

〈教育報告〉

平成 21 年度専門課程Ⅱ

国際保健分野

Course Name : Master of Public Health in International Health

Health Disability of School Teachers in Senegal: Descriptive Study on School Teachers Diseases from 2006 to 2008

SARR Patrice Théophile

Keywords: disability, teachers, psychiatric, somatic, disorders

Thesis Advisors: Naoki KUNUGITA, Hiromitsu OGATA

Abstract

Introduction Education forms the basis of progress and allows us, to a certain degree, to reach the Millennium Development Goals (MDGs). Teachers fill a niche in the field of education. It is important to consider teachers' health in order to reduce the absenteeism rate and the disability rate. Indeed, in our daily activities within the medico-social center of the public function in Senegal, we noted a significant number of civil servants, especially school teachers, who have a handicap due to some health weakness. This situation led us to conduct this study.

Objectives This present research aims to describe the occupational health problems among teachers of primary and secondary schools in Senegal.

Study design and methods This study is a descriptive case study based on information drawn from teachers' medical records already reviewed by the Health Council. The study population included all teachers working in the classrooms that were declared to be disabled by the Health Council from 2006 to 2008. In order to achieve these objectives, we conducted a scientific literature review. The data analysis was performed with Microsoft Office Excel and the statistical software program Epi Info, version 3.5.1., and crosstabulations were calculated, particularly using the Pearson Chi-square test.

Results This study included 260 medical files of disabled teachers, which yielded a disability rate of 0.5%. The age group of 45–54 years was the most represented (124, 47.7%). The most common cause of all teachers' disabilities was psychiatric disorders with 64 cases (24.6%), which were followed by neurological diseases (50; 19.2%), and cardiovascular diseases (40, 15.4%). Among the psychiatric disorders group, males (42, 65.6%), single, widowed, or divorced teachers (29, 45.3%), teachers without their own children (20, 31.3%), or teachers working out of the Dakar capital region (38, 59.4%) were most represented; whereas within the somatic disorders group, females (123, 62.8%), married teachers (160, 81.6%), teachers with children (168, 85.7%), or teachers working in the Dakar capital region (128, 83.1%) comprised most of the patients. These differences were significant (p value, <0.005). In this study, the incidence rate for disabilities was slightly higher for secondary school teachers with 0.52%, compared to 0.48% for primary school teachers. In primary schools, female teachers were significantly affected by disability (112, 60.9%), whereas in secondary schools, male teachers were more prone to be affected (43, 56.6%). The distribution of disabled teachers according to marital status revealed a slight difference that was statistically insignificant. At the primary school level, which was similar to the secondary level, married teachers were mostly disabled with, respectively, 144 (78.3%) and 51 (68%). Concerning if the teachers had their own children in their charge, a significant difference (p value, <0.01) was noted. Teachers of primary school with children in their charge (158, 85.9%) were more represented. Regarding

指導教官： 樺田尚樹（生活環境部）
緒方裕光（研究情報センター）

their professional address, the comparison between primary and secondary schools were significantly different with a p value of <0.01 . There were more disabled teachers in primary schools and who worked in the Dakar capital region (123, 66.8%), compared to those in secondary schools (45, 59.2%). There were more teachers with 20–30 years of teaching experience in these 2 groups. One cause for concern was for teachers having less than 10 years teaching experience. This group was placed at the second position with 39 cases (21.2%) and 26 cases (34.2%), respectively, for primary and secondary schools. Among disabled secondary school teachers, the first cause of disability was psychiatric disorders, followed by neurological disorders, and then cardiovascular disorders. However, primary school teachers were affected in a different order. The first cause of the disability was neurological disorders, followed by psychiatric and cardiovascular disorders. Primary school teachers were significantly affected by somatic disorders compared to those in secondary school (p value, <0.01).

Conclusion Psychiatric disorders are the main cause of disabilities in the teaching profession, which has been shown by many previous studies. Apart from the hard and complex working conditions that are mentioned frequently in the literature, many factors, which are difficult to measure, are involved. The factors that were found to be significantly associated with a school teacher having mental disorders were the following: male gender, being alone, being with their own child, and working in a rural area. Teachers from primary schools are less vulnerable than those from secondary schools. In the primary schools, disabilities are more common in females, those having their own child in their charge, and those working in the Dakar capital region. Although psychiatric disorders are the main causes, the total number of teachers having somatic diseases is also high, and most of the disabled primary school teachers had somatic diseases. Therefore, health promotional measures may have a great impact in teachers' occupational group.

