

2-(1)

## 高齢者に優しい環境に関する国際共同研究 International study on age-friendly environment

**【Background】** Age-friendly environment was one of the 5 strategic priority areas identified in the global strategy and action plan on ageing and health 2016-2020.(WHO 2020). We participated in the International collaboration initiated by AIHD Mahidol to study age-Friendly Environments in ASEAN Plus Three: Case Studies from Japan, Malaysia, Myanmar, Vietnam, and Thailand University.

**【Objective】** To measure and compare community residents' perception of how age-friendly their environment and compare across the countries. To find out the influence of age-friendly environmental factors on quality of life, active ageing and social network diversity.

**【Methods】** WHO: Measuring the age-friendliness of cities (2015). 20 itemed WHO age-friendliness indicators was transculturally translated and piloted to be in Japanese version.

**【Findings】** Community residents in Japan receive a balance of care, welfare and health services. Regarding the factor significant for social network diversity, altogether 69.66% of the participants did not participate in a volunteer activity, 77.33% did not engage in paid employment and 51.30% did not have internet access at home. Regarding the factors significant for active ageing, 55.55% of the older people seemed unable to join a sociocultural activity at least once in the previous week, and 43.48% did not join group exercise activity in their leisure time. Regarding the factors significantly related to quality of life, 24.47% seemed to not have access to the local source of information about health concerns and service; 30.71% did not get their needs of personal care and assistance at home using formal care services; and 39.3% who needed assistance did not have enough income to meet their basic needs over the previous 12 months.

**【Conclusion】** In conclusion, access to care is important for the quality of an older person's life whilst social participation and exercise promote active ageing.

# Age-friendly environment

Housing

Transportation

Social participation

Respect and social inclusion

Civic participation and employment

Communication and information

Community support and health services

Outdoor spaces and building

Transportation

2-(2)

## 新型コロナウイルス感染症流行による社会的インパクトに関する国際共同研究 Multinational study of community response to COVID-19 pandemic

**【Background】** Whilst policy interventions were broadly similar across the globe, there were some differences in individual and community responses. This study explored community responses to COVID-19 containment measures in different countries and synthesized a model.

**【Objective】** This study explains the community response to pandemic containment measures in the local context, so as to be suitably prepared for future interventions and research.

**【Method】** A multinational study was conducted from April-June 2020 involving researchers from 12 countries (Japan, Austria, U.S., Taiwan, India, Sudan, Indonesia, Malaysia, Philippines, Myanmar, Vietnam and Thailand). Steps in this research consisted of carrying out open-ended questionnaires, qualitative analyses in NVivo, and a multinational meeting to reflect, exchange, and validate results. Lastly, a community response model was synthesized from multinational experiences.

**【Findings】** Eight themes emerged: Communication strategy, Habit and behavior of the people, sustained essential social services to enable people to stay at home, economic back up to endure the tough time, preventing the clusters as a result of cultural norms, and festivals, alternative way to have fun or to work and practice social activities, public experience of pandemics, and privacy and human right of the patients, suspects and everyone constitute community response to the pandemic and containment polices.

**【Conclusion】** Understanding community responses to containment policies will help in ending current and future pandemics in the world.

