Association of 'Oshikatsu' with social connectedness in Japan: FAV-WELL Study

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Background : 'Oshikatsu', the act of enthusiastically supporting someone or something, has been expanding worldwide from Japan. Oshikatsu is considered to develop one's personality and social connectedness. This study aimed to examine the association between Oshikatsu and social connectedness.

Methods : We conducted a nationwide cross-sectional study from March to April in 2025 (FAV-WELL Study). This study included Japanese representative participants aged 18 to 79 years. The main exposure was the act of enthusiastically supporting someone: Oshikatsu or non-Oshikatsu groups. Additionally, we divided the Oshikatsu group into two types: with others or alone, defining the secondary exposure across these three groups. The primary outcome was social connectedness measured by the validated scale. This scale ranges from 22 to 132 and higher scores indicate better social connectedness. The analysis was performed using a linear regression model adjusted by age, gender, household income, education background, marital status, depression symptoms and the number of medical conditions. This study was approved by the ethics committee of Kyoto University Graduate School and the Faculty of Medicine (approval number: R4885).

Results : In a total 10,000 participants, 3,781 participants (38%) conducted Oshikatsu, and 744 participants (7.4%) engaged in Oshikatsu with others. In the primary analysis, the regression coefficients of social connectedness in the Oshikatsu group were 2.18 (95% confidence interval: 1.23 to 3.13) points higher compared to the non-Oshikatsu group. In additional analysis, the coefficients of social connectedness in Oshikatsu alone and Oshikatsu with others were 2.03 (1.02 to 3.04) and 2.81 (1.08 to 4.55) compared to the non-Oshikatsu group.

Discussion : This study showed Oshikatsu was associated with better social connectedness. Further studies are necessary to investigate how Oshikatsu contributes to social connectedness.

Dietary Patterns and Spatial Risk of Aflatoxin Exposure in Pregnant Women, Kwale County, Kenya

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Aflatoxin B1 is a ubiquitous and lethal toxin of major global public health concern. These naturally occurring secondary metabolites, produced under humid and temperate conditions common in Africa, contaminate the food chain from farm to table. Evidence links maternal exposure to aflatoxins with adverse pregnancy outcomes. This study examined dietary practices and geographic risk patterns of aflatoxin exposure among pregnant women in Kwale County, Kenya. We conducted a cross-sectional study nested within a prospective cohort, recruiting expectant mothers through the Pregnant Women and Infant Registration System, which Nagasaki University and the Kenya Medical Research Institute jointly manage. Sociodemographic data, dietary patterns, and GPS coordinates were collected. Serum Aflatoxin B1 levels were quantified using Enzyme-linked immunosorbent Assay (ELISA) to measure the AFB1-ALB adduct in pg/ml. Among 191 participants (Kinango: 59%, Golini: 27%, Mwaluphamba: 14%), the median age was 27 years (IQR, 23–32). Ugali consumption was nearly universal (98%), compared with rice (41%) and nuts (19%). Mean aflatoxin levels differed significantly across sites: Golini (101 pg/ml, IQR 47–147), Kinango (147 pg/ml, IQR 74–363), and Mwaluphamba (257 pg/ml, IQR 100–563) (**$p = 0.001$**). Global Spatial Autocorrelation was significant (**Moran's I = 0.093, $p = 0.004$**), with local clustering of high-high and low-low values in Kinango and Mwaluphamba. A generalized additive model (GAM) incorporating spatial, demographic, and behavioral factors identified Mwaluphamba as a high-risk area. Unexpectedly, lack of formal education appeared protective, suggesting possible culturally rooted practices that merit further investigation. We recommend prioritizing Mwaluphamba for aflatoxin risk-reduction interventions and call for more research to explore protective behaviors embedded in local cultural practices.

Incubation period-generation time dependency of SARS-CoV-2 variants: historical to Omicron variant

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Background : While the incubation period of COVID-19 shortened significantly from historical variant to Omicron variant, the intrinsic generation times remained roughly the same. It has been known for historical variant that the incubation-genaration time dependecy was also favorable: longer incubation periods were associated with longer generation time implying the link of transmission events to symptom onsets. However, how this dependency evolved for later variants such as Omicron has been uncertain.

Method : We collected information on ~100 transmission (infectee-infector) pairs during the first month of Omicron infections reported in Taiwan, December 2021 - January 2022, using publicly available reports. While accounting for the transmission network and isolation strategy during the active containment phase in Taiwan at that time, we modeled the incubation period and generation time selecting between three commonly used distributions (gamma, Weibull, lognormal). Their interdependency was modeled using the copula method.

