

Summary for Overseas Travel WENDI 2018-2019

| | |
|--|--|
| Name | Hiromi Segawa |
| School | Faculty of medicine |
| Grade | L3 (PhD 1 st Year) |
| Supervisor's name | Imanaka Yuichi |
| Travel period | 15/11~25/11/2019, 19/12~30/12/2019, 10/3~28/3/2019 |
| UN agencies / International organization visited | WHO Bhutan office, ADB |
| Theme of overseas travel | Health and happiness in Bhutan: data-analysis among GNH survey , WHO NCD step survey, medical cost, and field research |

Outline of the activities (4 pages including photos, figures, etc.)

(1) Global leadership

Global leadership is defined as leading people who are based in multiple regions of the world. Through my public health activity in Bhutan and Japan, I would like to connect the field site and policy maker. When I was working in field site, sometimes I felt that some research or policymaking is not reflect of real field problem and sometimes it become like violence on field site. On the other hand most of public health field people in field is less thinking logically and systematically. So I would like to conduct the research to reflect real field problem and connect with policy making.

Current UN goal is Sustainable Development Goals. Sometimes it is very difficult to find answer inside of small area. But with thinking globally, sometimes we can find the answer easily.

Bhutan is middle income country, but their country goal is Gross National Happiness which pursue sustainable development and people's happiness. GNH concept could suggest us many things. And Japan has already experience of prevention NCD (Non-Communicable-Disease) activity and has met challenging of sustainable health care system in super aging society.

If Bhutanese researcher and Japanese researcher in public health could collaborate, we can contribute in sustainable health care system and people's happiness in public health field. To collaborate with researcher from different culture, to integrate with field research and government research, to communicate with multiple department, all of those things are needed for global readership. Through this activity, I would like to establish global leadership and contribute to public health globally.

(2) Scientific significance

(3) Originality/Universality

NCD issue is getting big issue in whole of the world. According to the World Health Organization (WHO) 38 million people die from non-communicable diseases (NCDs) annually. Approximately three quarters of these deaths (28 million) occur in low- and middle-income countries [1]. The increase of NCDs leads to an economic burden on individuals, families, society, and the world [2].

Similarly in Bhutan, NCDs is a growing challenge facing the country today as health facilities across the country sees increasing number of alcohol related liver diseases, cancers, diabetes and heart diseases annually [3]. The Royal Government of Bhutan is concerned about the increasing number of NCD cases. The STEP survey conducted in 2014 for the prevalence of risk factors for NCDs estimated 13.5% of adult Bhutanese population (18-69 years) had three or more of the modifiable NCDs risk factors. It was also found that 7.4% smoked tobacco, 42.4% consumed alcohol, 66.9% ate less than five servings of fruits and vegetables, 6.4% had insufficient physical

activity, and 33% overweight [4]. In the year 2015, health facilities reported 1284 deaths of which alcohol liver diseases is the leading cause of mortality with 158 deaths followed by respiratory diseases and cardio-vascular diseases. Considering from a diversified aspect of society, culture, living, behavioral aspects, many risk factors are based on people's lifestyles and behavior changes [4]. Therefore, the Government of Bhutan has given the top priority to develop measures to fight NCDs since they are double burden to the nation. As such the United Nation (UN) Task Force on NCD has committed to support Bhutan in tackling NCDs during the first visit by the United Nation's interagency task force on the prevention and control of non-communicable diseases [5]. The Bhutanese government has approved a five year NCDs action plan to promote healthy lifestyles and reduce preventable illnesses in the country.

Bhutan's national development is based on the philosophy of Gross National Happiness (GNH), which aspires for sustainable development and happiness for all [6]. But previous GNH surveys have not included NCDs status nor did health related cost because government provides free primary health care services to its people. Due to socio-economic development there is increase in the life expectancy of Bhutanese people and at the same time due to change in the lifestyle and behavior, there is also increase in NCD cases which in turn increases health care costs. As such there is need to create sustainable health care system to manage NCDs within the GNH concepts. Although the government of Bhutan conducted GNH survey and NCD step survey, however, we couldn't find the indicators of living with NCDs in GNH survey and happiness indicator in the NCD survey.

Due to these gaps and to understand people's happiness and values, we conducted the first phase of this study. Our qualitative study concerns "Lifestyle-related disease risk factors and its influence on health conditions and happiness among urban and rural dwellers in the Southern parts of Bhutan."