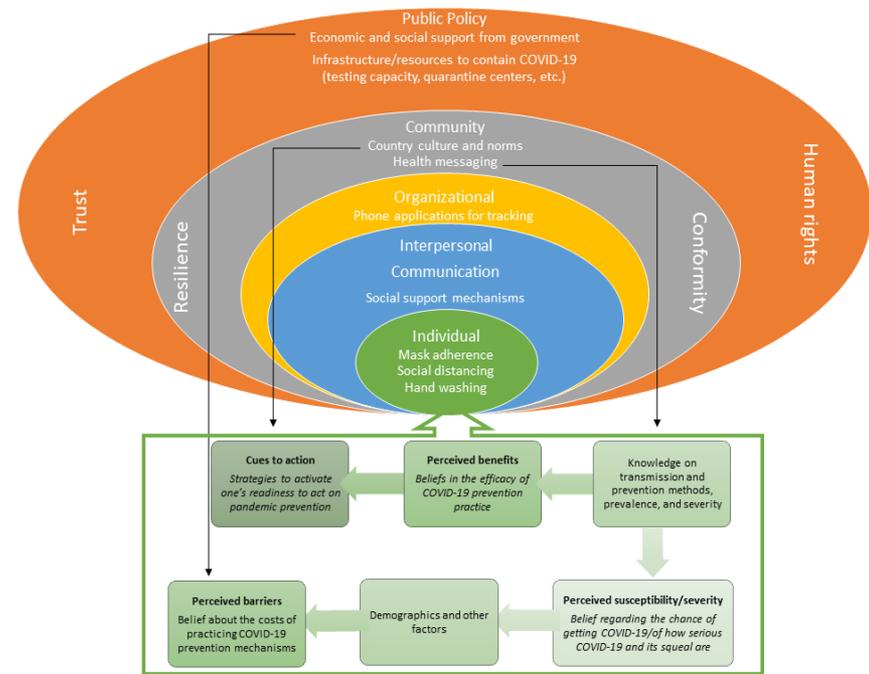


Figure : Community responses to covid-19 pandemic first wave containment measures: a model synthesized from multinational experiences in 2020.

Aung MN, Stein C, Chen WT, Garg V, Saraswati Sitepu M, Thu NTD, Gundran CPD, Hassan MR, Suthutvoravut U, Soe AN, Nour M, Gyi KK, Brandl R, Yuasa M. Community responses to COVID-19 pandemic first wave containment measures: a multinational study. *J Infect Dev Ctries.* 2021 Aug 31;15(8):1107-1116. doi: 10.3855/jidc.15254. PMID: 34516418.

Aung MN, Koyanagi Y, Yuasa M. Health inequality among different economies during early phase of COVID-19 pandemic. *J Egypt Public Health Assoc.* 2021 Feb 17;96(1):3. doi: 10.1186/s42506-021-00067-0. PMID: 33595767; PMCID: PMC7887563.

## 2-(3) ミャンマー国およびタイ王国における糖尿病患者の運動栄養に関する研究 Study on physical activity, eating habit & T2DM in Myanmar & Thailand

**【Background】** Diabetes is a common NCD in Thailand and Myanmar. The prevalence of type 2 diabetes was 9.9% in Thailand and 10.5% in Myanmar in 2014. Thailand and Myanmar share long border and common cultures. Non-communicable diseases are linked to the culture. The culture of two countries are similar but the health system and health promotion activities are very different. The aim of the present study was to identify the risk factors of T2DM in Yangon Myanmar and Chiang Mai Thailand applying case-control studies in the community setting.

**【Objective】** To compare the physical activity level, dietary habit, social support, and salt and sugar level in the home-made food between newly diagnosed diabetes patients and controls.

**【Methods】** Case control studies. Cases are defined with eligibility criteria and compared with community controls to find out the different in association with interested exposure variable. International physical activity questionnaires (IPAQ-short) version, combined food habit questionnaires, ENRICH social support questionnaires were used. Atago Digital salt-meter ES-421 and Atago Pocket saccharimeter PAL-J were applied for salt and sugar contents in the home-made dishes.

**【Findings】** There publications has been published to report the finding in Myanmar such as low physical activity and age older than 40 are the risk factors of diabetes. More analysis and publications are coming soon.

**【Conclusion】** The finding from these study aims to assist public health authorities to assemble the preventative intervention for diabetes in each county and culturally similar countries.

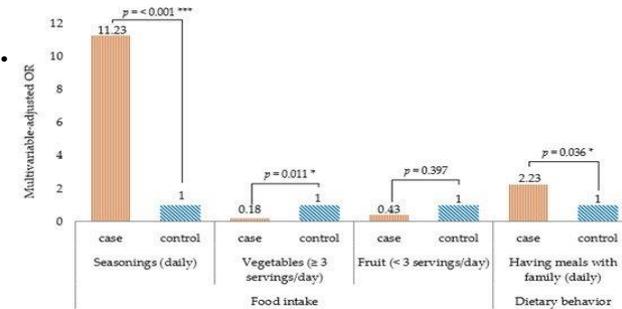


Figure 1: Dietary habits associated with type 2 diabetes mellitus in a case-control study of the urban residents in Yangon, Myanmar, 2019. Note: Multivariable logistic regression analysis; p-value for the comparison between two groups: \*\*\* p < 0.001, \* p < 0.05. All p-values are two-sided.

