 100 000 live births.

At present there are 16 universities and 6 medical faculties in Sri Lanka. The Faculty of Medical Sciences (FMS) of the University of Sri Jayewardenepura (USJP) was established in 1993 and the number of students admitted annually is around 160.

The Sida/SAREC research programme

In 2002 University Grants Commission of Sri Lanka called for research proposals from all universities to be funded under a Sida/SAREC agreement. The proposal submitted by the Faculty of Medical Sciences, University of Sri Jayewardenepura under the heading Health and Social Care for Socially Marginalized People was one of the new projects selected. This research programme was planed as a collaboration between Sri Jayewardenepura University, Department of Community Medicine and Family Medicine, and Uppsala University, Department of Women's and Children's Health, International Maternal and Child Health (IMCH), in Sweden because of already existing cooperation and personal contacts. The program activities started 2004.

Overall purpose and objectives

- To strengthen the capacity of university teachers in health and social science research.
- To carry out research in relation to social and health issues of socially marginalized people that will help the government of Sri Lanka to formulate policy and interventions that may reduce morbidity and mortality and improve quality of life.

Summary of the specific objectives given in the original proposal

- To train doctoral and masters students
- To carry out multi-disciplinary research
- To improve research training through arranging workshops and short courses
- To conduct study visits to learn skills or improve knowledge.
- To develop South – North Collaboration
- To develop a health and social science research lab
- To develop a computer lab for research students

Achievements

Training of doctoral and masters students

The main objective of the programme was to increase the research capacity of the academic teachers of Faculty of Medical Sciences, University of Sri Jayewardenepura and some health professionals in Sri Lanka by providing opportunities to conduct research at doctoral and master's level on the problems of marginalized people. Support from Swedish experts in several disciplines was provided to Sri Lankan students to conduct multidisciplinary research.

During the period 2004 to 2009 the following degrees were completed.

• PhD	2
• Doctor of Community Medicine	6
• Masters of Science	3
• Masters of Arts	1

Degrees to be completed in 2010

• PhD	2
-------	---

The Doctor of Community Medicine degree is accomplished by medical graduates with Masters in Community Medicine by conducting 2-3 years full time research for a thesis similar to a PhD thesis and defending this at an oral exam.

The programme also was providing an opportunity for Swedish researchers and students to conduct research in collaboration with colleagues in Sri Lanka. So far three Master's degrees have been completed in Uppsala and two Ph.D. students in Uppsala have done part of their data collection in Sri Lanka.

All students, who were University teachers or doctors from Ministry of Health, were guided by both Sri Lankan consultants and experts from Sweden. Each student had maximum 2-3 advisors. Consultants from the University Hospital in Uppsala and from Uppsala University who represented different disciplines in medicine and social sciences assisted the students with their expert knowledge and experience. This benefited students immensely as that professional knowledge was not available in Sri Lanka in some areas of the research conducted by the students. The guidance given by these experts was invaluable in expanding their field of study and skills, which in

return will help all future young doctors who will be trained by these doctoral students.

The findings of the research carried out by students and staff will help policy makers to provide better services to marginalized people. The research instruments developed and validated for the local setting are now available for local use by future researchers and service providers (Strengths and Difficulty questionnaire, Child Behaviour check list and Checklist to assess quality of antenatal clinic services). As a positive result of the research carried out, the student who conducted the study on "Prevalence of domestic violence" was appointed in 2009 as consultant to Ministry of Health to advise and guide on a national policy to provide better services to women who are abused. Another student is able to use the experience he gained during his study by working at the Health Education Bureau, which provides health education and promotion for the whole of Sri Lanka through their regional offices. The training received during the research study greatly assists all students in their present employment and in providing better service to people.

The instruments and computer software which were purchased under the project and used by doctoral students for their research to assess cognitive development and intelligence (Rutter's scale, Bayley's scale, Toni Intelligence test, Wechsler scale) are now made available at the Children's Hospital of the country to be used in investigations of children. The doctoral students who were trained on these instruments by Swedish experts and by consultants of Great Ormond Street Hospital for Children, England now have the capacity to train other doctors on these scales and continue to provide better service to children in need.

The experience gained in medical writing and publishing and attending and presenting at international and national academic forums (page 58 – 60) assisted the students in developing critical thinking, gaining confidence, and professionalism. After completing the doctoral degree, one of the students, with assistance from senior staff, has written a book on research methods for medical undergraduates.

The Swedish students who completed their Masters as part of the program were exposed to the health care system and social infrastructure of a developing country with good health care indicators although with low GNP; the burden with social problems mainly due to poverty and ongoing civil war.

Carrying out multi-disciplinary research

Multi-disciplinary research carried out by senior staff of both universities (single mothers, women undergoing abortion, commercial sex workers, autism, and nutrition of for hospital patients) will help policy makers to provide better service to these marginalized groups by addressing key issues highlighted by research. Social and health problems in children due to migration of women to Middle East for employment were key areas that were researched by Sri Lankan students and staff and Swedish teachers. The academic staffs of both universities were able to improve their capacities through participation and supervision of multi disciplinary research and also attending seminars and workshops on areas related to the research projects.

Most of the student projects included methods and theories from several disciplines and it was therefore very important that the program could offer expertise from other sectors than medicine. This opened up the possibility to address the research questions from several perspectives and to use complementary methods, thereby widening both the depth of the research and providing the students with training in new areas of research.

Most of the PhD thesis of the program, though belonging to the discipline of Medicine, had objectives that required the use of ethnographical methods. As a complementary resource to the courses and workshops in qualitative methods included in the program, and with a social sciences background, advice and supervision of the work of the PhD was given in the following areas:

- Thesis proposals
- Research strategies
- Planning of fieldwork
- Selection of methods
- Data collection through interviews, in-depth interviews and observation
- Data analysis
- Discussion of and comments on thesis chapters related to methodology

Additionally, training was given in the field, to PhD candidates in the use of ethnographical methods.

The program included also post-graduate students from Sri Lanka of the area of Social Sciences, more specifically, Sociology and Social Anthropology. Advice was given and supervision was done to:

- A Master of Philosophy in Social Anthropology
- A PhD thesis of Sociology/Criminology.

Besides the above named areas, the supervision also included

- Structure of the thesis
- Case studies
- Combination of quantitative and qualitative methods
- Analysis of collected data
- Presentation of results
- Final discussion and relation between empirical findings and theory

Improved research training through workshops, short courses, and study visits

All doctoral students except one were given research methodology course training at Uppsala University to provide necessary skills for scientific thinking and writing, data collection and data analysis. They were also trained one to one and in groups intermittently during their doctoral studies in specific areas as they required.

To improve the knowledge on qualitative research (in which there are very few experts in Sri Lanka) required special training for the doctoral and master's students. The opportunity to get trained was also given to academic staff in departments other than medicine and to staff of other universities in Sri Lanka. Experts from Uppsala University and University of London were invited to conduct training programs.

The knowledge and training provided on information seeking (literature search) with facilities available within Sri Lanka highly benefited most of the staff members of the medical faculty and also assisted the librarians to provide better service with limited resources.

Training in Behavioural and Cognitive Development in children was given to academic staff of medical faculties in Sri Lanka and to the doctors of Ministry of Health. As there are only few experts in Sri Lanka in this field capacity building in this subject area was a step forward for improving mental health services in Sri Lanka.

An extensive training opportunity was given at University of Mahidol, Thailand to staff of Department of Sociology who required special training in developing research proposals for qualitative research. The knowledge gained was useful to these academics for training under-graduates and post graduates in social sciences since there are very limited opportunities for obtaining special training in Sri Lanka. The undergraduates and postgraduates after obtaining qualification work mainly in social work related disci-

plines, providing special services to families and communities of deprived marginalized people.

Some staff members of the university also got opportunities to get trained in computer statistical analysis, web designing and one on mathematical modelling to assess burden of chronic illness.

A few administrative staff of the University made a study visit to Malaysia to get information on providing effective and efficient accountable auditing and management of accounts in the university system. This will greatly benefit the University as a whole.

The University teachers and doctors in the Ministry of Health are involved in training all levels of health care providers from grass root level to policy makers. Knowledge gained by study visits to other countries and undergoing training programs in social science research methods, concepts and process will greatly benefit the staff and doctors especially when training others and also help in policy development when invited to national policy making bodies.

Developing South – North Collaboration

The networking workshops conducted on Combating Domestic Violence and on Social and Health Issues due to Migration provided a forum to discuss key issues pertaining to the subject and for future networking and exchanging ideas between South Asian countries such as Sri Lanka, India, Pakistan, Nepal, Bangladesh, and Sweden and United Kingdom. The two publications from these network workshops are available as a reference guide to policy makers and students conducting research. These networking workshops also gave a window of opportunity for conducting national multi-centre studies with experts from different countries providing their knowledge and sharing their experiences in research especially on sensitive social issues.

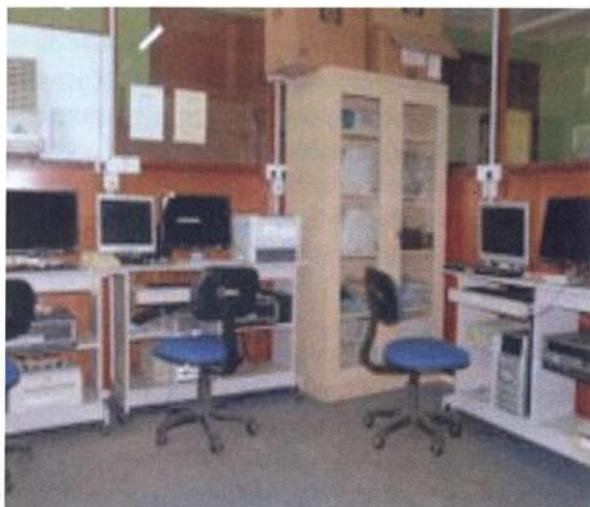
Creating a computer lab and a health and social science research library

The Faculty of Medical Sciences did not have a centre with computer facilities for postgraduate students. With funding provided under the programme, a computer lab was established in the department of Community Medicine with 30 computers and with statistical analysis facilities and easy literature reference packages.

Students from any department of the University are able to use the computer lab for their postgraduate work. A technical officer was trained in maintaining these computers and training students in using data entry and statistical packages.

A library was established with mainly health and social science related books in the department of community medicine to be used by post graduate students and academic staff. This was a very constructive step in improving facilities for research students studying health and social issues of the community. Other equipment required to assist students to conduct research was obtained to improve existing facilities for students such as furniture, accessories, copiers and printers, data storage equipments, and recording devices etc.