The first phase of our research was successfully conducted in Bhutan using a qualitative approach [7]. From the qualitative study, four recommendations were made to the ministry of health in Bhutan. 1) The need for more practical health education implementation: Theoretically, most people understand the importance of reducing the intake of salt and fatty foods and the importance of exercise, even those with little or no education. However, most people do not know the number of calories in their food, the recommended daily calorie consumption, and how to put this knowledge into practice. In the real world, fragmented knowledge is not utilized. For this reason, it is necessary to communicate practical knowledge in practical forms at the health education sites. 2) Using the group dynamics effect for health education on a community basis: Although harmony is an important factor of happiness, it also causes stress and triggers consumers' tastes, such as drinking and smoking. It is not only individual tutorials that empower individual awareness and efforts, but group dynamics may also be effective in NCD prevention awareness, such as in an individual's working, village, religious, and generational communities, and so forth. 3) Education of basic knowledge relating to nutrition and exercise in primary and junior high school curricula and the dissemination of awareness to the parents of children: Primary and junior high school is a life period that establishes lifestyles [8]. Moreover, for a culture that values families, it is possible to encourage effective behavioral changes by disseminating awareness to parents and residential communities through children [9] [10]. 4) Collaboration with the religious authorities: The people's deep faith and devotion could also make possible changes in the behavior that seem difficult; faith is also a factor of happiness. It is important to "collaborate" with religious authorities and to empower people's healthy behavior. It is possible that such an approach can not only maintain peace of mind, but also relieve new sources of social stress.

As a continuation to phase 1, we would like to conduct intervention studies on NCD prevention measures. However, the result of qualitative study is not generalizable and is felt better to visualize the gap between BHU unit bases. Furthermore we have to consider the sustainability with limited resources.

Considering all the above facts, we need to study the current situation quantitatively to determine the relationship between NCDs status, happiness, and socio-demographic variables. It is also significant to predict nation-wide health-related resources in regards to NCDs regardless of limited data sources. It is challenging, but if we can find the more effective target modifiable NCDs risk factor and economic burden, we can address the target modifiable risk factor with

evidence in Bhutan.

Therefore, in addition to the findings from the first phase of our study, we plan to perform secondary data analysis to explore the national health indicators of NCDs and prevention strategies in line with the GNH philosophy in order to plan and carryout effective intervention.

The findings of this study may show that the differences depend upon the health facility between socio-demographic factors, medical cost, and happiness. Our findings will contribute to promoting the health and happiness of people, which will in turn contribute towards sustainable development and the GNH philosophy in general. Further, this study aims to contribute to the global evidence based intervention to the prevention of global NCD epidemic [11].

【Reference】

- [1] World Health Organization. Global action plan for the prevention and control of non-communicable disease 2013-2020.
- [2] World Health Organization. Non-communicable diseases and their risk factors. Major NCDs and their Risk factors.2017.
- [3] Ministry of Health in Bhutan. Non-communicable Disease Division, Department of Public Health. Package of Essential NCD (PEN) protocol for BHUs. 2017.
- [4] Ministry of Health in Bhutan. Policy planning division. Annual Health Bulletin 2016. Health management and information system.
- [5] United Nation Interagency Task Force on NCDs. UN Task Force on NCDs: operationalizing national plans on non-communicable diseases prevention and control in Bhutan2017.
- [6] The constitution of Bhutan 2008.
- [7] Science council of Asia. The 18th Science Council of Asia Conference, Council paper: ISBN978-4-60000044-8
- [8] Patrick H. Erikson's Theory of Psychosocial Development and Career Development. Journal of Vocational Behavior.1977.10, 261-269
- [9] Catalano RF, Fagan AA, Gavin LE, et al Worldwide application of prevention science in adolescent health. Lancet. 2012 Apr 28; 379(9826):1653-64.
- [10] Langford R, Bonell CP, Jones HE, et al. The WHO Health Promoting School framework for improving the health and well-being of students and their academic achievement. Cochrane Database Syst Rev. 2014 Apr 16; (4):CD008958.
- [11] Gross national happiness Commission Royal Government of Bhutan. SAARC Development Goal country report 2013.

(4) Reasons and motivations for visiting UN agencies / International organizations

In Kingdom of Bhutan, UN agencies is very important. Bhutanese government is mainly supported by Indian government and UN agencies. WHO Bhutan country office is located in Building of Ministry of Health in Bhutan. NCD step survey also is financially and technically supported by WHO. And October 2018, ADB decided to invest 200,000,000 yen to Health sector. And now ministry of health is making protocol of project to ADB.

Due to contribute the health field in Bhutan, It is very important to understand these international organization's activity.

When I introduced my research activity, WHO staffs suggested me to hold meeting about NCD in Bhutan. After analysis the data, I will present the research result and discuss with them. To collaborate not only policy maker, but also international organization is relevant to contribute the public health field.