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Course Name : Master of Public Health in International Health

Reform of Primary Level Health Care Policies for Ageing Populations in Sri Lanka A Literature Review

Chamaleen J KASTURIARACHCHI

Key words: primary health, policy reform, population ageing, Sri Lanka, elderly care, Japan

Thesis Advisors: Nobuyuki HYOI, Afzal M MUHAMMAD

Abstract

Background Sri Lanka, an island country in South Asia, is facing the global phenomenon of population ageing, and is ageing at an alarming rate. Sri Lanka's population will grow to be as old as Europe's or Japan's today in the near future and the elderly population will double during the next 25 years rising from the current 11% to 20% in 2025. With this rise in the elderly population, the chronic disease burden will increase, with a consequent increase in long-term care needs, while Sri Lanka still faces a moderate level of communicable disease burden. Therefore, developing an effective, coherent strategy to address population ageing is extremely important. Investing in healthy and productive ageing is essential for reducing the burden of disease that results from ageing, to avert a crisis in health care provision, and to address the needs of the aged. This must begin sooner rather than later.

General Objective To describe the contrasts in and analysis of the current health care policies in the health sector of Sri Lanka related to the provision of preventive, promotive, curative and rehabilitative health care for the elderly and to propose a policy framework and relevant recommendations for the provision of timely and comprehensive health care services for the elderly.

Specific Objectives 1. To describe the currently available elderly care policies (equal or more than 60 years) in primary level health care services in Sri Lanka.

2 To identify best policies of elderly care services provided in Japan that can be adapted by low-income countries.

3 To review the gaps that need to be filled and to propose a framework for development of elderly care policies and a strategic plan, relevant to primary level elderly care in Sri Lanka.

Methodology A descriptive analysis done using secondary data with the literature review method, using key words for the search strategy, was employed. We searched several web sites like Pub Med/Medline, Google scholar, Cochrane and the WHO (World Health Organization) web site. In addition, the web pages of institutional regulatory bodies like the Health Ministry sites were also searched. The search period was 1 September to 15 December, and the years covered by the search were 1960 to 2009. This study includes only publications written in the English language.

The literature search retrieved 87 articles initially, of which 53 were excluded immediately. Thus, in total, 34 articles were included in the study.

指導教官： 兵井伸行（研修企画部）

ムハマッド・マフムード・アフザル（WHO 健康開発総合研究センター）

Analytical framework

1. Comparison of trends in demographic indicators as proxy measures to assess similar health care challenges faced by Sri Lanka and Japan.
2. Chronological history of development and consistency of elderly care policies in Sri Lanka and Japan.
3. Reviewing the gaps using SWOT Analysis - to identify the strengths, weaknesses, opportunities and challenges in elderly care policies in relevant health care settings in Sri Lanka and Japan.
4. Reviewing the gaps in Sri Lankan elderly care policies and the best practices used in Japan adaptable in developing countries with relevance to preventive - promotional, curative and rehabilitative aspects of elderly care policy implications at these different levels of health care.

Results Japan claims to have the world's highest life expectancy rates at birth and at the age of 60 years and Sri Lanka has high rates with similar trends in the same indicators. In addition, both countries show population growth rates and total fertility rates that are comparatively low with similar trends.

A developing country like Sri Lanka faces challenges in a broader range of other unmet needs, which deserves high priority for policy makers. As the elderly population was not identified as a major issue in Sri Lanka, the policies concerning revision are of only 10 years duration. Japanese elderly care policies revealed to continue processing and recognition of problematic areas as frequently as possible together with fact finding surveys and reforming them to make available maximum care for the elderly, are not seen in Sri Lankan policy developments.

Considering the strengths and weaknesses in the Sri Lankan and Japanese health care systems for elderly care shows that the Japanese system is much more overweight in strengths whereas Sri Lanka has more weaknesses.