The Computer lobby



The Library



Coordinators



*Professor Kumudu Wijewardena
Department of Community Medicine and Family Medicine
University of Sri Jayewardenepura*



*Professor Gunilla Lindmark
Department of Women's and Children's Health
International Maternal and Child Health (IMCH)
Uppsala University*



Dr. Aida Aragao Lagergren
Associate Professor
Department of Social and Economic Ge-
ography
Uppsala University



Dr Pia Axemo
Department of Women's and Children's
Health/Obstetrics and Gynaecology
Uppsala University



Professor Gunilla Bohlin
Department of Psychology
Uppsala University



Professor Karin Edebol Eeg Olofsson
Department of Neuroscience, Clinical
Neurophysiology
Uppsala University



Professor Pushpa Fonseka
University of Sri Jayewardenepura



Dr Johanna Hermansson
Child and Youth Psychiatry
Stockholm County Council

Dr Tord Naessén
Associate Professor
Department of Women's and Children's
Health/Obstetrics and Gynaecology
Uppsala University



Dr Pia Olsson
Associate Professor
Department of Women's and Children's
Health
Uppsala University



Professor Hemamali Perera
University of Colombo

Professor Harsha Senevirathna
University of Colombo



Professor Karin Sonnander
Department of Public Health and Caring
Sciences/Research in Disability and
Habilitation
Uppsala University

Doctor of Philosophy



Dr. D. C. Hewage

Background: Mothers in Sri Lanka are increasingly seeking overseas employment, leaving their children under care of next of kin, and making these children a vulnerable group for impaired cognitive functions. The working memory (WM) and inhibition are two of the core executive functions (EFs) in the prefrontal cortex that have been implicated in maturation of cognition.

Objectives: To assess and compare EFs and behaviour in children of mothers working overseas with children whose mothers are employed in Sri Lanka.

Design, setting and method: A sample of 60 healthy children with mean age of 11.6 ± 0.23 yrs comprised the study group. The comparison group was selected in the same school matched for age, sex and the employment status of the mother. Children were selected using simple random sampling in the schools located within two educational zones (Sri Jayewardenepura Kotte and Piliyandala) in the district of Colombo. Computerized executive function tasks (EF tasks) were used to assess the EFs. A visuospatial working memory task and counting span task were used to assess WM, while inhibition was assessed using Stroop, go/no-go and stop signal tasks. Child behaviour was assessed using Child Behaviour Check List (CBCL) - parent version and Rutter's behaviour checklist - teacher's version. Home Observation for the Measurement of Home Environment (HOME) scale-Middle childhood version was used to assess the quality of the home environment. The EF tasks and child behaviour were assessed at the start of the study (T_1) as well as after one year (T_2).

Results: The main caregiver was the grandmother in 62% of migrant families. The quality of home environment was significantly lower in the study group compared to the comparison group in HOME total scores, 23.6 (6.4) vs. 26.0(6.4) with $p < 0.05$. Significantly higher internalized (7.3(7) vs. 2.2(3) with $p < 0.001$) and externalized symptoms (12.5(11) vs.4.3 (5) with $p < 0.001$) in the CBCL scores and higher externalized problems (4.1(4) vs. 2.4(2.9)) at $p < 0.01$ in Rutter's scale were found in the study group compared to the comparison group at T_1 as well as at T_2 (0.7(.8) vs. 0.2(0.04), 5.3(4) vs.1.6 (1) with $p < 0.001$ and 3.2(3) vs. 1.9(1.6) at $p < 0.05$. The children with mothers working overseas had significantly poorer performance on all EF tasks except visuospatial working memory and stop signal reaction time at T_1 ($p < 0.05$) compared to the comparison group and in all the EF tasks performance except in stop signal commission errors at T_2 ($p < 0.05$).

Conclusions: Children with mothers working overseas had impaired EFs and higher behaviour problems compared to the children whose mothers were employed in Sri Lanka.

Menopausal symptoms, quality of life, postural balance and cognitive functions in a community based population of Sri Lankan women



Dr Himanshu Waidyasekera

In Sri Lanka there is less information available regarding the menopausal experience of women compared to that in the West. The present study was conducted to assess the prevalence of menopausal symptoms in a community-based population of Sri Lankan women and the relationship between these symptoms and their quality of life. In addition the relationship of menopausal status to changes in postural balance, cognitive function and auditory brainstem responses (ABR) was assessed in a sub sample of the selected study population. The relationship between changes in these functions and serum estradiol level was assessed in the postmenopausal women included in the sub sample.

The study was of cross sectional design and was conducted on 683 women in the age group of 45 – 60 years living in the Kesbewa Divisional Secretariat (D.S) area in Colombo, Sri Lanka. A cluster sampling method was used for recruitment of the sample. A background questionnaire was used to assess demographic and socio-economic information and menstrual and reproductive history. The Menopause Rating Scale (MRS) was used to assess menopausal symptoms and the Short Form 36 health survey (SF-36) to assess the health related quality of life. All 3 questionnaires were administered through a structured interview to all selected women in the main study. The sub sample consisting of 40 premenopausal and 67 postmenopausal women were selected from women recruited for the main study. The following tests were assessed in both the premenopausal and postmenopausal women included in the sub sample: postural balance using functional balance tests; reaction time using the CALCAP reaction time software,

general cognitive functions using the Mini Mental State examination test (MMSE), verbal memory cognitive function using the Rey Auditory Verbal learning test (RAVLT) and the auditory brainstem responses (ABR). Serum estradiol levels were assessed in the postmenopausal women included in the sub sample.

59.3% of the women in the study were postmenopausal. Over 91% of all women complained of one or more menopausal symptoms. The most prevalent menopausal symptoms were joint and muscular discomfort (74.7%), physical and mental exhaustion (53.9%) and hot flushes (39.1%). Women with menopausal symptoms had significantly lower ($p<0.05$) quality of life scores in most of the SF-36 domains when compared to women without symptoms. In the sub sample postmenopausal women showed a significant ($p<0.05$) reduction in postural balance and longer ABR wave latencies compared to the premenopausal women. Higher serum estradiol levels in the postmenopausal women was significantly ($p<0.05$) associated with better performance in the reaction time and verbal memory cognitive function test.

In conclusion women of 45-60 years had a high prevalence of somatic type menopausal symptoms and the presence of these symptoms had a significant ($p<0.05$) association with a decrease in their health related quality of life. Postmenopausal status was associated with impairment in postural balance and delayed neural transmission in the auditory brainstem pathways. The study findings suggest that low serum estradiol levels in postmenopausal women may have a role in impairment of postural balance and cognitive functions.

Doctor of Medicine (Community Medicine)

Candidates who have MBBS and a Masters in Community Medicine can register for MD (Community Medicine), where candidate is expected to do 2-3 years of full time research and submit a thesis which is examined by one local and one foreign examiner and defended at a viva-voce examination.



Dr. Lukumar Pathumanabhan

Jaffna district is one of the conflict-affected districts in Sri Lanka. The effect of war on children and adolescent are many and varied. Psychological consequences, risk factors and protective factors operating in this war situation on adolescents have not been systematically studied so far. The objective of this present study was to determine the mental health status of mid adolescent school children in Jaffna district and to identify some of the psychosocial factors associated with mental health.

In the present study an instrument to assess the mental health of adolescents (Strengths and Difficulties Questionnaire) was translated into Tamil and validated. Focus group discussions were conducted among various groups like adolescents, parents, and schoolteachers to identify the psychosocial factors associated with mental health of adolescents and to describe the psychosocial problems of adolescents. A self-administered questionnaire was prepared incorporating psychosocial factors identified from the focus group discussion. This self administered questionnaire and SDQ self report was given to a representative sample of 1243 school children of 14-15 years of age. Based on SDQ results adolescents were classified into 'normal mental health' and 'abnormal mental health. Various psychosocial factors were compared within these two groups. A multivariate analysis was performed to adjust for confounding factors.

Tamil translation of SDQ self report was found both valid and reliable. ROC curve differentiated well between normal mental health and abnormal mental health. Area under the curve is 0.87 with the 95% confidence interval of 0.79 – 0.93. Internal consistency (Cronbach's alpha: 0.78) and test retest reliability (kappa: 0.67) of SDQ self report were good.

The results showed 30% of adolescent school children were having abnormal mental health. This proportion was high when compared with other Sri Lankan and international studies using the same instrument.

Verbal abuse, defined as scolding unnecessarily at home was significantly associated with mental health (OR: 4.2, 95% C.I: 1.9 – 9.8). Quarrel in the family with the influence of alcohol was also an important factor associated with mental health (OR: 4.4, 95% C.I: 1.4 – 13.6), compared to those where alcohol was not reported (OR: 3.7, 95% C.I: 1.8 – 7.5). Scolding for poor educational performance (OR: 1.7, 95% C.I: 1.2 – 2.5) and parents not supporting educational decision taken by adolescents (OR: 1.9, 95% C.I: 1.3 – 2.8), were also identified as having strong association with mental health of adolescents in Jaffna district.

The present qualitative study revealed that adolescents in Jaffna district live in a restricted environment where their day-to-day activities are under threat. The importance of the ceasefire agreement between the warring parties was also indicated to have made many progressive changes in the economic situation in the Jaffna district. However, in a restricted environment, sudden economic change was also shown to have some adverse psychosocial outcomes in adolescent behaviour.

The prevalence and factors associated with IPV against women in the Western Province



Dr. MVF Jayasuriya

Intimate Partner Violence (IPV) against women is defined as physically, sexually and emotionally aggressive acts instigated by marital or cohabiting partners within intimate relationships. The present study was undertaken with the objectives of estimating the prevalence of IPV against ever-married women of 18-49 years age in the Western province of Sri Lanka, to assess factors associated with violence, and to describe responses of the abused women.

A cross sectional survey was conducted in a community based sample of 750 ever-married women in the above age group using standard methodologies and instruments recommend by the World Health Organization (WHO). In-depth interviews were conducted among a sample of abused women and caregivers and analyzed using qualitative methods.

The lifetime prevalence of physical violence among ever-married women in this age group of the Western province was 34% and prevalence of current physical violence (within last 12 months) was 9%. The lifetime prevalence of sexual violence was 5% and of current sexual violence 4%. 19% of the women reported emotionally abusive acts and 30% reported controlling behaviours.

In a multivariate analysis, being a female younger than 25 years was a significant risk factor for severe abuse. Having a partner who abused alcohol and/or drugs and partner having affairs with other women also significantly increased the risk of severe abuse.

According to the qualitative data, women would continue to stay in abusive relationship by denying its existence, by normalizing it, blaming self or someone else other than the partner for it and by living in hope that things would change in the future.

As one out of three women is subjected to IPV in the capital province of Sri Lanka advocacy programmes should be conducted at national level. Programmes for abused women with legal and social service networks should be available. Programmes to address alcohol and drug abuse and to rehabilitate addicts should be available and accessible to men with problems of substance abuse.

Development of stereotyped gender roles that affirm women's subordinate status in society should be prevented by school based programmes. These should also develop life skills and openly discuss and resolve gender issues among adolescents and youth.

Mental Health Status of Female Overseas Workers' Children in the Colombo District



Dr. BCV Senaratna

Over one million Sri Lankans are employed overseas. Approximately 60% of them are females and most of these females have children. These children are believed to be in a disadvantaged social position and subjected to many undesirable health and social outcomes. Only few researches had been conducted on these children, and less so on their mental health status.

