

Self-perceived food literacy in relation to the quality of overall diet and main meals in Japanese adults: a cross-sectional study

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To date, only a limited number of studies have examined food literacy in relation to some aspects of dietary intakes and behaviours⁽¹⁾. This cross-sectional study aimed to assess the relationship between the self-perceived food literacy (SPFL) and diet quality in Japanese adults, including health professionals.

We conducted an online questionnaire survey in February and March 2023. The target sample was 3300 health professionals (such as dietitians and doctors) and 3300 general individuals. In total, 5998 adults aged 20–79 years provided valid responses. The SPFL was assessed using the Japanese version of the 29-item Dutch SPFL scale⁽²⁾, with a higher score indicating a higher food literacy (score range 1–5). Using dietary intake information derived from a validated, short version of Meal-based Diet History Questionnaire⁽³⁾, the Healthy Eating Index-2015 (HEI-2015) was calculated, with a higher score indicating a higher diet quality (score range 0–100). To examine the association between SPFL and HEI-2015, we used multiple linear regression, including sex, age, body mass index, education, marital status, living situation, household income, employment status, having any chronic disease, smoking status, health-related occupation and healthy eating motivation as covariates.

The mean SPFL was 3.18 (SD: 0.43) and the internal consistency of the overall scale was considered good (Cronbach's alpha: 0.80). The mean HEI-2015 for overall diet was 50.4 (SD: 7.5). The SPFL was statistically significantly and positively associated with the HEI-2015, irrespective of adjustment for potential confounding factors. Using multiple linear regression, one point increase of SPFL corresponded to an increase in HEI-2015 by a point of 4.8 (SE: 0.2) for overall diet, 6.2 (SE: 0.6) for breakfast, 4.6 (SE: 0.4) for lunch and 3.6 (SE: 0.3) for dinner (all $P < 0.0001$). Other factors significantly ($P < 0.05$) associated with a higher HEI-2015 for overall diet included female sex, older age, underweight (compared with overweight), higher education, higher household income, non-working status (compared with part-time job and full-time job), having any chronic disease, never smoking (compared with current smoking), health-related occupation such as dietitians and doctors (compared with general population), and higher motivation for healthy eating. The association between SPFL and HEI-2015 for overall diet remained statistically significant when the analysis was restricted to females (n 3311; regression coefficient (β): 5.9), males (n 2687; β : 3.4), health professionals (n 2114; β : 4.2) and general population (n 3021; β : 4.9; all $P < 0.0001$).

In conclusion, independent of a number of factors associated with diet quality, the SPFL was strongly associated with the quality of overall diet and main meals in the general population as well as health professionals in Japan. Therefore, food literacy should be considered in nutrition education and behavioural interventions to improve diet quality.

References

1. Amouzandeh C, Fingland D & Vidgen HA (2019) *Nutrients* **11**, 801.
2. Poelman MP, Dijkstra SC, Sponselee H *et al.* (2018) *Int J Behav Nutr Phys Act* **15**, 54.
3. Murakami K, Shinozaki N, Livingstone MBE *et al.* (2022) *Br J Nutr.*