In Sri Lanka, nearly all the main domains such as leadership and policy, health settings and resources, community participation, intersectoral actions and other partnerships, evidence and research and monitoring and evaluation remain weak, the main reasons being poor leadership, policies, and lack of defined health settings with adequate health resources. Sri Lanka's current health care system is modeled for the past requirements of society, and is not geared to rapid demographic transitional needs, to cater to the emerging needs of elders. Although some elderly care activities were started in the year 2000, continuation and sustainability of these activities and programs fails because of insufficient organizational structure and leadership, inadequate resource allocations, human resource management, activity monitoring and evaluation.

Conclusion It was found that health policies for the elderly in Sri Lanka are limited, and evidence of the effects of these health care policies and measuring of their effects is also limited. Public health policies have been increasing in value with higher responsibility for the development of rational and accessible services based on the needs of coping with emerging health issues. Dealing with various problems in ageing societies and mainly with health services, holistically and comprehensively, is extremely important. Not having the public policy to address elderly care at the proper level will lead to negative impacts at all levels of society, aggravating health issues with widespread societal and economic crises, which will be reflected in increased disability and decreased healthy life expectancy.

Reforming elderly care health policies appropriately will result in a health system delivering sustainable, equitable, efficient and comprehensive services for the elderly population of Sri Lanka.

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Course Name : Master of Public Health in International Health

Quality Assessment of Reproductive Health Centers in Chongqing, China

HE Yang

Key words: Quality assessment, Reproductive Health Center, Structure-Process-Outcomes Model, Chongqing

Thesis Advisors: Toshiro KUMAKAWA

Abstract

Background Whether or not a health system was performing well became a subject of public debate and a hot academic issue. Efforts to improve the quality of reproductive health services in Reproductive Health Centers (RHCs) have come into practice over the past seven years in Chongqing city. Activities were implemented focusing on capacity building and performance standardization as instructed by national guidelines. However, there is currently no measurement system for evaluating the performance of reproductive healthcare. Therefore, a quality assessment system is needed to identify the performance of reproductive healthcare.

Objective The objectives of this study were two-fold: first, to devise an assessment system according to the framework of a structure-process-outcomes model; second, to evaluate quality of healthcare in five RHCs using this assessment system and existing data to indicate the direction for further activities.

Methods Formulation of the assessment system was based on the Structure-Process-Outcomes Model by Donabedian. Ten criteria and 20 indicators were selected as the contents of assessment based on the national guidelines and considering the importance of the contents and availability of data. The structure part included human resources, infrastructure and equipment. The process consisted of consultation, diagnosis, treatment, infection control and medical records. Outcomes involved adverse events and satisfaction. Five RHCs were evaluated using the new assessment system.

Results The results for human resources, infrastructure, equipment, consultation, diagnosis, treatment, infection control, medical records, adverse events, satisfaction and total score were, respectively, as follows: the scores for RHC-A were 6, 8, 9, 10, 9, 10, 6, 8, 10, 6 and 82; for RHC-B 9, 6, 9, 10, 9, 10, 9, 7, 10, 8 and 87; for RHC-C 10, 6, 8, 10, 10, 10, 6, 10, 10, 8 and 88; for RHC-D 9, 7, 8, 10, 10, 10, 7, 7, 10, 8 and 86; and for RHC-E 9, 7, 9, 10, 10, 10, 6, 10, 10, 8 and 89, respectively. The average scores for structure, process, outcomes and total scores of the five RHCs were 24, 44.8, 17.6 and 86.4, respectively.

Conclusion An assessment system was established in this study, constructed employing ten items and 20 key indicators. The items included human resources, infrastructure, equipment, consultation, diagnosis, treatment, infection control, medical records, adverse events and satisfaction. The results of evaluating five RHCs revealed consultation, diagnosis, treatment and adverse events to be the common strong points of reproductive healthcare in RHCs; equipment and medical records were the second strongest points in the five RHCs. The aforementioned items are needed to maintain good performance. Human resources, infrastructure, infection control and satisfaction showed large gaps among the five RHCs and require priority improvements.