The objectives of this research were to translate and validate a suitable instrument to measure mental health status of the children aged 5-10 years, to describe the mental health status of female overseas workers [OWs]' children aged 5-10 years in the Colombo district compared to children of women who are employed in Sri Lanka [LW], to describe factors associated with abnormal mental health among these children, to describe the difficulties/problems faced by the female OWs' children, and to describe the difficulties of childcare on the principal care providers [PCPs] of OWs' children.

Through an experts' opinion survey, an instrument [Child Behaviour Checklist – CBCL] to measure mental health status of the children aged 5-10 years was identified. It was translated in to Sinhala and validated [CBCL-S]. An interviewer-administered questionnaire [SDRIQ] to identify the factors associated with abnormal mental health in the children was prepared based on the findings of the focus group discussions [FGDs] with the teachers in the primary schools. The eligible OWs' children were identified through the Public Health Midwives [PHMs] in the Colombo district [including the PHMs in the Colombo Municipal Council]. The CBCL-S and SDRIQ were administered by trained interviewers to the PCPs of these children and age and sex matched LWs' children in the same neighbourhood. Information on school performances and attendances of these children were obtained using a

mailed questionnaire [SIF] and also by visiting the schools. FGDs with teachers and semi-structured interviews with PCPs were conducted to identify the problems of the OWs' children and the difficulties of the PCPs.

The results indicated that the CBCL-S is a valid and reliable instrument to measure mental health status of the children aged 5-10 years in Sri Lanka. The area under the ROC curve was 0.95 for both the girls [95% CI: 0.94-0.98] and boys [95% CI: 0.92-0.98]. At the cut-off point of 39 its sensitivity and specificity were 90% and 88% respectively for boys and 89% and 92% respectively for the girls. Internal consistency [Cronbach's alpha = 0.7], test-retest reliability [intra-class correlation co-efficient = 0.8; Cohen's kappa = 0.8], and inter-interviewer reliability [Cohen's kappa = 0.8] were satisfactory.

Approximately 23% of the OWs' children were categorized as abnormal compared to 12% of the LWs' children. The proportion of the OWs' children with abnormal mental health status is much higher than the reported prevalence levels for both the pre-school children [10%] and adolescents [19%] in Sri Lanka.

Many factors were significantly associated with the abnormal mental health status of the OWs' children aged 5-10 years in the bivariate analysis. There was an increase in the risk of mental health problems up to 5 times with frequently or very frequently disturbed home environment, very frequently disturbed neighbourhood environment, child getting distressed due to parental quarrelling, and child not communicating with the PCP freely. This risk increased from 5 to 10 times for children who had separated parents, being looked after by a sibling, whose PCP changed twice, mother worked overseas more than twice, living in households with more than 5 people, living in a relatives' home, living in a frequently disturbed neighbourhood environment, and not having opportunity to participate in recreational activities. The risk of abnormal mental health was from 11-20 times for those children who did not have an elder sibling, whose fathers were not living with them, who had divorced parents, who were being looked after by a non-relative, whose PCP changed thrice, and whose parents quarrel. The risk of mental health problems were over 20 times high for those OWs' children whose mother were educated below grade 5, who were living in nuclear families, and who did not have the opportunity to engage in sports and aesthetic activities, and recreational activities at school.

However, most of these lost their significance at the multivariate analysis. Only seven factors, namely, not having an elder sibling [OR: 4.7, 95% CI: 1.3-16.8], father not living with the child [OR: 11.5, 95% CI: 2.5-53.4], mother educated only up to grade 5 or less [OR: 10.2, 95% CI: 2.8-37.4], PCP changed more than once [OR: 10.5, 95% CI: 2.7-40.5], living in a relative's home [OR: 4.8, 95% CI: 1.3-17.4], child not communicating freely with the PCP [OR: 89.0, 95% CI: 2.4-330.0], and not permitting the child to engage in recreational activities at school [OR: 15.2, 95% CI: 3.7-62.4] remained significantly associated with the abnormal mental health of the OWs' children when controlled for other factors. Only two factors, namely, mother educated only up to grade 5 or less [OR: 12.5, 95% CI: 2.3-67.8] and child not communicating freely with the PCP [OR: 13.7, 95% CI: 1.4-138.5] remained as factors which significantly influence the mental health of the LWs' children.

The qualitative components revealed that many children have learning problems, poor school performances, and poor participation in extracurricular activities. In addition, they have numerous behavioural problems and other difficulties. The attempts by both the teachers and the PCPs to help these children with regard to the identified problems had failed in most cases. OWs' children are believed to be neglected by their PCPs. The complex inter-relationship of numerous socio-economic factors plays a role in creating a disadvantaged situation for these children.

Although the PCPs of OWs' children did not consider the responsibility of childcare as a burden on themselves, some indicated that they would be happier if they did not have to shoulder this responsibility. The social life of some PCPs had been adversely affected due to the responsibility of childcare.



Dr. Anil Samaranayake

In Sri Lanka a consistent upward trend in the percentage of institutional deliveries has been noted during the past few decades. In 2003, 91.9 percent of births were institutional deliveries. Presently thirty one percent of childbirths occur annually in secondary care level base hospitals. The quality of intrapartum care provided in secondary care level institutions is an important area to be studied. As the quality aspects of care have not received adequate attention, this study was undertaken to assess some aspects of quality of intrapartum care and to carry out an intervention to improve quality care provided by nurses and midwives.

In six base hospitals in the Western Province of Sri Lanka a baseline assessment was made on the structure, process and outcome, with regard to provision of intrapartum care. Physical facilities available for providing care and the baseline knowledge, attitudes and skills of nurses and midwives were assessed on intrapartum care: maternal satisfaction with care provided was assessed as an outcome indicator.

Based on the findings of the baseline assessment, an intervention was carried out to improve knowledge, attitudes and skills of the nurses and midwives in providing intrapartum care. A before-and-after study design was used to evaluate the effects of the intervention. The effectiveness of the intervention on knowledge, attitudes, and skills was assessed three months after the intervention, using the same instrument and procedure used for the pre-intervention assessment. The sustainability of the effects was assessed six months after the intervention using the same instrument and procedure. Post intervention assessment of maternal satisfaction with care was conducted at the same time in two different samples of mothers.

Baseline results showed that the availability of physical resources for provision of intrapartum care was satisfactory in all institution studied. The quantity of human resources including medical and para-medical personnel was also satisfactory in all six institutions. The pre- intervention assessment indicated that nurses and midwives had inadequate knowledge, attitude and skills in the provision care and only 40 % of parturient mothers reported that they were satisfied with the quality of intrapartum care received.

Post-intervention results showed a marked improvement in all aspects of care attempted to enhance by the intervention. The total knowledge level showed that significant increase had occurred from 40.9 % at pre-intervention stage to 69.2% at three months after the intervention, and to 72.1 % at six months after the intervention respectively. The attitude scores also showed a significant increase from 50.1 % at pre-intervention stage to 67.8 % three months after the intervention and to 70.2 % at six-months after the intervention.

Both nurses and midwives in the study showed significant increase in the skills of provision of care. Communication skills had increased from the 31.7 % pre-intervention level to 76.7% at three months after the intervention and to 83.3 % at 6 months after the intervention respectively. Skills in the recording observation on the partogram had increased from the 31.7 % pre-intervention level to 76.7% at three months after the intervention and to 91.7 % at 6 months after the intervention respectively.

Maternal satisfaction with care had increased significantly from 39.9 % at pre-intervention stage to 64.9 % at three months after the intervention and to 67.6 % at six months after the intervention respectively.

The study revealed the need to improve the provider competence and the feasibility of carrying out effective multidimensional intervention to improve the quality of intrapartum care. The intervention used in this study may be replicable in similar settings. A combination of training and supervision together with other methods of quality assurance, such as perinatal audits, is more likely to lead to sustainable changes.



Dr. Shamini Prathapan

Introduction: Making quality the pillar of the maternal care system can help us achieve the Millennium Development Goal by the year 2015. Yet to date, to improve we do not have a tool or a control mechanism to measure quality. The study assessed structure, process, and client satisfaction components of quality of field antenatal clinics.

Objectives: To develop standards and develop and validate an instrument to measure the quality of a field antenatal clinic and to assess the quality of field antenatal clinics in the Colombo district.

Methodology: The study was constructed in two phases; the development phase and the implementation phase. The development phase developed two instruments to assess the quality of facilities and services; Quality of field antenatal clinic facilities checklist, (Q FANC FC) and Quality of field antenatal clinic services checklist (Q FANC SC). The major steps on development of the tool were focus group discussions with health care personnel in the field, expert opinion on standards and items, homogeneity and multi-factor dimensionality. Factor analysis was performed with principal component analysis on exploratory factor analysis with Varimax rotation. Both tools were validated and tested for reliability. The World Health Organization Client Satisfaction questionnaire (WHO CSQ) was selected to assess the client satisfaction and was translated and back translated to Sinhala and Tamil and were validated and tested for reliability.

The implementation phase assessed the quality of facilities, services of field antenatal clinics in the Colombo District and the client satisfaction among a group of pregnant women attending these clinics. Lot quality assurance sampling was used to sample the field antenatal clinics for facilities, and the

pregnant women for services and client satisfaction. From Colombo District a sample of 59 fields antenatal clinics (40.7%) were selected for the assessment of quality of facilities and 295 pregnant women for assessment of quality of services. A further 295 pregnant women in their third trimester were selected for the client satisfaction of field antenatal clinics.

Results: Judgmental validity was ensured for the two developed tools with the experts' opinion and of which content validity was ensured by the process of tool development. Construct validity was ensured by factor analysis. Factor analyses resulted in a nine-factor structure for the Q FANC FC; building and cleanliness, materials, toilets, health care workers, client information system, training and supervision, health education, supplements and vaccines and water other than tap water. Factor analysis resulted in a six factor structure for the Q FANC SC; client provider interaction, promotion and protection of health, information and counselling, comprehensive care and linkage to other reproductive health services, continuity of care and follow up and technical competence of health care worker.

The WHO CSQ Sinhala and WHO CSQ Tamil were also ensured of its validity and reliability.

Lot quality assurance sampling decision rule was made use of in assessing the standards of quality facilities and quality services of field antenatal clinics. The results of the implementation phase found substandard quality of facilities in the Colombo District other than for the quality of facilities on availability of materials and health education. The quality of services were substandard for all medical officer of health areas in the Colombo District for subscales client provider interaction, information and counselling, comprehensive care and linkage for other reproductive health services and continuity of care and follow up. Promotion and protection of health was found substandard in all field antenatal clinics except for two medical officers of health areas. Technical competence of health care workers was found substandard in all field antenatal clinics except for three medical officers of health areas.

Among the pregnant women attending the field antenatal clinic, 30% were not generally satisfied, 61% wished to revisit and 70% indicated that they would recommend the field antenatal clinic to others.