Result : Our analysis revealed that the correlation coefficient between incubation period and generation time remained similar as for historical variant with values around 0.5 (interquartile range 0.4-0.6). The estimation of the incubation period and instrinsic generation time were consistent with earlier estimates of the mean of 3.4 days and 6.20 days, respectively.

Discussion : Positive correlation between incubation period and generation time still demonstrates the reliability of symptom-based control measures for Omicron infections such volunteer isolation of symptomatic cases. However, our study analyzed the first month of Omicron infections in Taiwan when the vaccination with efficient mRNA vaccines had not been yet implemented. Vaccination may lead to milder infections and result in weaker level of dependency.

Area-level socioeconomic status and rural-urban inequalities in gynecological cancers in Japan

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Background : In Japan, the government targeted reducing inequalities in cancer outcomes in the 4th National Cancer Plan. Monitoring inequalities and examining factors has become a critical challenge in cancer control efforts. However, evidence regarding inequalities in gynecologic cancer outcomes in Japan remains limited.

Methods : We analyzed population-based national cancer registry data from 2017 to 2018 to estimate age-standardised incidence rates (ASIRs) for corpus uterine cancer (ICD-10 code: C54), cervical cancer (C53, C55) and ovarian cancer (C56). Socioeconomic status was assessed using the Area Deprivation Index (ADI), and urbanization was measured using the percentage of population living in Densely Inhabited Districts (DIDs). Regional indicators were calculated at the town, chome, and Aza level, in units of 100. ASIRs were stratified by cancer site and by ADI and DID quintiles (ADI, Q1: least deprived; Q5: most deprived, DID, Q1: rural; Q5: highly urbanized).SII (Slope Index of Inequality) and RII (Relative Index of Inequality) were estimated using liner regression, and absolute and relative gradients were quantified for each.

Results : Females living in the most deprived area had higher ASIRs of cervical invasive cancer compared to those in the least deprived area (SII: 2.76; 95%CI, 0.50-5.02, RII: 1.17; 95%CI, 1.07-1.27). Conversely, ovarian invasive cancer showed negative SII values and RII below 1.0, suggesting a higher incidence in the least deprived area (SII: -1.34; 95%CI, -2.52-0.16, RII: 0.92; 95%CI, 0.88-0.96). A similar trend was observed for corpus uterine invasive cancer (SII: -0.96; 95%CI, -2.33-0.40, RII: 0.96; 95%CI, 0.93-0.99). Furthermore, for all cancer cites, the SII and RII were higher than 1.0.

Conclusions : Area-level socioeconomic and urban-rural inequalities in the incidence rates of each cite of gynecological cancer were observed in Japan. Further analysis is needed to determine what factors contribute to these inequalities.

Development of Rheumatoid Arthritis in Individuals with Positive Autoantibodies: Observational Study

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Purpose : Autoantibody positivity is the strongest risk factor for the progression of rheumatoid arthritis (RA). To clarify the progression of the disease in autoantibody-positive healthy individuals.

Methods : The participants in the resident health examinations conducted in Goto City, Nagasaki Prefecture, from 2014 onwards, serum anti-citrullinated protein antibodies (ACPA) measurements were performed, alongside interviews regarding joint symptoms and family history of RA. Individuals at high risk of RA onset were defined as those who were ACPA-positive, or who reported finger joint symptoms in the interview and had a family history of RA. These individuals underwent thorough examination by rheumatologist at Goto Central Hospital and were regularly followed up for RA development. The diagnosis of RA was made based on the 2010 RA classification criteria.

Results : Of the 3,620 individuals included (median age 70, 61.4% female), 2.1% were ACPA-positive and 11% had a family history. Of the 85 individuals (2.3%) considered to be at high risk of RA, 46 (54.1%) underwent a further examination at the hospital. Of the 46 individuals, 4 had established RA. Of the 15 asymptomatic ACPA-positive individuals, 7 received a new RA diagnosis, 1 was unclassified arthritis, and 7 remained asymptomatic. Of the 6 ACPA-positive individuals with joint symptoms, 5 received a new RA diagnosis and 1 was unclassified arthritis. Of the 21 ACPA-negative individuals having finger joint symptoms with family history, 1 developed new-onset RA. ACPA-positive individuals progressed to RA at a higher rate than ACPA-negative individuals (34.3% vs. 9.9%, $P<0.01$). The median follow-up period until RA progression was 12 months.

Conclusion : The ACPA positivity rate of 1.4% in healthy individuals was consistent with previous reports. Half of asymptomatic ACPA-positive individuals progressed to RA within a median of 12 months, while the remainder remained asymptomatic.