指導教官：熊川寿郎（経営科学部）

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国際保健分野

Course Name : Master of Public Health in International Health

A Cross-Sectional Analysis of Challenges of the First Batch of Nurse Trainees in Japan Under the Japan-Philippine Economic Partnership Agreement (JPEPA)

Christine Joan R.

Key words: Japan-Philippine economic partnership agreement, filipino nurse, international trainee, human resources for health, socio-cultural adaptation

Thesis Advisors: Nobuyuki HYOI

Abstract

Objectives As one result of the bilateral agreement between Japan and the Philippines, the first batch of JPEPA nurses was sent to Association of Overseas Technical Scholarships (AOTS) centers in Tokyo and Osaka for a six-month intensive course to study the Japanese language. The language course was intended as an initial step in preparation for their Japanese nursing licensure examination. This study aims to identify the major socio-cultural and adaptation issues and challenges faced by the first batch of JPEPA nurse trainees during their six-month course. The results will also be used to initiate a formative feedback system for Filipino human resources for health personnel engaged in overseas training.

Method A cross-sectional survey design was used. Self-administered 5-point Likert scale questionnaires were distributed to all nurse trainees in their AOTS centers during their sixth months of training. Questionnaires were accompanied by pre-stamped self-addressed envelopes. Data were collected, grouped, categorized and analyzed using simple calculations and cross-tabulations.

Results There were 78 participants in total, for a response rate of 88.6%. The lowest number of responses to any given question was 74 (94.8%). The findings showed motivation (mean=4.25, model score=5.0) to be the factor that positively affected students the most, and that anxiety negatively affected them (mean=3.36, model score=1.0) while depression was not perceived to have any negative effect (mean=2.6, model score=1.0). Of the determinants of anxiety, stress and variable components of coping or adjustment (finances and pre-travel knowledge of host country) were most predictive of its negative effects. Although depression did not adversely affect the respondents, there was a balance between the positive effects of social support and self-esteem and the negative effects of homesickness. Individual inherent qualities such as age and marital status influenced some factors but only to a minor degree.

Conclusion Adaptation enabling and disabling factors in this study can be both inherent to the respondents and a result of external influences (e.g., pre-travel knowledge of host country, perceived standards of education). Negative influences associated with inherent qualities of respondents such as age or background can be anticipated; thus, counseling on socio-cultural adjustment may play a crucial role in the enabling of adaptation. Strategic interventions aimed at improving the student's knowledge of the host's culture, lifestyle, cost of living and educational standards, through a comprehensive pre-departure orientation, may facilitate socio-cultural adaptation, decrease attrition rates and enhance performance.

指導教官： 兵井伸行（研修企画部）

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Course Name : Master of Public Health in International Health

A Study on HIV/AIDS Preventive Activities at Health Centers in Japan

Ayako SHIMPO

Key Words: HIV/AIDS, Health center, Activity, Cooperation, Prevention

Thesis Advisors: Takeo TANIHATA

Abstract

Objective Despite the efforts devoted to national guideline-based prevention activities by Japanese public health centers, the numbers of new human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) cases have been rising consistently since 1990.

This study clarifies the activities implemented for HIV/AIDS prevention at health centers located in ordinance-designated cities, core cities and special wards. The process of this study ascertaining HIV/AIDS situations and activities using a questionnaire based on national guidelines is applicable in other countries.

Study Design and methods This is a descriptive analysis conducted via questionnaires sent to health centers and branch centers located in ordinance-designated cities, core cities and special wards.

A total of 130 health centers and 98 branch centers were targeted. Only data gathered from health centers were analyzed.

Results The response rate was 75.2%. Only 17 (18.7%) of the 91 health centers had a plan for preventing HIV/AIDS in 2008 while 74 (81.3%) had no plans for HIV/AIDS (prevention). Ninety-one health centers (98.8%) provided HIV testing. Among the health centers providing HIV testing, it was found that tests were available during the daytime on weekdays at all health centers. Thirty-two health centers (36.8%) also provided testing after 5PM; among these health centers, only 3 (9.4%) provided testing at night on a weekly basis. The most common means of support for people living with HIV/AIDS (PLWHA) was information provision on medical facilities; this service was available in 66 (81.2%) of the 91 health centers. Other means of support were assistance by introducing PLWHA to NGOs, provided by 25 (30.9%) health centers, and community meetings with other organizations, facilitated by 27 (30%) health centers.