Recommendation: The availability of the four instruments and the results of the quality of field antenatal clinics in the Colombo District would be brought to the attention of the Family Health Bureau, to improve the quality of facilities and quality of services in the Colombo District and to make use of the tools to assess the quality of field antenatal clinics in other districts in Sri Lanka.

Children aged eighteen months at risk of mental disability in the Colombo district: validation of a screening tool, their parents' perceptions on their roles and needs in care giving and facilities currently available for them



Dr. Amanthi Bandusena

Introduction: Developmental delay can be identified in the early pre-school years. The benefits to be gained by intervention at this period of life are far greater than at any other time. It was considered cost-effective and feasible to use parents to screen for early identification of risk of developmental delay. Hence, it was considered appropriate to validate the Parental Assessment Score (PAS), a screening tool using parents exclusively, to screen for risk of developmental delay at the age of eighteen months. The validated PAS (S-PAS) was used to estimate the prevalence of being at risk for developmental delay within the district of Colombo. It was also considered important to ascertain parents' views as caregivers of preschoolers with developmental delay and to study the facilities currently available for such preschoolers.

Objectives: To adapt the PAS cross-culturally for use within Sri Lanka, to estimate the prevalence of children aged eighteen months at risk of developmental delay and to describe parents' perceptions as caregivers and to describe the facilities currently available for these children

Methods: In component 1 of the study, the PAS was adapted and validated for use in the Sri Lankan cultural context by parents who could understand and read Sinhala. Adaptation was performed with a panel of experts using the Delphi method, while concurrent validation with the Bayley Scales of Infant and Toddler Development (BSID-111) was performed.

In component 2, the prevalence of children aged eighteen months at risk of developmental delay within the Colombo district was estimated using the validated PAS (S-PAS) with cluster sampling within all twelve Medical Officer of Health (MOH) divisions of the Colombo district. Component 3 of the study overviewed the perceptions of parents of preschoolers with developmental delay through the use of Focus Group Discussions (FGD), while component 4 overviewed the facilities currently available for preschoolers with developmental delay within Colombo through contacting and visiting such facilities and by conducting a FGD with professionals involved in service provision at these facilities to obtain their views on these facilities.

Results: Cross-cultural adaptation and concurrent validation of the S-PAS was performed, with a correlation coefficient of .226 between the S-PAS and Cognitive Scale of the BSID-111, which was significant at the level of 0.05 and a correlation coefficient of .235 between the S-PAS and Language Scale of the BSID-111, which was also significant at the level of 0.05. There was no significant correlation between the S-PAS scores and Motor Scale of the BSID-111. However, the sensitivity of the S-PAS was moderate at 50%, while the specificity was high at 94.9%. The prevalence of being at risk of developmental delay among those aged eighteen months in the Colombo district was 1%. The main problems perceived by parents as caregivers were those of transporting their children with developmental delay, lack of resources to provide their children with necessary assistive devices and discrimination against their children when they were accepted into pre-schools. They also expressed a desire for domiciliary services and more information on optimizing their children's development. The fact that there are yet families that hide away their children with developmental problems was also expressed. Early detection of children with developmental delay was perceived to be unsatisfactory, although the situation has improved in the last few years. Interventions for developmental delay were deemed to require being more specific to conditions.

The quality of services was considered to need improvement together with co-ordination of services, which is currently very poor. There are many centres scattered throughout Colombo offering different service modules for developmental delay. However, there is no standard mode of management of specific conditions at these centres. The knowledge of centres regarding other such centres and their services is poor, although sharing of resources does occur to an extent in the government health sector. Parent groups were identified to be strong support systems. However, there are only two such groups in operation and there is no co-ordination between these, even though they share common objectives.

Conclusions: The S-PAS is a reliable and valid instrument for identification of eighteen-month-old children at risk of developmental delay. However, considering that the sensitivity is only 50%, it is recommended that this tool be simplified to include a pictorial base to aid interpretation of items. It is also considered that parent education on basic developmental skills be improved, both in interpreting the presence or absence of skills and in creating a conducive environment for optimizing skill development. Co-ordination between sectors and facilities need to be greatly improved. This is particularly relevant with regard to social services as there are many parents who do not have the resources to procure necessary assistive devices for their children. Early identification of developmental delay needs to be further improved and intervention services for such children need improvement in both qualitative and quantitative aspects.

Doctor of Philosophy



Dr Savithri Wasundara Wimalasekera

Introduction: Iron deficiency is the commonest micronutrient deficiency in adolescence. According to the WHO, iron deficiency is known to affect more than 53% of adolescents of 11- 15 years age (WHO, 2000). Changes in brain iron concentration are known to affect myelination and neurotransmitter functions especially during development. Iron deficiency in infancy has caused delays in psychomotor development in infants (Gorden, 2003). It also has shown to impair development of intellectual capabilities in some populations (Mc Gregor & Ani, 2001). Adolescent females are at risk of iron deficiency due to the onset of menarche and monthly menstruation. The risk of iron deficiency is increased by a lower priority of food allocation to female adolescents in the household, and the parents being unaware of the importance of providing iron rich foods to female adolescents during this critical growth period.

The main **objective** of the study was to determine the iron status and its impact on cognitive and neurophysiologic function in Sri Lankan female adolescents. The specific objectives were to assess the iron status among females in early adolescence; to assess cognitive function, peripheral sensory and motor nerve conduction, visual evoked potentials and auditory brain stem evoked potentials in adolescence; to describe the association between iron status and cognitive function, motor/sensory nerve function, visual evoked potentials and auditory brain stem evoked potentials in ado-

lescent females and to determine the effect of iron supplementation of anaemic and iron deficient adolescent females on their iron status, cognitive function, visual evoked potentials and auditory brain stem evoked potentials, motor/sensory nerve function.

Methods: A descriptive interventional study was conducted on study population consisting of 11-13 yr old female adolescents from the Colombo District of Sri Lanka. Stratified random sampling was used to select five hundred and twenty eight adolescents (n= 528). The study instruments used were *Questionnaires* to determine the baseline height weigh and socioeconomic data, menstrual history and psychosocial adversity index; *clinical examination* to assess the health status and stage of puberty; *venous blood examination* to determine the haemoglobin level, iron profile (ie. serum iron, serum ferritin, serum total iron binding capacity and serum transferrin) and serum albumin. In a sub sample of 180 subjects (ie 60 anaemic, 60 iron deficient and 60 non anaemic), cognitive function and neurophysiologic functions were assessed. The neurophysiologic tests; Visual evoked potentials (VEP), Brainstem auditory evoked potentials (BAEP), motor and sensory function of the lower limbs (MCV and SCV) were assessed using standard measurement techniques on a Nihon Kohden Neuropack II, ENG/ EMG machine (Nihon Kohden Inc, Japan).

Cognitive function was assessed using Weschler Intelligence tests (WISC—IV) (Psychological Corporation, UK) and Tests of Non verbal intelligence (TONI – 3) of (of Western Psychological Services, USA). The selected sub tests of the WISC – IV were Block design & Picture completion (to determine Perceptual Reasoning Index (PRI); Similarities & Comprehension (to determine Verbal Comprehension Index) Digit span & Arithmetic (to determine Working Memory Index (WMI) and Cancellation & Symbol Search (to determine Processing Speed Index (PSI) and the estimated full scale intelligence quotient were calculated.

The anaemic and iron deficient adolescents were supplemented with iron for three months and the same sub sample was reassessed to determine the iron status, cognitive function and neurophysiologic tests after supplementation.

The data were entered into an Excel database and analysed using SPSS and Epi Info statistical soft ware packages.

The results reveal that the prevalence of iron deficiency anaemia was 16.3% in this population. 25.4% of subjects were iron deficient in this population.

The mean scores of Perceptual Reasoning Index (PRI) mean scores of Working Memory Index (WMI), processing speed Index Verbal Comprehension Index (VCI), Processing Speed Index (PSI), and full scale IQ (FSIQ) of anaemic adolescents **and iron deficient adolescents** were statistically significantly decreased when compared with the mean scores of non-anaemic adolescents ($p < 0.05$).

Among these adolescents there was a significant positive correlation between serum iron levels and the VCI, PRI, WMI, the PSI, and the estimated full-scale intelligence quotient ($p < 0.05$). The serum iron level has a positive impact on the estimated full-scale Wechsler intelligence scores of this study population. There was a significant positive correlation between the serum iron level and the raw scores and quotient of Tests of Non verbal Intelligence ($p < 0.05$). There was a positive correlation between ferritin levels and the VCI, PRI, WMI, PSI, and the estimated full-scale intelligence quotient (all $p < 0.05$). This implies that the Wechsler intelligence scores are significantly associated with serum ferritin level in this study population. There was a significant but weak positive correlation between the serum ferritin level and the raw scores and quotient of Tests of Non verbal Intelligence ($p < 0.05$). There was a positive correlation between the iron indices and intelligence tests implying an association of cognitive function with the iron indices. The cognitive function indices had the strongest association with serum ferritin, serum iron and serum transferrin. The association between the haemoglobin level and the intelligence tests scores was poor. The association between the total iron binding capacity and the intelligence tests scores too was poor.

There was poor correlation between the iron parameters (haemoglobin, serum iron, serum total iron binding capacity, serum percent transferrin saturation and serum ferritin) and the visual evoked potentials among these adolescents in this study.

There was a significant negative correlation between serum iron and waves I, II, III, IV, and V auditory brain stem evoked potentials of the right ear among the moderate anaemic. This also demonstrates a variation in auditory evoked potentials of the right and left ears, which has not been recorded before among adolescents.

There was a significant correlation between the serum transferrin level and proximal motor latency of the tibial nerve (correlation coefficient 0.519, $p = 0.047$ as well as the motor amplitude of the peroneal nerve (correlation coefficient 0.530, $p = 0.042$) among the moderately anaemic subjects in this study. There was a significant positive correlation between the transferrin level and sensory latency (correlation coefficient 0.667, $p = 0.007$), sensory

action potential amplitude (correlation coefficient 0.547, $p = 0.035$). There was a significant negative correlation between the sensory conduction velocity (correlation coefficient - 0.626, $p = 0.012$) of the sural nerve of the right lower limb and serum transferrin in this study group.

There was a statistically significant improvement in the Verbal Comprehension Index (VCI) and the Processing Speed Index (PSI) in the anaemic adolescents after iron supplementation. A statistically significant improvement was observed in the Verbal Comprehension Index (VCI) when pre supplementation WISC scores are compared with post supplementation in the iron deficient group too.

The study reveals that iron nutritional status is important for proper cognitive function development among female adolescents. There was a significant reduction in the visual evoked potential latencies, and brain stem auditory evoked potential latencies among the anaemic and iron deficient adolescents in this study. Iron supplementation for three months improved the iron status but did not completely reverse cognitive function test scores to normal. Neither were the VEP nor BAEP latencies normalised by three months of iron supplementation although there was an improvement in the latencies with supplementation. The impairments seen in cognitive function and evoked potentials may be due to brain iron depletion having an effect on myelination of the central conducting pathways and maturation of iron and dopamine dependant neurotransmitters in the brain. There is an urgent need to educate parents on proper nutrition of adolescent females, since they will be the future mothers of the world.



