

Impact of Smartphone Overdependence on Depression and Suicidal Ideation by Multicultural Status

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Introduction : Smartphone overdependence contributes to depression and suicidal ideation among adolescents, with multicultural youth being particularly vulnerable due to acculturative stress. This study examined these associations by gender among multicultural and non-multicultural adolescents using Korea Youth Risk Behavior Web-based Survey data.

Methods : This study utilized data from the Korea Youth Risk Behavior Survey (KYRBS 2020 and 2023). To minimize bias between multicultural and non-multicultural groups, 1:1 propensity score matching was performed. Smartphone overdependence was assessed using the 'Adolescent Smartphone Overdependence Scale' developed by the Korea Intelligence Information Society Agency, with participants scoring 23 points or higher on the total scale comprising three sub-factors classified as the overdependence group. Based on these measures, chi-square tests and logistic regression analyses were conducted to examine the associations between smartphone overdependence and mental health.

Results : Among multicultural adolescents, the smartphone overdependence group showed 1.32-fold (95% CI: 1.08–1.61) higher depression compared to the non-overdependence group, and 1.38-fold (95% CI: 1.07–1.77) higher suicidal ideation. Among non-multicultural adolescents, the smartphone overdependence group demonstrated 1.41-fold (95% CI: 1.15–1.73) higher depression compared to the non-overdependence group, and 1.47-fold (95% CI: 1.15–1.87) higher suicidal ideation.

Gender-based analysis revealed that among multicultural adolescents, significant associations between smartphone overdependence and both depression and suicidal ideation were confirmed in male students, whereas among non-multicultural adolescents, these associations were observed in female students.

Conclusion : These findings confirmed that cultural background and gender affect mental health risks differently, thereby emphasizing the need for tailored prevention programs.

Attitudes toward society and hope for marriage and childbearing in adolescents.

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Individuals' life designs, including their intentions on marriage and childbearing, may affect fertility trends and public health outcomes. However, among late adolescents aged 15-20 years—a formative period for life planning—little is known about how their attitudes toward society (e.g., anxiety and optimism) relate to their intentions regarding marriage and childbearing and whether the attitudes vary by area. Therefore, a cross-sectional online survey was conducted in March 2025 with those aged 15-20 years living in Hokkaido prefecture, Kanagawa prefecture, and Kyushu/Okinawa region (mainly Okinawa prefecture), Japan (n = 1,239). Attitudes toward society were evaluated using a multiple-choice question of the Public Opinion Survey on Social Awareness, Cabinet Office of Japan: “*In which aspects are you not satisfied with the current society?*” A logistic regression model was used to identify what unsatisfied issues relate to hope for marriage and childbearing after adjusting for age and area. For both sexes, the issue “*There is no economic affluence or prospects for the people*” was inversely associated with hope for marriage (odds ratio (OR) 0.59, p= 0.02 for males; OR 0.71, p= 0.03 for females). For males, the issue “*It is difficult for young people to aim to gain independence in society*” was inversely associated with hope for marriage (OR 0.56, p= 0.009) and childbearing (OR 0.63, p= 0.03). The issue “*It is difficult for the elderly to be involved in society*” was associated with hope for childbearing (OR 2.51, p= 0.03). For females, the issue “*It is difficult for women to aspire toward success in society*” was associated with hope for marriage (OR 1.55, p= 0.007) and childbearing (OR 1.52, p= 0.008), whereas the issue “*It does not allow us to maintain a healthy mind and body*” was inversely associated with hope for marriage (OR 0.65, p= 0.003) and childbearing (OR 0.75, p= 0.048). The issue “*A high-quality living environment has not been developed*” was inversely associated with hope for marriage (OR 0.66, p= 0.01). Only the prevalence of “*There is no economic affluence or prospects for the people*” in females varied by area. In conclusion, adolescents' attitudes toward society were linked to marriage and childbearing intentions, differing by sex. There was a limited regional difference in the prevalence of the attitudes.

Validity of Visceral Fat Area Measurement Using the BIA Method: Comparison with CT Measurement

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In recent years, the increasing number of people with metabolic syndrome has become a global concern. Visceral fat accumulation is the top diagnostic factor for metabolic syndrome. While the gold standard is visceral fat area (VFA) measured by CT, issues such as radiation exposure and cost make it difficult to use for health checkup purposes. No bioelectrical impedance analysis (BIA) method suitable for Vietnamese people has been developed so far, and the purpose of this study is to measure visceral fat area using a new impedance method that only measures the abdomen and to verify its accuracy. In this study, we compare the results of VFA obtained from BIA and CT scans to examine whether BIA can be used as a routine tool for the prognosis and detection of cardiovascular risk in health checkups at hospitals and in the community.

We recruited 300 subjects (144 men and 156 women), aged between 30 and 70 years, from patients visiting the outpatient department, Bach Mai Hospital, Hanoi. VFA was measured using CT and BIA, and waist circumference (WC) was also measured. The new device of BIA is wrapped around the waist and measures the intra-abdominal resistance at the level of the navel by passing an alternating current micro-current between electrodes at the navel and back, and measuring the voltage generated in the lateral abdomen. Using this device allows for the measurement of VFA and WC in the abdominal region only, rather than the entire body.