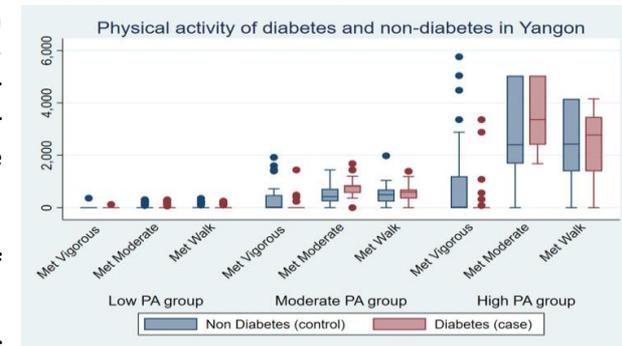


Figure 2: Level of physical activity (PA) in METs.min.wk-1 among diabetes patients and non-diabetes control group, within the category of low PA, moderate PA and active PA, Yangon Myanmar, 2019 (n=300). P<0.001, MANOVA.

A. Ishtiaq, M.N. Aung, S. Ueno, E.T. Khin, T.S. Latt, S. Moolphate, M. Yuasa. Physical Activity of Type 2 Diabetes Mellitus Patients and Non-Diabetes Participants in Yangon, Myanmar: A Case-Control Study Applying the International Physical Activity Questionnaires (IPAQ-S). *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy* 14:1729-1739, 2021.  
 E. T. Khin, M. N. Aung, S. Ueno, A. Ishtiaq, T. S. Latt, S. Moolphate, M. Yuasa. Social Support between Diabetes Patients and Non-Diabetes Persons in Yangon, Myanmar: A Study Applying ENRICH Social Support Instrument. *International Journal of Environmental Research and Public Health* 18; 7302, 2021.  
 Ueno S, Aung MN, Yuasa M, Ishtiaq A, Khin ET, Latt TS, et al. Association between Dietary Habits and Type 2 Diabetes Mellitus in Yangon, Myanmar: A Case-Control Study. *International Journal of Environmental Research and Public Health*. 2021;18(21):11056.

2-(4)

# ボリビア国住民参加型ヘルスプロモーションに関する研究 Community-based Health Promotion Study in Bolivia

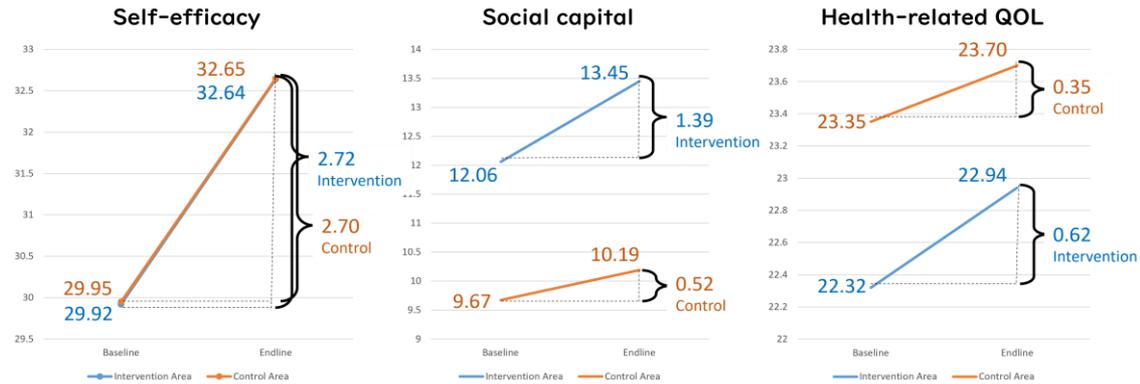
**【Background】** JICA Maternal and Child project assisted to implement community-based health promotion (HP) actions.

**【Objective】** The study aimed to evaluate the effect of HP intervention in Potosi and Oruro.

**【Methods】** Cluster randomized trial was conducted. The verified questionnaire of self-efficacy, social capital, and health-related QOL. A difference in difference analysis was performed.

**【Findings】** In Potosi, Social capital and QOL in Int. were significantly improved. In Oruro, Self-efficacy and Social capital in Int. were increased.