Conclusion Most health centers have complied with the national guideline for AIDS; however, implementation of prevention activities, provision of support for PLWHA and cooperation with other organizations were generally inadequate. Cooperation with other organizations could strengthen community efforts and create adequate and comfortable communities for all residents.

指導教官： 谷畑健生（疫学部）

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Course Name : Master of Public Health in International Health

Effects of Internet Use During the Weight Maintenance Period After Weight Loss Programs

Soko FUJINO

Keywords: weight loss maintenance, Internet, overweight/obesity, meta-analysis, randomized controlled trial

Thesis Advisors: Noriko SUDO

Abstract

Objective To examine whether Internet-based weight maintenance intervention after weight loss programs is more effective than traditional intervention without Internet use, randomized controlled trials (RCT) were systematically reviewed and evaluated by meta-analysis.

Data sources Literature searches were conducted employing 6 databases; PubMed, PyscINFO, ERIC, Web of Science, CINAHL, and Nursing/Academic Edition, and 143 articles were thereby identified. Relevant articles were also retrieved from reference lists of articles found in database searches and three articles were added. In total, 146 articles were subjected to the study selection process.

Study selection Six articles met the following selection criteria: 1) Study subjects were free-living adult (18 years or older) males and females, regardless of any chronic medical conditions such as diabetes and hypertension. Institutionalized subjects were excluded, 2) Study subjects were overweight or obese ($\text{BMI} \geq 25$) at baseline and participated in a weight loss program and a subsequent weight maintenance program, 3) Weight loss programs were based on behavioral changes such as dietary modification, increased physical activity, or counseling. Programs with the use of weight-loss medications or fat removal surgery were excluded, 4) Weight maintenance programs employed the Internet only for the intervention group, 5) The control group did not use the Internet during the weight maintenance period, 6) RCTs had body weight (before and after intervention or changes between them) as outcomes. In order to improve quality of the meta-analysis, two studies with high attrition rates were excluded. As a result, four studies were included in the final meta-analysis.

Data synthesis and analysis Within-participant weight change from the pre-maintenance to the post-maintenance period was compared between the Internet and control groups. Effect size was the difference in means. To test for evidence of publication bias, a standard funnel plot and the Begg and Mazumdar test were conducted. The Cochran Q statistic was used to assess heterogeneity across the studies.

Results The study participants were predominately well-educated white middle-aged women. The average BMI ranged from 28.9 to 34.2 at baseline. All included studies were conducted in the United States. The sample size of the RCTs ranged from 62 to 644. The total number of pooled participants from the 4 studies was 930 based on the number of participants who completed the programs. The duration of maintenance programs ranged from 12 to 30 months. The Cochran Q test for heterogeneity result was 15.322 ($P = 0.002$), rejecting the assumption of a homogeneous effect size among studies. Therefore, a random-effects model was used for meta-analysis. One study indicated the same effectiveness as traditional intervention in weight loss.

指導教官： 須藤紀子（生涯保健部）

In Study No. 20, the difference in means was -1.2, the lower limit was -2.084 and the upper limit was -0.316 at a 95% confidence interval. Participants in the Internet group were encouraged to visit the Web site, which provided personal goals and action plans for the next week and to graph personal data over time. The participants received e-mails or telephone calls from the study staff as a reminder, if they did not access the Web site. If they still did not log onto the Web site, the study staff contacted them again to encourage them to visit the Web site. The combined difference in means was -0.083, the lower limit was -2.239 and the upper limit was 2.073 at a 95% confidence interval. A funnel plot showed no evidence of publication bias. The lack of bias was further confirmed by the rank-correlation test of Begg and Mazumdar (Kendall's tau b = 0.667, P = 0.308).

Conclusion The present study suggested that using the Internet during the weight maintenance period after weight loss programs for overweight/obese adults had the same effect as traditional weight maintenance programs. Internet-based weight maintenance programs must be regarded as a potential strategy for population-oriented intervention.