Ms. EAA Edirisinghe

Widowhood is a very common experience and social problem in all societies. It affects to the family and society. This study is among wives of security personnel and police officers who died in the civil war in the North and East of Sri Lanka. During the period 1995-2005 in Sri Lanka, more than 7000 women married to members of security forces and police service have become widows. This study expects to identify problems of adaptation of war widows in Sri Lanka.

Main objective of the research is to critically analyse problems of adaptation. The research is an exploratory study with a combination of quantitative and qualitative methods. Primary data will be collected through a survey, in-depth interviews and focus group discussions. Two hundred fifty widows will be selected and 10 widows will be used for in-depth case studies, based on experiences of the first round of interviews. Kurunegala district is selected for collecting data.

Masters Degrees

A Criminological Study on Sexual Crimes against Women (With special reference to Colombo and Ratnapura Districts)



Ms Anusha Edirisinghe

According to the statistics extracted from the reports of Women and Children Bureau, under Crime against women, period 2000-2003, Police Head Quarters, Colombo, it was seen that there is a significant increase in all types of sexual crimes especially the number of Rape cases and Sexual harassments.

With the macro data in place, a more detailed study was done in Colombo and Ratnapura districts to assess the sexual crimes inflicted on women. This cross sectional study was carried out during 2004 to 2006. Since Ratnapura represents the rural community while Colombo signifies the urban community, Ratnapura and Colombo police divisions were selected as the fields of study.

This opportunity was used to identify the nature of sexual crimes against women, Identify the reasons for sexual crimes in Sri Lanka and to describe the role of the criminal justice system.

The study sample consisted of 100 women victims over 18 years of age, purposively selected from both districts. Other than the victims, 10 police officers from the women and children's bureau of each police division, 10 lawyers and 5 judicial medical officers were also selected purposively as primary sources of information.

Data collection of the victims was done via structured interviews and observations with the participation of trainee counsellors and field investigators. Strict confidentiality was maintained of the information received. Individual structured formal interviews were conducted on police officers, judicial medical officers and lawyers.

In-depth interviews of seven victims were presented as case studies.

As mentioned in police reports, during the period of 2000 to 2003, 149 sexual crimes were reported in the Colombo police division. Out of those, 81 cases were sexual harassments and 46 were rapes. Other than that, few cases of Grave sexual abuse and trafficking were also reported. During the same period 218 sexual crimes were reported in the Ratnapura police division of which 141 were sexual harassments and 77 were rapes.

Fifty victims of rape and sexual harassment from each police division were selected from all the sexual crimes reported during that period. From the 100 victims selected, personnel data and information regarding the sexual crimes were obtained. Data collection was carried out from June 2006 to October 2006.

Data analysis was done manually as the sample was small. Results were obtained and the researcher came in to the following conclusions.

The results showed that the most common sexual crime is rape (69%). Sexual harassment has only been observed 24% of the time in this study group and Grave sexual abuses make up 7% of the cases.

Most of the victims (51%) had an education below grade nine. 21% of them only had primary education and 6% were non-schoolers. When considering the ages of the victims, high percentage (47%) of them was between the ages 18-25 years. It was interesting to note that 4% of the victims were aged over 55 years. It was also observed that more than 50% of the victims were unmarried 8% of the victims were found to be pregnant as a result of rape.

Sexual crimes seem to be equally prevalent among the working and non-working women. 48% of the victims were working and out of that 87.5% were working in the private sector mostly as garment factory workers. Information gathered at the interviews revealed that most of them were migrants from rural to urban areas.

The study indicates that 77% of the victims were abused by known persons, of which 24% were abused by their lover/boyfriend. In these situations the women might have given the consent but that would be vitiated as it has been obtained by force. Ten percent of the victims have been abused by their stepfathers.

This study has shown an association between alcoholism and sexual crimes. Police records state that 52% of the accused has been under the influence of alcohol at the time of committing the crime.

At the scene of the crimes, 18% of the accused have used weapons or tools for example, fire arms, knives, axes, hand bombs and clubs. This has been done in order to obtain the women's consent by intimidation and sometimes with the intention of physically abusing the women.

The research shows an association of sexual crimes with the environment especially in the Ratnapura police division. The key factors were isolation, forests and footpaths. On the other hand there was an equal prevalence of crimes reported during the day and night. When considering the site of crime, majority (44%) has been victimized in their homes, 20% in common places, 6% at work places and 30% in hotels and other places.

Out of all the victims 42% of the victims have been keen on reporting the case to the police. Most of the others have tried to hide the issue initially due to fear of social stigma. All the cases in this study have been reported to police but only 79% of the suspects have been remanded and only 1 person has been convicted by the end of year 2006. Most of the victims (71%) lack the knowledge of the legal issues regarding sexual crimes against women and 77% of victims has had no knowledge in obtaining the necessary legal help regarding this matter.

Though the procedure is to carry out medical examination in all the victims irrespective of the time of presentation, only 82% of them have been examined. This was because 18% of the women had not given the consent for examination.

It is believed that making a good rapport with the victim, proper interviewing and reporting is essential in a case of sexual crime. Therefore training constitutes an important factor for law enforcing officers, as majorities (70%) of the police officers have not had any special training on this. The lawyers should also be specially trained to handle cases of sexual crimes in the courts without harassing the victims again and again. (90% of the lawyers have not had any special training on this either).

Alcohol seems to be a major contributory factor for the occurrence of sexual crimes because in 52% of the incidents, the accused have been under the influence of alcohol. Therefore measures should be taken to control alcohol consumption in Sri Lanka.

Health care provider's perception's of adolescent reproductive health in Colombo, Sri Lanka



Ms. Alemnesh H. Mirkuzie

Master's Programme in International Health
Department of Women's and Children's Health
Uppsala University

Like in many other developing countries adolescents in Sri Lanka are challenged by conflicting paradigms regarding sexuality represented by traditional cultural norms and the modern values.

Several minor Adolescent Reproductive Health (ARH) projects have been running in Colombo, Sri Lanka and the experience of ARH providers working in those projects may contribute to the improvement of ARH.

A qualitative interview study was conducted to explore ARH care providers' perceptions of ARH problems in Colombo after obtaining study permit from the Ethical Review Committee, Faculty of Medicine, Sri Jayewardenepura University, Nugegoda. Twelve ARH providers were identified through purposeful sampling and snowballing technique (Patton, 2002). The interviews were in English following an informed consent. All participants (8 women) were Buddhists and belonged to the Sinhalese ethnic group and worked in Colombo at different settings. They were between 31 to 52 years of old with 2½ to 31 years of services. The interviews were held in privacy, tape-recorded and were between 43-105 minutes in length. The transcribed verbatim was analyzed using phenomenographic analysis method (Sjöström, 2002). Following preliminary data analysis, discussion was held with a professor in Community Medicine and native Sri Lankan to clarify some cultural concepts.

These interviews revealed a variety of ARH problems and reflections over different strategies to improve knowledge, awareness and services in the unequal and rapidly changing society of Colombo in Sri Lanka. Despite the

policy allowing adolescent contraceptive use (De Silva et al, 2003) access to RH services and contraceptives was still hindered by several socio-cultural barriers resulting in unintended pregnancies, STIs and unsafe abortions. Unmarried adolescents did not always feel welcome at health clinics and were often in practice denied the services. It is estimated that 19% of the abortions in Sri Lanka are among adolescents (De Silva et al, 2003). The tradition that parents accompany their adolescent whenever they need health care was mentioned as another hindrance for visiting clinics. Furthermore, the spread of STIs is facilitated by the paradoxical values tolerating males' casual premarital sexual encounters with commercial sex workers but with socio-cultural barriers to the use of condoms. Creating youth centres with a wide range of health and social activities could help to overcome the aforementioned challenges (Dickson-Tetteh et al 2000; Brahmabhatt, 2003).

The relationship between foreign employment of mothers and sexual abuse of adolescents was highlighted in the interviews. This important source of revenue for both family and country implies negative consequences for the families. Similar negative effects on ARH from living with single parents are described in America (Lammers et al, 2000). Sexual abuse is often unreported, with victim blaming and other negative consequences disregarded by the society. Victims of sexual abuse often commit suicide not to face stigmatization, compliant with this observation Diamond and Gajanayake (2004) reported that female suicide rate in Sri Lanka is highest in the world and the most common cause of death among 15-25 years olds. The legal system needs further strengthening to support survivors.

The provision of information for school and out-of-school adolescents was described as the best strategy to reduce ARH problems. Incorporating ARH education into school curricula was a great triumph in Sri Lanka despite considerable cultural and social resistance. The stepping-stone was a change in attitude and involvement of parents and teachers via an extensive awareness campaign (De Silva et al, 2003). The need for collaboration between the health, education, social, cultural and legal sectors to diminish ARH problems is clear. The crucial ways forward in the promotion of ARH is involving adolescents and public health midwives in the development of programs and services provision (Brumbaugh Keeney et al, 2004).

Quality of perinatal care in Sri Lanka: A study in general hospital of Kegalle



Dr. Gölin Wikstrand

Master's Programme in International Health
Department of Women's and Children's Health
Uppsala University

The objective of this study was to analyze the perinatal mortality in a district hospital in Sri Lanka in order to identify key factors in perinatal care, which possibly could be improved.

The perinatal mortality rate (PMR) is defined as deaths occurring during late pregnancy at 22 completed weeks of gestation and over, during childbirth and up to seven completed days of life (WHO). A retrospective study of perinatal mortality in 2001-2003 in the general hospital of Kegalle, Sri Lanka was conducted in September 2004. Data was collected from the local midwifery book and the neonatal ward registry in the hospital. The study included all fetuses of gestational length >22 completed weeks of gestation and over or a birth weight exceeding 500 g.

During these three years 21,583 babies were born and 479 perinatal deaths were registered. The perinatal deaths were further divided into 267 (55.7%) stillbirths and 212 (44.3%) early neonatal deaths. The perinatal mortality rate was calculated to 22 per 1000 births. These figures correspond well to the official statistics of Sri Lanka.

This study was conducted in the general hospital Sri Lanka in the province of Sabaragamuwa. They provide primary and secondary care for the district

and serve as a referring hospital for surrounding hospitals and health care clinics. It is also a teaching hospital for medical students coming from a nearby university, University. In this hospital there were approximately 7 000 deliveries each year during 2001-2003.

One part of the study was observational, in the stage room and labour room. In this part, the daily activities and normal procedures in the stage room and delivery room were observed and described using a protocol including the different steps of a delivery. Data was also collected from the ward admission register book and the neonatal ward registry in the hospital.

The study included all fetuses of gestational length >23 weeks or with a birth weight exceeding 500g. The data was collected and registered in Excel. Analysis was then made from the entries. The perinatal mortality rate was calculated as the number of perinatal deaths per 1000 total births. Deaths occurring during pregnancy at gestational length >23 weeks, during childbirth and up to seven days of life are included in this figure. The Nordic/Baltic classification of perinatal deaths was applied to the data to try to classify the deaths.