To examine the relationship between CT-VFA and BIA-VFA, we calculated the Pearson's correlation coefficient. The correlation coefficients between CT-VFA and BIA-VFA were high, at 0.873 for men and 0.811 for women, and were higher than the correlation coefficients with waist circumference (WC) (0.788 for men and 0.742 for women).

BIA-VFA has been shown to be a more useful indicator than the current simplified WC measure in clinical screening settings.

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Adherence to Washoku and its low environmental impact: the Japan Nurses' Health Study

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Background : While health- and eco-friendly diets are reported abroad, research in Japan is limited. This study aimed to (1) quantify environmental impacts of Japanese diets and (2) assess the impact of traditional Washoku and other eco-friendly diets.

Methods : This cross-sectional study included female nurses nationwide enrolled in the Japan Nurses' Health Study (JNHS) at the six-year follow-up (n = 11,678). After excluding women with missing food frequency questionnaire (FFQ) (n=127), extreme energy intake (n=275), and pregnancy (n=112), 11,164 women were analyzed. The exposure variables were four dietary pattern scores calculated from a 98-item semi-quantitative FFQ; EAT-Lancet score, Planetary Health Diet Index (PHDI), Mediterranean diet score, and Washoku score. The Washoku score was derived via LightGBM on JNHS data. The outcome variables were the six environmental indicators: Greenhouse gases, Land use, Energy use, Acidification potential, Eutrophication potential, and Water use. The Inventory Database for Environmental Analysis calculated dietary environmental indicators. Linear regression coefficients of environmental indicators per 1 SD or quartiles in dietary scores were calculated.

Results : The means of the dietary environmental effects (/kg-food/day) were 1,643gCO₂ (Greenhouse gases), 1.07m²/year (Land use), 17,795kj (Energy use), 2.62gSO₂ (Acidification potential), 34.1gPO₄ (Eutrophication potential), and 173L (Water use). The Washoku score, along with the other three dietary scores, was inversely associated with all environmental indicators per 1 SD increase. Higher Washoku score quartiles showed inverse associations with all environmental indicators, similar to other scores (all P for trends < 0.001).

Conclusion : This was a first large-scale study to quantify multiple environmental impacts of Japanese women's diets. Washoku showed low environmental burden, comparable to EAT-Lancet and PHDI diets.

Spatiotemporal Trends in Early Syphilis Incidence in Seoul, Republic of Korea, 2014–2024

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Background : Syphilis has re-emerged worldwide, with notable increases in Europe, the United States, and neighboring Asian countries. In the ROK, national surveillance data indicate a growing burden, yet no metropolitan-level analysis has been conducted despite Seoul accounting for one-fifth of the population and concentrating young adults at high STI risk. This study aimed to describe spatiotemporal patterns of early syphilis (primary, secondary, early latent) in Seoul from 2014 to 2024 using crude and age-standardized incidence rates.

Methods : A retrospective population-based analysis was performed using National Health Insurance Service (NHIS) claims data. Early syphilis cases were defined by ICD-10 codes A51.0–A51.5, A51.9, A53.0, A53.9 with prescriptions for benzathine penicillin G or doxycycline. Reinfection was defined as a repeat prescription ≥ 6 months later. Population denominators were derived from annual resident registration data for Seoul and its 25 districts, stratified by sex and 5-year age groups. Age-standardized incidence rates (AIRs) were calculated using the 2020 ROK standard population. District-level relative risks (RRs) were estimated by comparing each district's AIR with the Seoul average.

Results : From 2014–2024, 16,685 cases were identified, with 71.1% in males (11,890) and 28.9% in females (4,855). The 30–39 year group accounted for 29.1%, followed by 25–29 years (12.6%) and 40–44 years (11.5%), showing concentration in young adults. Crude incidence ranged 13–17 per 100,000 (peak 17.0 in 2017) without sustained increase. AIRs declined from 16.8 per 100,000 in 2014 to 14.4 in 2024, indicating modest risk reduction after demographic adjustment. Central districts such as Jongno, Jung, and Yongsan (RR 1.3–1.8) and Yeongdeungpo (RR 1.2–1.6) remained consistently higher than the city average, while southeastern districts including Gangnam, Songpa, and Gangdong were persistently lower (RR 0.7–0.9). Some districts such as Dongjak and Seodaemun showed temporary spikes above 1.5, suggesting localized outbreaks. A decline after 2020 coincided with the COVID-19 pandemic, possibly linked to changes in healthcare utilization and sexual behaviors.

Conclusion : Early syphilis in Seoul showed stable crude rates but declining age-adjusted incidence from 2014 to 2024, in contrast to global increases. The predominance in young adult males and persistent high-risk clusters in central districts highlight the need for targeted screening, sexual health promotion, and district-specific surveillance strategies. Sustained monitoring and tailored interventions are essential to control early syphilis in the ROK.