**【Conclusion】** HP intervention was effective in human & social capital of community residents.

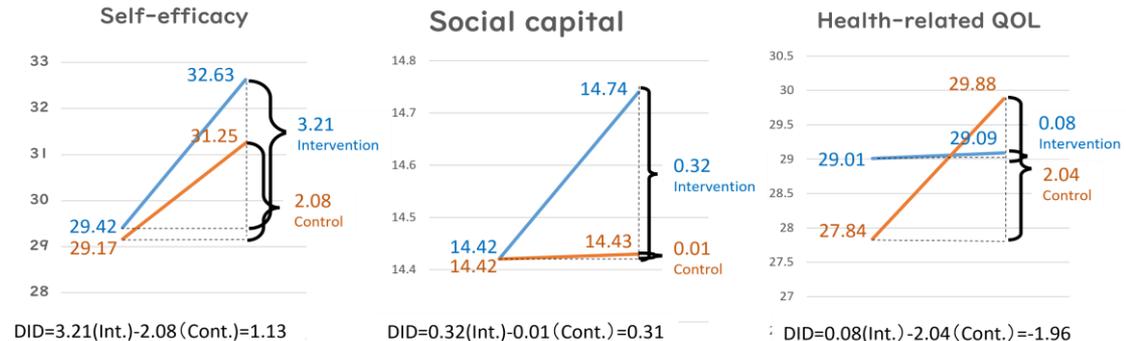


$DID=2.72(Int.)-2.70(Cont.)=0.02$

$DID=1.39(Int.)-0.52(Cont.)=0.87$

$DID=0.62(Int.)-0.35(Cont.)=0.27$

Fig 1. Results of Potosi province



$DID=3.21(Int.)-2.08(Cont.)=1.13$

$DID=0.32(Int.)-0.01(Cont.)=0.31$

$DID=0.08(Int.)-2.04(Cont.)=-1.96$

Fig 2. Results of Oruro province

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## ボリビア国保健医療従事者のコンピテンシー調査および患者満足度調査 Survey of medical professional competency and patients' satisfaction in Bolivia

**【Background】** In JICA Maternal and Child Health Network Strengthening Project carried out in Oruro Department, Bolivia, a competency survey of health care workers was conducted to measure the effect of training for health care workers including doctors, nurses, and associate nurses.

**【Objective】** The "Competence Survey" measured the ability of health care workers to care for mothers and children.

**【Methods】** The study participants were doctors, nurses, and associate nurses engaged in medical centers in three intervention health divisions (intervention group) and three non-intervention divisions (control group) in Oruro Province. Surveys were conducted before and after the project using originally developed questionnaire based on UNICEF/WHO guideline.

The number of doctors, nurses, and ass. Nurses were 97, 62 & 93 in int. and 41, 13, & 41 in con. before Int., and 118, 72 & 105 in int. and 44, 12 & 57 in con. After Int. The intervention had been provided for three years.

**【Findings】** The mean of competence scores of the intervention grope was significantly improved in doctors, nurses and ass. nurses in intervention group that those of control group for three years.

**【Background】** The JICA Oruro project aimed to improve patient's satisfaction at health centers as one of the outcome of the project.

**【Objective】** The project measure the patient's satisfaction which was provided at the intervention health centers.

**【Methods】** The questionnaire of HCAHPS (Hospital consumer assessment of healthcare providers and system) was used to measure the satisfaction. The number of patients were 228 (M; 55, F; 173) in int. and 247 (M; 63, F; 184) in con before Int., and 138 (M; 48, F; 90) in int. and 146 (M; 53, F; 93) in con. After Int.

**【Findings】** The mean of patient's satisfaction score of the intervention grope was significantly improved to doctors and nureses in intervention group that those of control group for three years.