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国際保健分野

Course Name : Master of Public Health in International Health

Status of Orofacial Clefts in National Capital Region (NCR), Philippines A Literature Review of Prevalence, Classifications and Risk Factors

Jieni MORIMATA

Keywords: cleft lip and cleft palate, international volunteer medical services, nonsyndromic, orofacial clefts, philippines oral cleft registry

Thesis Advisors: Hiroko MIURA

Abstract

Background The Philippine Oral Cleft Registry was initiated by the University of the Philippines-Institute of Human Genetics in 2004. The Registry is expected to provide information on the problem of orofacial clefts (OFCs) and common birth defects of complex etiology resulting from various interactions of genetics and environmental factors in the country. With the increase in the population in the National Capital Region (NCR) and parallel increase in life expectancy, the number of people living with OFCs will continue to increase, along with poverty in the country.

Objectives This study aims to investigate the prevalence, identify the types and discuss risk factors for OFCs in the NCR of the Philippines.

Study Design and Methods A literature review was conducted using PubMed, Web of science, Web of Knowledge, Web of Science and Cleft Palate Craniofacial Journal for the prior 20 years. The key words “cleft palate,” “prevalence,” “incidence,” “cleft lip,” “epidemiology,” “NCR” and “Philippines” were used. In addition, a combination of the following terms was also used: “incidence and cleft lip,” “incidence and cleft palate,” “cleft lip and Philippines,” “cleft palate and Philippines,” “incidence of cleft lip and palate and Philippines” and “epidemiology of cleft lip and palate in the Philippines”. Some annual reports, and case reports from NGOs which provide free surgeries for cleft lip and/or palate patients in the Philippines were also included. The relevant populations excluded were as follows: clinical features and cleft patterns, reports on etiology, social impact or un-operated without mention of incidence rates of OFCs.

Results Ten studies met the criteria of this study. There were two clinical, epidemiological studies of CLP in relation to the Filipino population in the country and Hawaii, and the prevalence of CLP was 1.94 per 1000 live births. The numbers of types of cleft cases were reported based on the Philippine Oral Cleft Registry during a 6 month pilot operation in 2000, wherein 1648 data were gathered. Fifty percent had both cleft lip and palate, 18.4% had cleft lip only. Cleft palate only was found in 15.6%. In the sex ratio according to different studies, males were more commonly affected by various kinds of oral clefts than females. In previous studies, the classification systems were basically based on known etiology from chromosomal analysis, gene mapping, gene linkage combined with morphological and pathological characteristics. However, the syndromic, multiple and isolated groups were not specified and remained undocumented. As to maternal characteristics of the three studies, poor vitamin B-6, plasma zinc and folate status were common in mothers of children with OFCs in the central and southern rural areas in the Philippines. As to the candidate gene associations, the candidate novel region (8p11-23) of the fibroblast growth factor receptor 1 (FGFR1) genes may contribute to syndromic as well as nonsyndromic OFCs. On the other hand, there were differences in

指導教官： 三浦宏子（口腔保健部）

the frequency of dermatoglyphic fingerprint pattern types and patterns of dissimilarities between individuals with OFCs. The unaffected relatives were assessed in relation to the genders of case and control groups. It seemed that female subjects were majorly affected. Annual reports of international volunteer medical services in 2005 revealed that the Philippines Band of Mercy (PBM) had in total 543 CLP patients treated and 88 other patients with disorders such as craniosynostosis, eye diseases, hydrocephalus and meningocele in the NCR. In overall annual reports of Operation Smile (OS) from 2007 to 2008, a total of 1478 of CLP patients were treated among 2154 who had physical examinations. However, among 1941 subjects examined 1204 CLP patients were treated in 2009.

Conclusion Using various methodologies to identify the etiologies in certain population areas of OFCs in the past two decades in the Philippines, some nutrition inadequacies such as vitamin B-6, folate and zinc concentrations could contribute to increasing the risk of OFCs among reproductive age women. It is important for developing new intervention and prevention services of OFCs such as neonatal screening and family counseling to ensure appropriate education and public awareness. These findings suggest that public health planners and policy makers need to improve and establish guidelines and treatment plan specifically for OFCs.