At admission the nurse examines the patient and is supposed to listen to the foetal heart sounds. The foetal heart sounds are in the majority of cases not registered in the ward admission register book. Many patients are already in the ward before labour starts due to long distances for transportation. These patients are assessed for induction in gestational length of 41+5 weeks. If this is decided, the patient moves to the stage room. The patients are expected to lie down during delivery and have no real possibility to move around or sit if they wish to do so. There is no possibility of pain relief. The fathers are not present. There is no possibility of bringing a chosen birth companion for supportive care. The women usually do not drink or eat during labour but can use a bucket for emptying the bladder. The labour is followed clinically and emphasis is on progress of labour. Oxytocin was widely used. The doctor makes a cervical examination every four hours. The information was registered in the patient sheet as written text but no partographs were used. The nurses are supposed to assess the foetal heart sounds every 15 minutes by auscultation. The quality of this information was not reliable as it was, in the majority of cases, written down before the heart sounds were auscultated.

When the second stage is coming the patient is moved to the labour room with new staff. Pushing is allowed up to two hours, after this time period some intervention takes place and the doctor is examining the patient. The impression was that the nurse or midwife, especially in the last minutes, did not optimally control the pushing. If appropriate, a forceps is used by the senior house officer. A lower segment caesarean section can also be conducted. When the baby was delivered, the mouth and the nostrils are suctioned directly as soon as the baby's head has come out. When the baby has slipped out the umbilical cord was clamped and cut, and the baby was immediately taken to the baby station where it was weighed, wrapped in clothes and then put on a table with heating from above. The Apgar score at five and ten minutes was sometimes recorded. A paediatric doctor on call could be in the delivery room within minutes if needed. The Apgar score was at these occasions more commonly recorded. Meanwhile, the doctor on duty sewed all tears and episiotomies, after the placenta was delivered. After these procedures the baby was given to the mother. Breastfeeding was encouraged. All mothers stay in the hospital in the postnatal ward for 24 to 36 hours before discharge after normal labour and childbirth.

An attempt was made to classify the deaths using the Nordic-Baltic perinatal death classification. However, the information needed to do such a classification was not sufficient for most cases. The registration of foetal heart sounds at admission was missing most of the time in the midwifery book. This parameter is important to differentiate antenatal deaths from intrapartum deaths.

The objective of this essay was to analyze the perinatal mortality in order to identify key factors to be improved in quality of care. The observational part suggests for some changes. Supportive care for the mother could possibly be improved if a chosen birth companion could be present. The staff could be more communicative and supportive. A possibility for the patient to move around during the labour might ease the pain and help the progress itself. Encouragement of eating and drinking during labour would give more energy for the labour work. To improve monitoring during labour a door test would provide information about the foetuses status at entrance, primarily if foetal heart sounds are present or not.

When the patient moves from the stage room to the labour room the staff changes. There is a risk of loss of important information as this happens. Oxytocin use during labour needs good monitoring of the foetus to avoid unnecessary distress.

Data recorded in the hospital records could be standardized. Many cases are incomplete and risk factors and facts for important indicators might be known and not registered. It could be valuable if a system for health information could be implemented, perhaps on a national level. A director for health information has been appointed so the problem is most probable well known.

Factory Workers' Perceptions of Reproductive Health Issues in Free Trade Zones, Sri Lanka



Ms. Malin Jordal

Master's Programme in International Health
International Maternal and Child Health/IMCH
Department of Women's and Children's Health, Uppsala University
Uppsala, Sweden

This qualitative study aims to explore and describe female factory workers' perception of reproductive health issues in Free Trade Zones in Sri Lanka. Thirteen female factory workers from two Free Trade Zones in Sri Lanka were interviewed using in-depth and semi structured interviews in order to gather as great a range and depth in perceptions as possible. Qualitative content analysis was used to analyse the interview transcripts, and eight categories and twenty-nine sub-categories were identified during the analysis. The results show that female factory workers in FTZ in Sri Lanka face various challenges, concerns.

FTZ can be seen as melting pot where female migrate for work from various places in Sri Lanka due to lack of working possibilities near their homes. The factory workers in this study were positive regarding the ability to earn their own income in a poor society. However, the changed family structures, where these unmarried women live without parental protection in a vulnerable society, created anxiety regarding various aspects.

The factory workers faced several issues related to living in an environment without protection where love affairs were common. The concept of boyfriend is relatively new in rural Sri Lanka, but was seen as accepted and normalised in the FTZs. Many men, hoping to engage in casual love affairs with female factory workers, are attracted to the FTZs and some workers

trust these men and take their proposals seriously. Factory workers often come to the FTZs in their late teens or early twenties, and most are left on their own regarding decision-making related to many aspects of life. When these young women fall in love, few adults are there to consult them, whereas their counterparts in the villages are close to their parents for consultation and support. This leads to a higher demand for the factory workers themselves to choose whether they want to become intimate and engage in sexual relations or not. As there are few external barriers for avoiding couples becoming intimate in FTZ, it was assumed that many workers are engaging in sexual relations despite the society's condemnation.

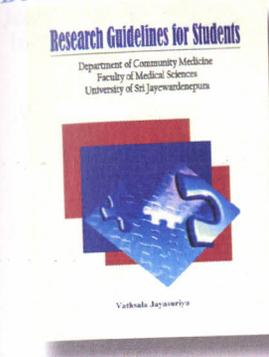
The factory workers in this study strongly emphasised the importance of young and new factory workers being informed about the risk of being cheated upon in the FTZs. It was believed that knowledge about FTZ society and the risk of being abandoned after sex would result in a decrease in number of women engaging in premarital sex, and therefore also a decrease in reproductive health problems among FTZ factory workers. The first-line of defence for female factory workers was to protect their virginity, and knowledge about the existing situation in the FTZ was assumed to create empowerment for the workers to do so.

Problems in relation to reproductive health issues. Stigmatisation in the FTZs, problems related to boarding houses, difficulties of handling a new environment which is lacking protection and support from parents, conflicting relationships with boys and other female factory workers, sexual harassment, lack of education, severe consequences in relation to premarital sex and the issue of virginity are among issues that are described. These complexities related to reproductive health issues should be analyzed and taken into consideration when implementing reproductive health programs for female factory workers in the Free Trade Zones in Sri Lanka.

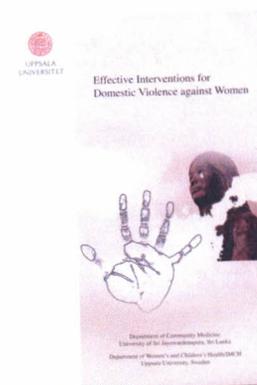
There were various suggestions for inventions regarding how to improve female factory workers' reproductive health, and it was believed that in order to live safe reproductive lives, knowledge regarding other aspects of life was also needed. This indicates that the factory workers view their reproductive lives in a holistic way. Since reproductive health also has a social aspect, attention must be given on how to approach this particular subgroup of Sri Lankan women. This study has described some of the challenges, concerns and problems of the female factory workers perceived in relation to reproductive health issues.

Publications

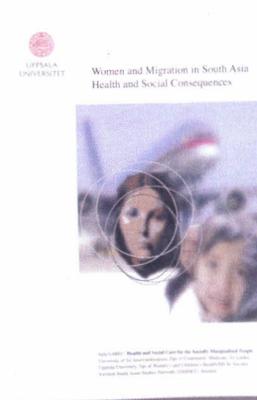
Books



Jayasuriya MVF. Research Guidelines for students. 2007. Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura



Effective Interventions for Domestic violence against women. International conference. Conference proceedings. 9th -11th May, 2006.
ISBN: 978-91-978677-0-2



Women and Migration in South Asia Health and Social Consequences
ISBN: 978-91-978677-1-9

Papers

H Widasekara, K Wijewardena, G Lindmark, T Naessén
Menopausal Symptoms and Quality of life During the Menopausal
Transition in Sri Lankan Women

Menopause Journal of the North American Menopause Society,
Volume 16, No 1, January/ February 2009

H. Perera, K. Wijewardena, R. Aluthwelage
"Screening of 18-24 month old children for autism in a semi-urban
community in Sri Lanka"

Journal of Tropical Pediatrics Advance Acces Volume 55., NO 5
April 2009

P Lukumar, K Wijewardene, J Hermansson, G Lindmark
Validity and reliability of Tamil version of strengths and difficulties
questionnaire self-report.

The Ceylon Medical Journal: Volume 53: 2 June 2008

B C V Senarathana, P Fonseka, H Perera
Sinhala Translation of Child Behavior Checklist: Validity and Reliability

The Ceylon Medical Journal: volume 53:2 June 2008

Mirkuzie A, Olsson P.
Reproductive health problems in Sri Lankan adolescents.
African Journal of Midwifery and Women's Health /2(3):/150-154.
2008

Accepted for Publication

Journal of Developmental Science

Chandana Hewage, Gunilla Bohlin, Kumudu Wijewardena, Gunilla
Lindmark

Executive Functions and Child Problem Behaviors are Sensitive to
Family Disruption: A Study of Children of Mothers Working Overseas

Journal of Violence against Women

M V F Jayasuriya, K Wijewardena, P Axemo
The prevalence and risk factors for Intimate Partner Violence
against women in the Capital province of Sri Lanka

Submitted for publication

Journal of Sexual and Reproductive Healthcare

P Olsson, K Wijewardena
Unmarried women's decisions on pregnancy termination. Qualita-
tive interviews in Colombo, Sri Lanka.