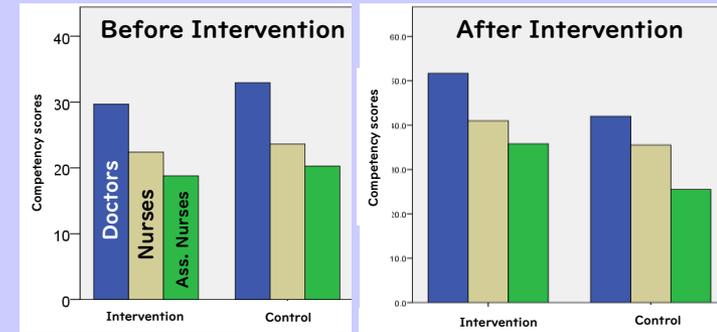


Fig 1. Competency survey

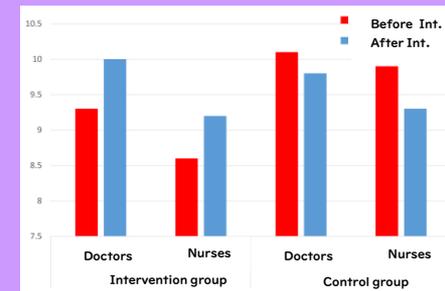


Fig 2. Satisfaction survey

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## タイ王国ランパンにおける禁煙行動に関する介入研究

# RCT study on smoking cessation in Lampang, Thailand (ESCAPE study)

**【Objective】** Smoking cessation is an achievable behavioral change, which reduces the risks of cardiovascular diseases, cancers and tobacco-related diseases. There is a need for an effective smoking cessation service for low and middle income country settings where the smoking rate is generally very high whilst a cessation service is not usually accessible. This study devised a new smoking cessation service package and assessed its effectiveness in the primary health care setting of northern Thailand.

**【Methods】** Randomized controlled trial A total of 319 eligible patients who consented to participate in the study, were randomly allocated to an intervention arm (160) and a control arm (159), applying block randomization. The multi-component intervention service consisted of: (1) regular patient motivation by the same nurse over a 3-month period; (2) a monthly piCO+ Smokerlyzer test for 3 months; (3) continual assistance from a trained family member, using a smoking-cessation- diary; and (4) optional nicotine replacement chewing gum therapy. The control group received the routine service comprising of brief counseling and casual follow-up. Smoking cessation, confirmed by six months of abstinence and the piCo+ Smokerlyzer breath test, was compared between the two services after a year follow-up. The trial is registered as an international current control trial at the ISRCTN registry. ISRCTN89315117.

**【Findings】** The intervention arm participants achieved a significantly higher smoking cessation rate than the control arm 25.62% vs 11.32%, with an adjusted odd ratio of 2.95 and 95% confidence interval 1.55-5.61.

**【Conclusion】** Utilizing community resources as major intervention components, the evidence from this trial may provide a useful and scalable smoking cessation intervention for low and middle income countries.



Figure 1: Conceptual model

The image shows two pages of a smoking cessation diary. The diary is organized into columns for tracking various aspects of the process, including dates, symptoms, and other factors. The pages are filled with handwritten entries and colored markers (yellow and red) indicating specific events or symptoms.

Figure 2: Smoking cessation diary

Myo NA, Yuasa M, Lorga T, Moolphate S, Fukuda H, Kitajima T, Yokokawa H, Minematsu K, Tanimura S, Hiratsuka Y, Ono K, Naunboonruang P, Thinuan P, Kawai S, Suya Y, Chumvicharana S, Marui E: Evidence-based new service package vs. routine service package for smoking cessation to prevent high risk patients from cardiovascular diseases (CVD): study protocol for randomized controlled trial. *Trials* 2013, 14: 419 doi:10.1186/1745-6215-14-419.  
 MN Aung, M Yuasa, S Moolphate, T Kitajima, T Lorga, H Yokokawa, H Fukuda, S Tanimura, Y Hiratsuka, K Ono, PT Thinuan, K Minematsu, J Deerojanawong, Y Suya, E Marui. Effectiveness of a new multi-component smoking cessation service package for patients with hypertension and diabetes in northern Thailand: a randomized controlled trial (ESCAPE study). *Substance Abuse Treatment, Prevention, and Policy* 14, 10, 2019. DOI: 10.1186/s13011-019-0197-2.

# タイ王国チェンライにおける減塩行動に関する介入研究 RCT study on salt reduction in Chiangrai, Thailand

**【Background】** Global sodium intake remains above the recommended levels to control blood pressure (BP).

**【Objectives】** We aimed to evaluate the efficacy of a dietary intervention on BP through salt reduction among community-dwelling participants with high risk of cardiovascular disorders.

**【Method】** This cluster randomized trial (February 2012 to January 2013) included cooking instruction using the pocket salt meter among patients with diabetes and/or hypertension who were treated at health center in Thailand. Based on health centers, 8 clusters of eligible participants were randomly allocated to the 4 intervention and 4 control groups. Dietary intervention was performed at baseline, 1 month, and 3 months in intervention group. In both groups, systolic and diastolic BPs, and estimated 24 hours salt intake based on overnight urine samples were measured at baseline, 6 months, and 12 months.

**【Findings】** There were significant difference in systolic BP and estimated salt intake after adjusting covariates at 6 months. However, these differences were not observed at 12 months. There were no differences in diastolic BP in both follow-ups.

**【Findings】** The results suggest the effectiveness of a visually based dietary intervention targeting salt intake reduction in short term, but the effectiveness discontinued in long term.

