Supporting favorites ‘Oshikatsu’ and well-being in the Japanese general population: FAV-WELL Study

Takahiro Itaya (1)
Kazuya Taira (2,3), Yusuke Ogawa (1), Ayame Hanada (1), Kirara Hiyama (1), Yosuke Yamamoto (1)

1 : Department of Healthcare Epidemiology, Graduate School of Medicine and Public Health, Kyoto University, Kyoto, Japan
2 : Human Health Sciences, Graduate School of Medicine, Kyoto University, Kyoto, Japan.
3 : Center for Quantum Information and Quantum Biology, The University of Osaka, Osaka, Japan.

Background : ‘Oshikatsu’ is supporting favorite someone or something and becoming widespread worldwide from Japan. While it is considered to have positive impacts on people's health, the potential risks of excessive Oshikatsu have been discussed. We aimed to examine the association between Oshikatsu and well-being.

Methods : We conducted a nationwide cross-sectional study including individuals aged 18–79 in Japan from March to April in 2025 (FAV-WELL Study). The main exposure was supporting favorite someone or something: Oshikatsu or non-Oshikatsu groups. The outcome was well-being measured by the Japanese version of psychological well-being scale (PWBS-42); higher scores indicate better well-being ranged 42–294 points. We performed linear regression analyses to estimate the coefficients (95% confidence intervals), adjusted by age, gender, marital status, education, employment, income, comorbidity, and depression symptoms. We conducted additional analyses on the duration of and spending on Oshikatsu, and subgroup analysis on autistic traits. This study was approved by the Ethics Committee of Kyoto University Graduate School and Faculty of Medicine (R4885).

Results : In total of 10,000 participants, 3,781 (38%) enjoyed Oshikatsu. The well-being scores were 4.08 (3.13–5.03) points higher among the Oshikatsu group compared to the non-Oshikatsu group. Participants who spend more time and money on Oshikatsu showed better well-being. In subgroup analyses, no association with well-being was observed in the Oshikatsu group with autistic traits; however, the well-being scores were higher compared to the non-Oshikatsu group.

Discussion : This study showed Oshikatsu was associated with well-being among general population in Japan. Oshikatsu not only provides psychological support for living, but may also increase social connections, which could contribute to well-being. It is important to study more detailed mechanisms and the excessive level of Oshikatsu.

Genetic Risk Disclosure and Risk Perception on Ischemic Stroke: Progress of the PARC Study

Akiko Yoshida (1,2)
Nobuhiro Suzumori (1,2), Hideki Ohmomo (1,3), Yoichi Sutoh (1,3), Yuka Kotozaki (1,2), Tsuyoshi Hachiya (1,3)
Koichi Asahi (1,2), Atsushi Shimizu (1,3), Kozo Tanno (1,2)

1 : Iwate Tohoku Medical Megabank Organization, Disaster Reconstruction Center, Iwate Medical University
2 : School of Medicine, Iwate Medical University
3 : Institute for Biomedical Sciences, Iwate Medical University

Background : Recent applications of genetic risk prediction in healthcare present both opportunities and challenges. This study examines the effects of polygenic score (PGS)-based predisposition risks for ischemic stroke on health behaviors. Here we report the study progress.

Methods : Participants wishing to know their genetic risk of ischemic stroke were recruited at health checkup venues in Iwate Prefecture. Blood samples were collected for genotyping, and the ischemic stroke risk was calculated using the integrative PGS model for East Asian populations. Participants were randomly assigned to intervention or control groups. The intervention group received individualized risk reports. Understanding of genetic risk and psychological impact were evaluated using a 4-item questionnaire and the Impact of Event Scale-Revised.

Results : Recruitment was conducted from April 6 to November 13, 2023. Of 3,599 workers, 2,088 participated. Among 2,083 eligible participants, 80.7% were male, and 75.2% were aged 18–49 years. Based on PGS, 200 participants (9.7%) had a risk of 1.0 (reference); 57 (2.7%), 927 (44.7%), and 888 (42.9%) had risks of 2.1–3.4, 1.4–1.9, and <1.0-fold of that reference, respectively. In 2024, 1,042 intervention participants received risk reports, of whom 512 returned questionnaires (response rate 50.0%). Regarding genetic risk understanding, 395 respondents (78.7%) answered at least three of four items correctly. For psychological impact, 414 (85.0%) scored below 25, the cutoff for high risk of post-traumatic stress disorder, with no significant differences across PGS risk levels ($\alpha = 0.05$).

Discussion : These results suggest that receiving a genetic risk report may support participants' understanding of PGS-based risks without causing adverse psychological effects. Follow-up assessments of health status, lifestyle habits, and psychological state will continue over two years. A longitudinal study through 2030 will further evaluate long-term effects.

Cardiovascular Disease Risk by Subsector and Occupation in Transportation and Storage Industry

Juyeon Oh (1)
Heejoo Park (1), Jian Lee (1), Jongmin Lee (1), Myeongbo Kwon (1), Byungyoon Yun (2,3), Jin-Ha Yoon (2,3,4)

1 : Department of Public Health, Graduate School, Yonsei University, Seoul, Korea
2 : Department of Preventive Medicine, Yonsei University College of Medicine, Seoul, Korea
3 : Institute for Innovation in Digital Healthcare, Yonsei University Health System, Seoul, Korea
4 : The Institute for Occupational Health, Yonsei University College of Medicine, Seoul, Korea

Background : Cardiovascular disease (CVD) is a major contributor to global morbidity and mortality. While the transportation industry is recognized as high-risk for CVD, variation across subsectors and occupations remains unclear. We evaluated CVD risk across subsectors and occupations in South Korea's transportation industry.

