

## 論文の要旨

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論文題目: Essays on Health-related Behaviors: Evidence from Japan

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The primary focus of this dissertation is to present findings on factors influencing health-related behaviors in Japan, including cancer screening, health check-ups, and COVID-19 vaccine's third dose uptake. The thesis consists of three individual essays that investigate whether financial literacy has positive effects on health preventive behaviors of cancer screening and health checks, and how the degree of hesitancy to take the third dose of COVID-19 vaccine varies in different socio-economic contexts. The first and second essays propose a hypothesis suggesting that individuals with higher financial literacy, as a proxy for rational decision making, are more inclined to engage in cancer screening and health check-up activities. On the other hand, the third essay is to examine the research question of which determinants influence the hesitancy towards the third dose of COVID-19 vaccine, particularly among young generations in Japan.

The first paper is titled "Financial Literacy, Financial Education, and Cancer Screening Behavior: Evidence from Japan", published in *International Journal of Environmental Research and Public Health* in 2022 (Nguyen et al., 2022). This study aims to assess the impact of financial literacy and financial education, as measures of people's understanding of investments and savings, on enhancing cancer screening rates in Japan. The primary data was sourced from the Osaka University's Preference Parameters Study (PPS) survey in 2011. Utilizing ordered probit regression models, the study examined the association between financial literacy, financial education (as two main independent variables), and the number of cancer screenings (as the dependent variable). The findings indicated that no significant link was found between financial literacy and cancer screening behavior in Japan, but a positive association was observed for financial education. Consequently, the implementation of more financial education initiatives is crucial to promote cancer screening among Japanese populations.

The second paper is titled “Does financial literacy influence preventive health check-up behavior in Japan? A cross-sectional study”, published in *BMC Public Health* in 2022 (Lal et al., 2022). This research was designed to evaluate the effects of financial literacy, which represents rational decision making, on the likelihood of undergoing health check-ups in Japan. The data was obtained from the 2010 and 2011 waves of PPS longitudinal datasets. By deploying probit regression analysis, the study explored any possible relationship between financial literacy (as the independent variable) and participation in health check-ups (as the dependent variable). The results indicated that financial literacy exhibited an insignificant association with health check-up behavior. Therefore, it is suggested that although there are no significant effects that financial literacy has on health check-up behavior among Japanese populations, it is imperative that several concerns of health examinations, including instances of over diagnosis and risky treatments that might confound the overall results, should be mitigated to increase the effectiveness of health check-up programs in Japan.

The third paper is titled “Hesitancy towards the Third dose of COVID-19 Vaccine among the Younger Generation in Japan”, published in *International Journal of Environmental Research and Public Health* in 2022 (Khan et al., 2022). This study was initiated to evaluate people’s hesitancy towards the third dose of COVID-19 vaccine in Japan. The data was extracted from an online panel survey conducted by the Hiroshima Institute of Health Economics Research at Hiroshima University. By incorporating probit regression models, the study aims to investigate the effects of various socio-economic factors on booster dose aversion. The findings reported that a substantial proportion of younger men is reluctant to receive the third dose as supplementary COVID-19 vaccination. In addition, the booster dose aversion among Japanese youth was empirically evidenced to be affected by various socioeconomic and behavior factors, comprising marital status, having children, household income and assets, and having a myopic view of the future. The study’s results imply more rigorous focus on devising appropriate communication approaches to raise vaccine understanding on societal level, particularly aimed at young Japanese generations.

Findings from the three papers shed more light on preventive health behaviors in Japan, encompassing cancer screening, health check-ups, and COVID-19 vaccine’s booster shot. The first two articles explore potential roles that financial literacy and financial education can play in enhancing cancer screening behavior and healthcare examinations. While financial education (measured from the perspective of savings’ knowledge) is positively associated with cancer screening, but not for health check-ups, financial literacy (measured from perspective of investment knowledge) is not significantly associated with

both behaviors of concern. Further longitudinal studies, thus, are recommended to provide more concrete evidence on the association between financial literacy, financial education, as proxies for rational decision-making abilities, and health behaviors. On the other hand, the third article corroborates the severity of booster dose aversion among younger populations in Japan, along with its variation under the influence of demographic and socioeconomic factors. Since geographical factors can intervene vaccine accessibility and vaccine information attainability, this finding can be further extrapolated by making sub-sample analysis across different geographic settings in Japan.

#### References

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