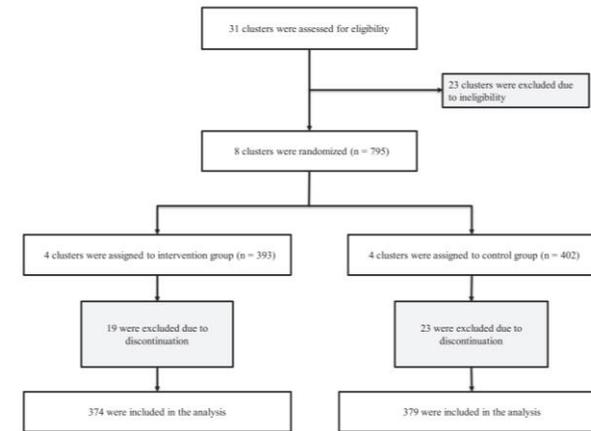


Figure 1: Flow chart for enrollment and follow up

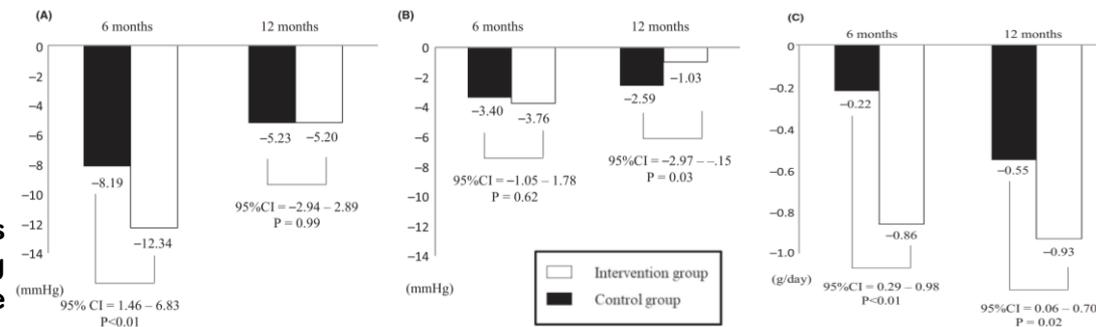


Figure2: (A) Change in systolic BP. (B) Change in diastolic BP. (C) Change in estimated daily salt intake

Aung MN, Yuasa M, Moolphate S, Nedsuwan S, Yokokawa H, Kitajima T, Minematsu K, Tanimura S, Fukuda H, Hiratsuka Y, Ono K, Kawai S, Marui E. Reducing salt intake for prevention of cardiovascular diseases in high-risk patients by advanced health education intervention (RESIP-CVD study), northern Thailand: study protocol for a cluster randomized trial. *Trials* 13: 158 doi: 10.1186/1745-6215-13-158, 2014.  
 H Yokokawa, M Yuasa, S Nedsuwan, S Moolphate, H Fukuda, T Kitajima, K Minematsu, S Tanimura, E Marui. Daily salt intake estimated by overnight urine collections indicates a high cardiovascular disease risk in Thailand. *Asia Pac J Clin Nutr* 25(1); 39-45, 2016.  
 H Yokokawa, M Yuasa, S Nedsuwan, S Moolphate, H Fukuda, T Kitajima, K Minematsu, S Tanimura, E Marui. An impact of dietary intervention on blood pressures among diabetic and/or hypertensive patients with high cardiovascular disorders risk in northern Thailand by cluster randomized trial. *J Gen Fam Med* 22: 28-37, 2021.

2-(8)

# 日本の小学生5・6年生に対する禁煙予防教育教材の効果研究

## Educational effectiveness on no-smoking for primary school children in Japan

**【Background】** Hokkaido is the prefecture with the highest adult smoking rate in Japan. Raising public awareness through cancer education from a younger age is a key to prevent and control cancer and other NCDs. Two health educational DVDs were developed by Hokkaido-Sapporo Cancer Seminar Foundation.

**【Objective】** The study aims to evaluate the effects of the anti-smoking education using these DVDs at randomly selected schools in four geographically various prefectures.

**【Methods】** We measured...

- 1) The change in children's image of tobacco smoking, before and after the education, using the Kano Test for Social Nicotine Dependence (KTSND).
- 2) One month after the class, what kind of interactions actually occurred among children, parents, and adults in their community

**【Findings】** The survey elucidated the high smoking rate (62.9%) among adults surrounding the children. This explains the result that the 299 (13.2%) showed higher tolerance to smoking.