P. Olsson, K. Wijewardene

Providers perspective on adolescent reproductive health issues in Sri Lanka

Conference on young people's sexual and reproductive health needs in Asia progress, Achievement and ways forwards – New Delhi – India 2004

H. Waidyasekera, K. Wijewardene, G. Lindmark, T. Naessen
Menopausal symptoms and Quality of life of Sri Lankan Women
Menopause Congress – Singapore 2006

D. C. Hewage, K. Wijewardene, G. Lindmark, G. Bohlin
Deficit in inhibitory control is associated with higher behavioural problems among children of Sri Lankan migrant workers –
6th Congress of the Federation of Asian and Oceanian Physiological societies.
Seoul – Korea 2006

S. W. Wimalasekara, K. Wijewardene, G. Lindmark, K. E. Eeg Olofsson, G. Bohlin
Cognitive Function Tests in Anaemic Pubertal Adolescents – A Sri Lankan Experience
6th Congress of the Federation of Asian and Oceanian Physiological societies.
Seoul – Korea 2006

M.V.F Jayasuriya, K. Wijewardene, P. Axemo
The Health Sector Response Services for Abused Women in Health Care Institutions In Sri Lanka
XVIII FIGO World Congress of Gynaecology and Obstetrics – Malaysia 2006

M.D.A Samaranayaka, K. Wijewardene, G. Lindmark, H. R. Seneviratne
Intervention to Improve the Provision of Quality Care at Labour
XVIII FIGO World Congress of Gynaecology and Obstetrics – Malaysia 2006

H. Waidyasekera, K. Wijewardene, G. Lindmark, T. Naessen
A Study of Menopausal Symptoms and Quality of Life
Sri Lanka Medical Association – 2007

D C Hewage, K. Wijewardene, G. Lindmark, G. Bohlin
Executive functions in Children of Overseas Migrant Workers
12th Asia Pacific Congress of Paediatrics – 2007

D C Hewage, K. Wijewardene, G. Lindmark, G. Bohlin.
Are Children who are Left Behind Have Poor Executive functions? -
SLMA
Sri Lanka Medical Association 2007

S. W Wimalasekara, K. Wijewardene, G. Lindmark, K E Eeg Olofsson, G. Bohlin
Cognitive function Tests in Anaemic Adolescents – A Sri Lankan study
12th Asia Pacific Congress of Paediatrics – 2007

M.V.F Jayasuriya, K. Wijewardene, P. Axemo
Violence against Women: The Magnitude of the Problem.
Sri Lanka Medical Science Association – 2007

M.V.F Jayasuriya, K. Wijewardene, P. Axemo
Family Planning: is it a woman's responsibility
Sri Lanka Medical Science Association – 2007

K Wijewardena, P Olsson
Reasons for pregnancy termination among women in Colombo, Sri Lanka
Asia Pacific congress on Reproductive Health and Sexual Rights – 2007

K Wijewardena, P Olsson
Commercial sex workers difficulties in negotiating safe sex Qualitative study in Colombo, Sri Lanka
Asia Pacific congress on Reproductive Health and Sexual Rights-- 2007

M.D.A Samaranayaka, K. Wijewardene, G. Lindmark, H. R. Seneviratne
Selected Quality Aspects of Intra- Partum Care
Sri Lanka Medical Science Association – 2007

P Lukumar, K Wijewardene, G Lindmark, J Hermanson
Psychosocial Correlates for mental health of Adolescent School Children in Jaffna District

Sri Lanka Medical Science Association – 2007

B C V Senarathne, H Perera, Pushpa Fonseka
Mental Health Status of the Children of Female Migrant Workers of Sri Lanka:

Annual Meeting of the Royal College of Psychiatrists, London. 1st – 4th July, 2008

S W Wimalasekara, G Lindmark, G Bohlin A M, Jayatilake, K Wijewardene, K E Eeg Olofsson
Iron Deficiency in Adolescence; Effects on Brain Stem Auditory Evoked Potentials in Sri Lanka Females

1st SAARC Conference of Physiological Societies & 11th Biennial Conference of Pakistan Physiological Society Islamabad, Pakistan – November, 2008

K E Olofsson, G Bohlin, K Wijewardene
"Brain stem auditory evoked potentials in anemic adolescent females in Sri Lanka." **Proceedings of the British Society of Clinical Neurophysiology and Association of British Neurologists Joint congress in Dublin Ireland – March 2008**

P Olsson
Unmarried women's decisions on pregnancy termination. Qualitative interviews in Colombo, Sri Lanka

Swedish Midwifery Association – November 11 2009

Workshops for Capacity Building

EFFECTIVE QUALITATIVE RESEARCH



Professor David Silverman

Professor Emeritus
Professor of Sociology
Goldsmiths' College
University of London
UK

20th -22nd February, 2007 - Colombo

Course Aims

This course served as a basic primer for PhD students, combining 'hands on' guidance on completing a good qualitative research project with practical advice on the criteria used in publication. The course involved lectures, workshops, feedback sessions and brief one to one supervisions.

Topics

- Selecting a method
- Analyzing interview data
- Kick-starting data analysis
- Credible qualitative research
- Publishing in international journals

ANALYZING QUALITATIVE DATA



Professor David Silverman

Professor Emeritus
Professor of Sociology
Goldsmiths' College, University of London, UK

3rd, 5th and 6th February, 2009 - Colombo

Course Aims

My 2007 course was a basic primer for PhD students, combining 'hands on' guidance on completing a good qualitative research project with practical advice on the criteria used in publication. This second course focused on the analysis of qualitative data.

The course involved lectures, workshops, feedback sessions and brief one-to-one supervisions. It derives from my experience over twenty-five years of teaching introductory workshops for research students, a course in Concepts and Methods of Qualitative Research for MA students and an undergraduate qualitative research course.

The 2009 course covered the following topics:

- selecting a research topic
- analyzing qualitative data
- interview data
- analyzing documents
- naturally-occurring data
- how many cases do you need?

Students were also sent papers on analyzing interview data (by Catherine Riessman), qualitative data analysis (by Sarah Li and Clive Seale) and documents (by Lindsay Prior).

QUALITATIVE DATA COLLECTION TRAINING and QUALITATIVE DATA ANALYSIS



Dr Pia Olsson

Associate professor
Department of Women's and Children's Health
International and Maternal and Child Health (IMCH)
Uppsala University

1st - 10th March, 2005 - Colombo
26th July - 2nd August, 2005 - Colombo

Within the collaboration program three workshops on qualitative research methodology were held. Faculty members, research students and research assistants engaged in qualitative data collection, attended them. The overall aim of the workshops was to introduce the participants to the theory and craftsmanship of basic qualitative research methods. The more specific objectives were to introduce:

- Research questions that require qualitative methodology
- Sampling techniques in qualitative study designs
- Recruitment and information to research persons
- Qualitative interviewing and focus group discussions (FGD) as tools for data collection
- Different means for documentation of data
- Transcription and translation of recorded interviews and FGDs
- Analysing transcribed data using qualitative content analysis
- Writing up qualitative results
- Ethical issues
- Trustworthiness

The ways of working in the workshops were interactive departing from the needs and previous experience of the participants. It included presentations, group discussions, case studies, and exercises in data collection, transcription, translation and analysis.

Written information in form of PowerPoint presentations, textbook chapters and articles was provided.

The workshops were facilitated by Associate Professor Pia Olsson from IMCH/International Maternal and Child Health, Department of Women's and Children's Health, Uppsala University, Sweden.

Qualitative research methods had seldom been used within the medical faculty before this collaboration. The workshops in Colombo served as a complement to the longer courses at IMCH/Uppsala that the research students attended. Thus, these workshops served as a 'starter' for those in need of the method within their research project. Furthermore, the workshops provided a general understanding of the methodology also for those in the faculty who introduce students to research.

INFORMATION SEEKING



Dr Martha Garrett, Ph.D.

Department of Women's and Children's Health
International and Maternal and Child Health (IMCH)
Uppsala University

Workshops

14th-16th May, 2005

19th-21st May, 2005

9th-11th May, 2006

Director of INFORM (International Network for Online Resources and Materials) at IMCH. She has done health information training in over 15 countries, primarily in Asia and Africa, and has written about 30 sourcebooks about free, professional-quality information resources for health professionals.

As part of the programme, the research students and others at the University of Sri Jayewardenepura went through training in how to access online information for their professional work.

The training was provided by Martha Garrett, director of the International Network for Online Resources & Materials (INFORM), and a teacher at International Maternal and Child Health, Uppsala University. Four one-week INFORM training workshops were held onsite in Sri Lanka during the period 2003-2006, and the research students in the programme also took a two-week course on information seeking while they were at IMCH.

Both the workshops and the courses were aimed at helping the students develop the skills and knowledge they needed to find journal articles, electronic books, research tools and guidelines, and other resources relevant to their research. All the resources covered were either accessible free-of-

charge in Sri Lanka through international access programmes such as PERI or were available at no cost to students registered at Uppsala University.

The participants in the workshops and courses were provided with a sourcebook that provided guidance about search strategies, outlined different categories of literature and explained where each could be found on-line, introduced free and pre-paid sources for e-books and articles, and gave detailed instructions about where on the Web they could find professional-quality information on specific topics (gender, social aspects of health, public health, women's health, and so forth).

The information training was invaluable for the programme. Both the research students and their advisors were unfamiliar with most of the high-quality resources covered in the workshops and courses. Like most academics in lower-income countries, they had assumed that they had extremely limited access to such professional materials. The training opened the door to a whole new world of information that they will be able to utilize throughout their professional careers.

BEHAVIOURAL AND COGNITIVE DEVELOPMENT IN CHILDREN

2nd - 3rd October, 2007, Colombo



Conducted by

Prof Karin Sonnander – University of Uppsala
Prof Gunilla Bohlin – University of Uppsala
Prof Gunilla Lindmark – University of Uppsala

The main areas discussed at the above workshop was

- Behavioral adjustment
What can be used as indicators and how are they measured?
- Cognitive development and function
What can be used as indicators and how are they measured?
- Validation - why and how?
- Use of following instruments in relation to above topics
 - Child Behavior Checklist
 - SDQ
 - Rutter's Scale
 - Computerized Executive Function Task
 - Bayley Scales of infant Development
 - Wescheler Interlligent Scale
 - Toni 3

DEVELOPMENT OF QUALITATIVE RESEARCH PROPOSAL STEP BY STEP



Bencha Yoddumnern-Attig, Ph.D. (Anthropology)
Associate Professor

The Institute for Population and Social Research (IPSR)
University of Mahidol, Thailand

18th -28th March 2008, Thailand

The programme well planned to step by step, how to write research proposal under the supervision. Staff of IPSR guided the students in

Data collection

Data analyzing

Literature Review

Scientific Writing

They stayed at the University Mahidol Thailand that provided them a great opportunity to have a foreign experience in the academic arena.

Staff who under went training from University of Sri Jaywardenepura

Dr. Shamini Prathapan

Dr. Yasanjali Jayathilaka

Ms. Mayura Samarakoon

Mr. C Udaya Kumara

Mr. MW Jayesundera

Mr. WAS Wijekoon

Ms. E A A Edirisinghe

EVALUATION METHODS FOR PROGRAMME MANAGERS

Professor Gunilla Lindmark

Associate Professor Lennarth Nyström

Dr Aida Aragao Lagergen

Dr Pia Axemo

Professor Kumudu Wijewardena

Dr Anil Samaranayake

21st 22nd April 2010, Sri Lanka Foundation Institute

A workshop on evaluation principles, methods and application for programme managers from various government and non-governmental institutions was conducted by resource persons from Sweden and Sri Lanka. Areas covered include the objectives of evaluation, assessment of problems at baseline, planning a project /intervention for evaluation, choice of indicators for evaluation, data collection methods for evaluation, statistical rules in data comparison. The World Bank policy for evaluation was used as an example and workshop participants discussed local project examples.

GENDER BASED VIOLENCE FOR MEDICAL OFFICERS

Prof. Berit Schei

Dr. Pia Axemo

Dr. Mapitigama

Shyamala Gomez

21st 22nd April 2010, Sri Lanka Foundation Institute

Medical officers from government health care institutions are introduced to the problem of Gender Based Violence, its consequences, the health care workers responsibility in care of victims, counselling and prevention. Areas covered include GBV within health care settings - the problem, magnitude and prevention, the role of health care workers in managing GBV in hospital and community settings, networking - experiences, issues and setting it up, their responsibility of legal actors and health care workers, research on GBV – methods, data and analysis, from research to policy and practice, challenges and issues for Sri Lanka. Gender issues are discussed in relation to health consequences. The panel include local and international resource persons.