Methods : This retrospective cohort study used linked data from Korean National Health Insurance Service and Employment Insurance databases. Male workers aged 35–54 years who remained in the same occupation during 2012 and underwent health screening in 2012–2013 were included. Follow-up continued through 2022. We calculated age-standardized incidence rates, standardized incidence ratios (SIRs), and population-attributable fractions across industries, with stratified analyses by subsector, occupation, obesity, and smoking status.

Results : Among 2,300,512 workers, transportation industry exhibited the highest age-standardized CVD incidence rate (558.9 per 100,000 person-years) and population-attributable fraction (1.49%) of all industries. Within transportation, driving-related occupations showed the highest SIRs, especially in land and freight subsectors. Aviation subsectors had lower CVD incidence and more favorable health indicators. These patterns remained consistent after stratification by obesity and smoking status.

Conclusions : Substantial heterogeneity exists in CVD risk across transportation subsectors and occupations. Targeted prevention strategies are needed for high-risk groups, particularly drivers.

Validity of a brief questionnaire to assess physical activity environments in Japan's 2023 guideline

Hiroyuki Kikuchi (1)
Noritoshi Fukushima (1), Shiho Amagasa (1,2), Masaki Machida (1), Tomoki Nakaya (3,4), Shigeru Inoue (1)

1 : Department of Preventive Medicine and Public Health, Tokyo Medical University
2 : Graduate School of Public Health, Teikyo University, Tokyo, Japan
3 : Graduate School of Environmental Studies, Tohoku University, Sendai, Miyagi, Japan.
4 : Graduate School of Science, Tohoku University, Sendai, Miyagi, Japan

Background : Physical Activity Guide for Health Promotion 2023 proposes a two-by-two framework (physical vs. social; lifestyle vs. exercise). We developed a four-item questionnaire to measure these four domains (lifestyle-physical **[a]**, exercise-physical **[b]**, lifestyle-social **[c]**, and exercise-social **[d]** environment) using a 4-point scale (score range, 1–4). This study examined its construct and criterion validity.

Methods : We conducted a nationwide web survey of adults (≥20 years) in 122 Japanese cities in 2022, using sex- and age-stratified quotas. For construct validity, we used linear and logistic regression to assess associations of each item with walking time (minutes/day) and having an exercise habit, adjusting for sex and age. For criterion validity, we used linear regression to assess the associations of the lifestyle-physical score **[a]** with the Japan Postcode-level Walkability Index (JPWI), and the exercise-physical score **[b]** with the GIS-based number of exercise-related facilities. We calculated partial eta squared (partial η^2) for all associations.

Results : We analyzed 38,798 adults (54.6% men; mean age 51.7 ± 14.9 years). Mean (±SD) scores were: **[a]** 2.36 ± 1.12; **[b]** 2.56 ± 0.84; **[c]** 2.68 ± 0.86; and **[d]** 2.18 ± 0.78. For construct validity, all four scores were positively associated with longer walking time (β range: 3.80 to 10.11; partial η^2 range: 0.01–0.03) and a higher likelihood of having an exercise habit (odds ratio [OR] range: 1.10 to 1.73; partial η^2 range: 0.01–0.03). For criterion validity, both physical environment scores (**[a]** and **[b]**) were significantly associated with their respective objective measures with partial η^2 range values ranging from 0.03 to 0.26.

Conclusion : This four-item instrument showed acceptable construct and criterion validity. It can be a useful tool for municipalities to efficiently measure residents' perceived environments for physical activity based on the new national guideline.

Short-term exposure to PM2.5, cause specific-mortality, and high-risk populations

Seoyeong Ahn (1)
Jieun Oh (2), Hyewon Yun (3), Harin Min (3), Yejin Kim (1), Cinoo Kang (2), Sojin Ahn (3), Ayoung Kim (2), Whanhee Lee (4)

1 : Pusan National University / College of Information and Biomedical Engineering / Department of Information Convergence Engineering
2 : Seoul National University / Graduate School of Public Health / Department of Public Health Sciences
3 : Pusan National University / Graduate School of Data Science
4 : Pusan National University / College of Information and Biomedical Engineering / School of Biomedical Convergence Engineering

Numerous studies reported that short-term exposure to fine particulate matter ($PM_{2.5}$) is associated with mortality risk; however, results on high-risk populations and regions were mixed. This study performed a nationwide time-stratified case-crossover study to assess the association between short-term PM2.5 and mortality in South Korea (2015-2019) by each cause of death and age group. A machine-learning ensemble $PM_{2.5}$ prediction model was used to cover unmonitored districts. We estimated the excess mortality and Years of Life Lost (YLL) attributable to $PM_{2.5}$ and non-compliance with the 2021 WHO guidelines (>15 $\mu g/m^3$). We examined the effect modifications by district-level accessibility to green spaces and medical facilities in the living sphere. In the total population, $PM_{2.5}$ was positively associated with mortality for non-accidental causes (OR: 1.008 with 95% CI: 1.006–1.010), circulatory diseases (1.007, 95% CI: 1.003–1.011), and respiratory diseases (1.007, 95% CI: 1.001–1.013). Based on the point estimates, the association was generally greater in younger age groups (0-59 or 60-69 y) than in older age groups (70-80 years and 80 years or older), and this pattern was pronounced in mortality for ischemic heart and cerebrovascular diseases, and pneumonia. The excess mortality fraction and YLL due to non-compliance with WHO guidelines were 0.80% and 186,808.52 years. Our findings suggest high risk populations and benefits for establishing stricter $PM_{2.5}$ standards and action plans.