**【Conclusion】** Our DVDs encouraged young children to talk to their own parents and adults in the community. Many of them did actually talk and they perceived some changes in their parents and other adults. We continue to promote cancer education from younger age.

### Two DVDs were designed to.....

#### 1. "What is cancer? Why do people get cancer?"



#### 2. "Goodbye to smoking, Tsuru-kame Dining Restaurant." (8 minutes and 30 seconds)



"I can't tell Dad to quit smoking" "Clear discarded cigarette butts" "Non-smoking restaurant now!"

• 2,263 six graders at 31 schools received the education in 2015.

• 1,424 (62.9%) reported that their parent, grandparent, and/or close community member smokes. Father(985), mother(407), grandfather(406), grandmother(133), and others(305) such as homeroom teacher and sports coaches

Score >= 10	Miyagi	Nagano	Okayama	Kumamoto	Total
<b>Before</b>	86 (14.3%)	56 (15.1%)	91 (14.6%)	66 (10.5%)	299 (13.2%)
<b>After</b>	56 (9.3%)	29 (7.8%)	43 (6.9%)	36 (5.8%)	164* (7.2%)

- Their mean KTSND score improved from  $4.85 \pm 4.11$  to  $3.58 \pm 3.57$ .
- The number of students with smoking accepting tendency also went down from 299 to 164.

2-(9)

# JICA保健関連プロジェクトの分析研究 Analysis of JICA health-related projects

**【Background】** The Japan International Cooperation Agency (JICA) has focused its attention on appraising health development assistance projects and redirecting efforts towards health system strengthening.

**【Objective】** The study aimed to describe the type of project and targets of interest, and assess the contribution of JICA health-related projects to strengthening health systems worldwide.

**【Methods】** We collected a web-based Project Design Matrix (PDM) of 105 JICA projects implemented between January 2005 and December 2009. We developed an analytical matrix based on the World Health Organization (WHO) health system framework to examine the PDM data and thereby assess the projects' contributions to health system strengthening.

**【Findings】** The majority of JICA projects had prioritized workforce development, and improvements in governance and service delivery. Conversely, there was little assistance for finance or medical product development.

**【Conclusion】** Our study confirmed that JICA projects met the goals of bilateral cooperation by developing workforce capacity and governance. We also showed that the analytical matrix methodology is an effective means of examining the component of health system strengthening to which the activity and output of a project contributes.

Indicator/Parameter	Objectively verifiable achievement	Means of verification	Important assumptions
<b>Overall goal</b> Reproductive health in the target population is improved.	Proportion of women who become pregnant under the age of 18 years is reduced (8% in 2005).	Project health survey	Government ensures the sustained implementation of national reproductive health strategy within the budget allocated.
<b>Strategic objective</b> Use of quality reproductive health services is increased in health facilities in the target district.	Contraception prevalence (modern methods) is increased in the target district (50% in 2005).	Project health survey	Government ensures the budget allocation and personnel input to implement national reproductive health strategy.
<b>Outcome</b> 1. Quality of reproductive health services provided to health facilities is improved. 2. Capacity of target health district office is strengthened is improved.	1. Number of women who receive prenatal care at health services is increased. 2. Short-term work plan is formulated following the situation analysis.	1. Monthly report 2. Project survey	Government ensures the budget allocation and personnel input to implement national reproductive health strategy. Project counterparts ensure the same.
<b>Activities</b> 15. To improve health facilities and equipment. 16. To conduct reproductive health training for health care staff. 17. To modify and introduce the national family planning guidelines to the target districts. 18. To conduct management training for health district offices. 19. To support health district office staff to formulate and implement an annual work plan. 20. To provide technical support to health district office staff for data systems.	<b>Inputs</b>		<b>Disincentives</b> National Health Councilor rejected modern family planning strategy.