**Effective interventions for Domestic Violence against women
9 – 11 May 2006**

Violence against women is a complex social issue with devastating consequences for women's health and function in the family and society. It is a concern in all countries and is closely related to the attitudes to gender roles, both masculinity and femininity, and to the level of acceptance of violent behavior in the community.

To address this problem is a multisectorial task that also needs multidisciplinary research. One part of the Sri Lanka-Sweden collaborative research is violence against women, and this workshop was arranged as a forum to meet with researchers of several disciplines from the South-Asian region and discuss research findings as well as possible strategies for policy change to combat domestic violence.

The resource persons in the workshop included

Dr. Sunila Abeysekera	Inform Human Rights, Colombo, Sri Lanka
Dr. Pia Axemo	Dpt of Women's and Children's Health, IMCH, Uppsala University, Sweden
Dr. Regina De La Paz – Ingente	Women & Children Protection Unit Davao Medical Centre, Philippines
Dr. Henrica A.F.M. Jansen	WHO Multi-country Study on Violence against Women
Dr. Vathsala Jayasuriya	Dpt of Community Medicine, University of Sri Jayewardenepura
Dr. Sepali Kottegoda	The Women & Media Collective Colombo, Sri Lanka
Ass. Prof. Poonam V S Kumar	Mahatma Gandhi Institute of Medical Sciences, India
Prof. Gunilla Lindmark	Dpt of Women's and Children's Health IMCH, Uppsala University, Sweden
Ms. Nishi Mitra	Tata Institute Of Social Science Mumbai, India
Dr. Ruchira Tabassum Naved	ICDDR,b Centre For Health and Population Research, Dhaka, Bangladesh
Dr. Katarina Swahnberg	Division of Gender & Medicine Linköping University, Sweden
Prof. Kumudu Wijewardena	Dpt of Community Medicine,

Prof. Barbro Wijma

University of Sri Jayewardenepura
Division of Gender & Medicine
Linköping University, Sweden

The proceedings from the workshop have been published as a separate publication.

Women and migration in South Asia – Health and Social Consequences

9 – 11 February 2009

Migration to find paid employment and better living conditions is common in low-income countries and also in Sri Lanka. It is estimated that 20 million women in South Asia work outside their countries mainly as domestic workers or in unskilled industrial production. The social consequences of migration are different for women who often leave dependent children behind. These consequences have been the topic of several of the research projects in the collaborative program, and the multidisciplinary workshop was arranged to bring together research findings from the region and to create possibilities for networking between institutions and researchers. It was organized jointly by the University of Sri Jayewardenepura and Uppsala University together with SASNET (Swedish South Asian Studies Network) based in the University of Lund.

The resource persons for the workshop were

Mr L.K. Ruhunage	Bureau of Foreign Employment, Colombo, Sri Lanka
Dr. Devika Jayakumari	Centre for Development Studies, Kerala State, India
Professor V. Balambal	Madras University, Chennai, India
Dr. Tek Nath Dhakal	Department of Public Administration, Tribhuvan University, Katmandu, Nepal
Dr. Rita Afsar	Bangladesh Institute of Development Studies, Dhaka, Bangladesh
Dr. T. V. Sekher	International Institute for Population Sciences (IIPS), Mumbai, India
Dr. Anna Lindberg	SASNET, Lund University, Lund, Sweden
Dr. Mohsin Saeed Khan	Dpt of Public Health Sciences, (IHCAR), Karolinska Institute, Stockholm, Sweden
Dr. Birgitta Essen	Dpt of Women's and Children's Health IMCH, Uppsala University, Sweden
Ms Sanghamitra Choudhury	Centre for the Study of Law and Governance, Jawaharlal Nehru University, New Delhi
Dr. Janaki Vidanapathirana	National STD AIDS Control Programme Ministry of Health, Sri Lanka

Ms Malin Jordal	Dpt of Women's and Children's Health IMCH, Uppsala University, Sweden
Dr. Chandana Hewage	Department of Physiology, University of Sri Jayewardenepura
Dr. Aida Aragao-Lagergren	Dpt of Social and Economic Geography, Uppsala University, Sweden
Dr. Sreelekha Nair	Centre for Women's Development Studies, Delhi, India
Professor Dipak Malik	Faculty of Commerce, Banaras Hindu University, Varansasi, India

The presentations have been published in a book.

Travels and study visits during the programme

The Swedish students who visited Sri Lanka for research

Alemnesh H. Mirkuzie
Gölin Wikstrand
Ann-Mari Ask
Magdalena Bjerneld
Malin Jordal

Visit to Centre for Battered Women Uppsala University

16th – 25th April, 2004

Dr Ananda Gunasekera

Research Methodology training at IMCH, Uppsala

8th November - 16th December, 2004

Dr. Vathsala Jayasuriya
Dr. Savithri Wimalasekera
Dr Chamara Senaratne
Dr Chandana Hewage
Dr Himashu Waidyasekera

Visit to Tata Institute of Social Science

28th February - 6th March, 2005

Dr Suwarnalatha Perera - Department of Sociology

Attend Course unit of the MSC in child and adolescent Mental Health Msc
Department of Child and Adolescent Psychiatry, King's college London

26th September – 24th November, 2005

Dr. P Lukumar

Advanced Research Methodology at IMCH, Uppsala

16th January – 18th February, 2006

Dr. Vathsala Jayasuriya
Dr. Savithri Wimalasekera
Dr Chamara Senaratne
Dr Chandana Hewage
Dr Himanshu Waidyasekera

Study Visit to IMCH, University of Uppsala, Sweden

12th – 25th February, 2006

Dr S Siritunga
Dr. Arul Kumar
Dr. Amanthi Bandusena

Training in Neurophysiology, University Hospital Uppsala Sweden

26th March – 14th April, 2007

Dr. Savithri Wimalasekera
Dr. Himashu Waidyasekera

Training on Use of Bayley scale for assessing Infant Development, Great Ormond Street Hospital, UK

16th April – 16th May, 2007

Dr Amanthi Bandusena

Training course on Statistical Packages for Data Analysis At Applied Statistics Association of Sri Lanka

3rd – 31st August, 2007

Staff who under went training from University of Sri Jayewardenepura

Dr D C Hewage
Dr H Waidyasekera
Dr N R Jazeel
Dr E Goonewardene
Dr H Banheka
Mr G U S Wijesekara
Miss Banuki Jayasuriya
Mrs Anjali Amarasekara
Mrs K D L Meegoda
Mr W S S Padmasiri

Study visit at IMCH, Uppsala University, Sweden

20th October – 4th November, 2007

Ms. Nirnjani Malkanthi - Academic staff university of Sri Jayewardenepura
Ms Thanuja Silva - Medical Officer of Health office - Boralsgamuwa attached to Department of Community Medicine University of Sri Jayewardenepura.

Vector control Research Centre, Pondicherry, India

July – August, 2008

Mr. N.C. Ganegoda, Department of Mathematics.

He is completed 2 months research training on Mathematical modelling of Lymphatic Filariasis transmission

Computer Training Programme at Prince of Songkla University, Thailand

5th November – 13th December, 2005

Mr. Situm Manjika

Training of Para Medicals in English – SVS English School of Colombo - 2006

Mr. Situm Manjika Department of Community Medicine

Mr. UG Upali Department of Community Medicine

Ms. Neleema Meththananda Faculty of Graduate Studies(Finance)

Ms. Palika Jayathilaka Project Secretary

Training on University Management and Administration at the Asian

Institute of Technology, Thailand

13th – 22nd December, 2007

Mr. P G Maithrieratne Deputy Bursar,
University of Sri Jayewardenepura

Mr. M J R Bogamuwa - Deputy Internal, Auditor,
University of Sri Jayewardenepura

Computer Training Programme at Prince of Songkla University, Thailand

19th April – 19th May, 2008

Mr. Situm Manjika

Training on Clerical Staff Development at National Institute of Business

Management in Sri Lanka

1st - 9th September, 2008

Ms. IA Priyadharshani Faculty of Graduate Studies (Finance)

Ms. HMN Meththananda Faculty of Graduate Studies (Finance)

Mr. JK Hewagamage Faculty of Graduate Studies (Finance)

Training Course on Computer Application Assistant – University of Colombo
Sri Lanka

13th September - 31st December 2008

Ms. P.A.R. Sujatha Faculty of Graduate Studies
(Administration)

Mr. P.P.M.N. Premawardena Faculty of Graduate Studies
(Administration)

Ms. IA Pryadharshani Faculty of Graduate Studies (Finance)

Ms. R. Susila Faculty of Graduate Studies (Finance)

Guest Professor, IMCH, Uppsala University, Sweden

June-December 2009

Professor Kumudu Wijewardena

Awards Received

P Lukumar

SC Paul Oration

Mental Health of Adolescents Jaffna District and
some of their Psychosocial Correlates

23rd March 2007: Sri Lanka Medical Association (SLMA)

M V F Jayasuriya

Sir Frank Gunasekera Prize

Violence Against Women: The Magnitude of the
Problem in Western Province.

23rd March 2007: Sri Lanka Medical Association (SLMA)

H Waidyasekara

Wilson Peiris Prize

A Study of Menopausal Symptoms and Quality of Life:

23rd March 2007: Sri Lanka Medical Association (SLMA)

M V F Jayasuriya

SC Paul Oration

Intimate Partner Violence in the Western Province of Sri Lanka

21st March 2008: Sri Lanka Medical Association (SLMA)

SC Paul Oration / Sri Lanka Medical Association



The Sri Lanka Medical Association (SLMA) is the national professional medical association in Sri Lanka, which brings together medical practitioners of all grades and all branches of medicine. The SLMA is the oldest medical organization in Asia and Australasia, with a proud history dating from 1887. At its inception it was called the '**Ceylon Branch of the British Medical Association**'. Later it evolved into the '**Ceylon Medical Association**' (1951) and after Sri Lanka became a Republic in 1972, it became the '**Sri Lanka Medical Association**'.

The Sc Paul Oration awarded in honour of Dr. Edwards H. Samuel Chelliah Paul, M.D., F.R.C.S. is one of the oldest orations of the SLMA.



This award was presented to studies conducted under project in two consecutive years

2008 – Intimate Partner Violence in the Western Province of Sri Lanka - Dr. M V F Jayasuriya, Lecturer, Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura

2007 – Mental health of adolescents in Jaffna district and some of their psychosocial correlates - Dr P Lukumar, Consultant Community Physician, Mental Health Unit, Ministry of Healthcare and Nutrition, Colombo.

ISBN: 978-91-978677-2-6

Universitetstryckeriet, Ekonomikum, Uppsala 2010