# 学位論文内容の要旨 (Summary of dissertation)

博士の専攻分野の名称 博士(医学)

(Degree conferred: Doctor of Philosophy)

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学位論文題名 (Title of dissertation)

A Study on Gender-related Differences in Life Expectancy and Attitudes towards Long-term

#### Care in Selected Countries

(平均余命と介護に対する考えにおける性差に関する研究)

#### **Background and Objectives**

With the world population rapidly ageing, the proportion of the world's older people (over 60 years) will double from 11% to 22% from 2000 to 2050. Furthermore, the older people can live longer than before expressed as a longer life expectancy. It has been going up in almost a straight line of three months per year since 1840.

Between 1960 and 2008, life expectancy in OECD increased by 11 years on average (from 68.2 to 79.2) and by gender (11.3 years among women and 10.7 years among men). However, there is a gender gap in life expectancy (GGLE) with women living longer than men. In explaining GGLE, the published research literature has focused mainly on the causes of morbidity and mortality, particularly among men. Prior studies have shown that national income tends to affect LE: GGLE narrows with increases in socioeconomic level and GGLE is predictive of unhappiness after controlling for LE, national wealth and income inequality. GGLE in OECD countries have remained persistent and wide. Most industrialized countries of OECD members except for Japan had begun experiencing declines in their GGLE.

With the society aging and longer life expectancy, the need for long-term care is also rising. The number of older people who are no longer able to look after themselves in developing countries is forecasted to quadruple by 2050.

Regarding to long-term care to the older people, previous literature has mainly discussed from the perspectives of caregiver, policy, financing, use of health-care, and even gender differences in daily activities. Few had discussed awareness and attitudes of older people towards health-care and welfare. And most of the articles have been focused on developed countries.

Sri Lanka is the third oldest population in Asia. The older people (60 years old or over) accounts for 9.2% of the total population in 2001, which exceeded the average of the world except OECD countries, Eastern Europe and the former Soviet Union. Thus, need for long-term care for the elderly in Sri Lanka is also rising.

With the background knowledge of GGLE and long-term care, the objectives of this study are: (1)to examine the differences in patterns of GGLE in OECD member countries and to explore the associations between GGLE and indices of happiness, human development, and gender empowerment; (2)to analyze the trend of GGLE in Japan between 1947 and 2010 and to explore its associations with social development indices besides mortality factor; (3) to analyze the gender-related attitudes towards long term care of the older people in certain selected area in Sri Lanka.

## Methods

National data in all OECD countries and Japan was collected from official websites and second-hand data analysis was used, respectively; Cross-sectional survey was conducted among older people dwelling in selected rural or urban communities with age of 60 and over years in certain selected areas in Central Province, Sri Lanka. Participants will be asked to take part in 20 minutes face-to-face interview with self-made structured-questionnaire. SPSS 14.0 was used for statistics analysis.

### Results

This study revealed that the OECD countries had a GGLE trend that occurred in an inverted U-curve fashion. Most (25 of 32) of the OECD member countries displayed this inverted U-curve pattern in GGLE whose peak values were found in the 1970s or 1980s. However, Japan had a divergent trend (i.e., it's GGLE rose gradually rather than peaked during the same period) and constituted a special case. Moreover, findings do strongly suggest the negative associations of GGLE with development indices which were Happiness at national level, HDI and GEM.

GGLE has a statistically significant positive association with age-adjusted all-cause mortality ratio in Japan. However, it has no association with HDI, a finding that differs from the negative correlation we found from the cross-sectional study among 32 OECD countries.

In terms of long-term care in Sri Lanka, there is still a traditional opinion that children should take care of older people when they could not look after themselves and it has been an obstacle for institutional care home utilization. Males and Sinhalese would be much happier while living in an elderly care home. Low supports from family members, bad self-rated health status, independent daily life and no older people employees working in an elderly care home would be barriers for an older people feeling happy when they use an elderly care home.

## Discussion

This inverted-U pattern suggests that GGLE undergoes three phases of growth, peak and stability, and decline. The periods or years in which these phases developed tended to vary according to countries.

The outstanding increases of gender mortality ratios in chronic bronchitis and emphysema, diseases of liver, cancer and suicide might be caused by the gender differences in environmental factors (e.g. smoking, alcohol consumption, diets, psychological and social support) leading to the mainly increased changes of GGLE in Japan.

Although the traditional opinions were still ongoing, however, if adult children were included in the institutional care home activities, the older people would like to live there. The higher informal supports from family and hiring older people who can look after others in an elderly care home would be an impetus not an obstruction for the older people using the formal long-term care facilities.

## Conclusion

The observed associations between GGLE and the general development indices may be attributed to common underlying causes such as gender norms and subjective perception of health in many industrial countries.

The decrease of GGLE recently in Japan might be the results of increasing of women's unhealthy lifestyle. It also implies that Japanese women are catching up with lifestyle of men which has put them into more risk than before. This study offers some kinds of clues for further studies.

The study in Sri Lanka will prompt a new perspective as the ageing and longevity issues taking into account in Sri Lanka. For example, not only professional caregivers in the elderly care home, but also family members and healthy older people who can still look after others should also be involved in the long-term care system. This could contribute not only to resolve ageing related employment issue but increase the psychological comfort to older people living in the elderly care home.