Fig 1. An example of PDM

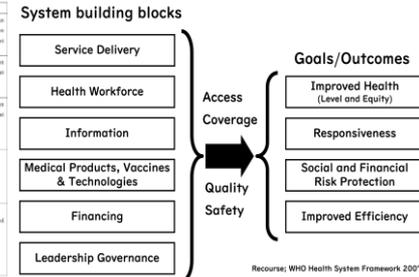


Fig 2. WHO health system framework

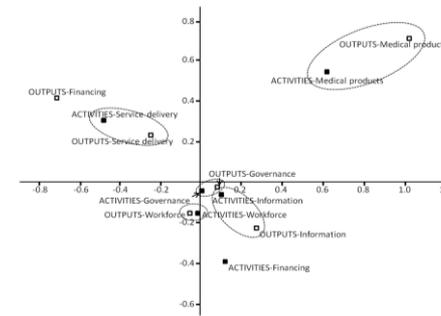


Fig 3. Association between outputs and activities of JICA project by Correspondence analysis

Except for financing, outputs of other blocks were associated with activities.

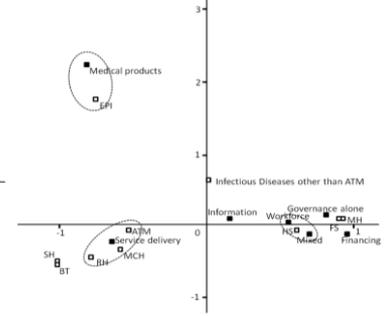


Fig 4. Association between JICA project type and system block by correspondence anal.

There were association between products & EPI, Service & RH/MCH.



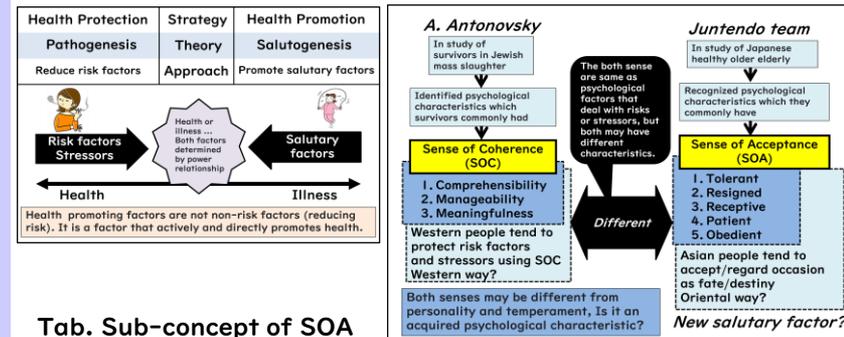
**【Background】** The oriental view of the world and life is vaguely recognized by subject and object, and has a strong tendency to be introverted, sensory, and subconscious.

**【Objective】** The study aimed to identify oriental stress coping sensations based on the above characteristics.

**【Methods】** The first edition of the questionnaire was created by the facet method for the results of interviews with local government officials and tsunami victims. Next, using this questionnaire, the first survey was conducted on 358 local government employees, and the results were promax-rotated by factor analysis to extract the sub-concept. In addition, the second survey was conducted for 280 general residents and corporate employees, and the results were promax-rotated by factor analysis to extract the final sub-concept.

**【Findings】** When the questions were asked by the facet method, a total of 26 questions were created, including 6 questions of counter-adherence, disidentification, and inclusiveness, and 8 embracement. As a result of the second survey, the number of questions with a factor loading of 0.6 or more was 3 questions of counter-adherence (Cronbach  $\alpha=0.708$ ), 2 questions of disidentification ( $\alpha=0.718$ ), and 2 questions of inclusiveness ( $\alpha=0.650$ ), and 3 questions of embracement ( $\alpha=0.763$ ). The Pearson correlation coefficient between SOA and WCCL positive cognition and social support was 0.524 ( $p<0.001$ ). The correlation coefficient between SOA and SOC (Univ. of Tokyo ver. 3 questions) was 0.586 ( $p<0.001$ ).

**【Conclusion】** The 10 items in the SOA questionnaire were considered to be useful indicators as a measure of emotional stress coping.



Tab. Sub-concept of SOA

Sub-concept	definition	Example expression
脱執着感 Counter-adherence	Sense free from stress (not overreacting)	1. くよくよ考えない 2. 水に流す 3. 気分転換する
脱同一化感 Disidentification	Sense of actively and objectively observing being in a stressed state	1. 自分の気持ちと距離を置いてみる 2. こんなものだ
包容感 Tolerance Inclusiveness	Sense of accepting being stressed as a reason for things	1. 仕方がない 2. 諦めるしかない 3. だめなら、だめでいい 4. やるだけのことはやった 5. 何とかなる
被包容感 Embracement Being included	Sense of being accepted by an existence	1. ひとりじゃない 2. ありがたい 3. お陰さまです 4. 大きな存在に支えられている