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Health literacy and the voluntary adoption of the new normal in COVID-19: The case of Japan

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**[Working paper] Health literacy and the voluntary adoption of the
new normal in COVID-19: The case of Japan**

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Abstract

This study quantitatively examines factors behind the Japanese public's high voluntary compliance with the government's 'new normal' advice during COVID-19 from both sociocultural and health communication perspectives. Using survey data collected from 3,100 adults in Japan in October 2021, it is found that social coercion increases people's willingness to comply with government advice while belief in COVID-19 conspiracy theories has the opposite effect. In parallel, it is found that perceived efficacy of the new normal practices also increases the willingness to comply with government advice, and the effect is strengthened by health literacy.

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Introduction

To contain the highly infectious COVID-19, governments and health authorities around the world have been promoting behavioural changes in the population. For instance, people are encouraged to adopt the ‘new normal,’ which can be defined as:

New lifestyle and workplace practices in place to contain the virus, which spreads through contact between people. Keep your distance from others. Avoid closed spaces, crowded places, and close conversations (Tokyo Metropolitan Government, n.d.)

Although these measures may sound straightforward, in practice it is proven to be very challenging to achieve mass adoption, especially in democratic countries because they go against individual freedom (Mohan & Hooda, 2021). To avoid the collapse of healthcare systems, some governments were forced to deploy coercive measures, such as penalties, lockdowns, or curfews, to suppress social contacts in the population. In some cases, these measures were met with strong public resistance and even violent protests (Davies et al., 2021).

Japan is one of the few democratic countries, in which, as of the time of writing, the government has not imposed any restrictive measures on individuals, but achieved a wide adoption of new normal practices and a relatively low infection rate. According to the COVID-19 Government Response Tracker database compiled by the University of Oxford (Hale et al., 2021), between 2020 and 2021, Japan’s average number of COVID-

19 infections per million and the average stringency² of the government's containment and closure policies were the lowest among its neighbouring Asian countries as well as major European and North American democracies (Figure 1).

According to the then Prime Minister Shinzo Abe, Japan's apparent success in containing the virus was owing to the government's 'Japanese model' COVID-19 policies (Harding, 2020). However, that might not be the main reason as Wright (2021) argued: *'In summary, almost every element of the Japanese government's response to COVID in 2020 was criticized as inadequate or misguided'* (p 462). With this background in mind, the aim of this study is to quantitatively identify factors behind the Japanese public's high voluntary compliance with the government's 'new normal' advice from both sociocultural and health communication perspectives.

² 'The index records the strictness of 'lockdown style' policies that primarily restrict people's behaviour. It is calculated using all ordinal containment and closure policy indicators, plus an indicator recording public information campaigns' (University of Oxford, n.d).

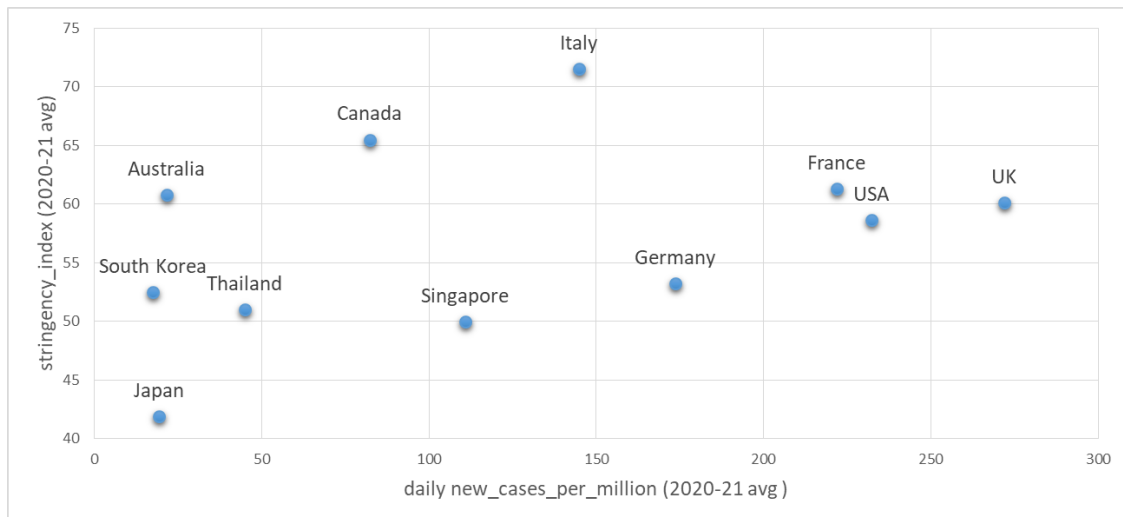


Figure 1 Stringency index and number of new COVID-19 cases (daily/million) [Avg 2020-21]. Source: Oxford Covid-19 Government Response Tracker (University of Oxford, n.d.), rearranged by the authors

Literature review

According to Wright (2021), government and political trust in Japan has been low, and the public has low levels of trust in almost every level of the government. Thus, the wide adoption of the ‘new normal’ practices advocated by the government in Japan was because of its collectivistic culture rather than people’s trust in the government. Specifically, he contends that the *jishuku*(self-restraint) culture played a major role. *Jishuku* in Japanese implicitly implies that individuals should suppress their emotions and desires for the greater good. It has historically been a symbol of Japan’s national solidarity in crises such as the 2011 Great East Japan Earthquake (Ida et al., 2015).

During COVID-19, the *jishuku* rhetoric was the main part of the government’s anti-COVID campaign, in which it ‘requests’ the public to exercise *jishuku* by refraining from leisure activities and social gatherings. The message was disseminated from all levels from the Prime Minister and government officials to pundits and celebrities on

mass media. While many people voluntarily exercised *jishuku*, some escalated it to a form of social coercion. Known as *jishuku-keisatsu* (self-restraint police), some people began to police (through public shaming) others' compliance with the new normal practices (Matsubara, 2021; Wright, 2021). Thus, first, from a sociocultural perspective, we hypothesise that:

- H1: Social coercion increases willingness to comply with government advice.

In parallel, we also anticipate that low political trust would reduce people's willingness to follow government advice. Specifically, studies, for example, Karic and Mededovic (2021) and Loomba et al. (2021), conducted during COVID-19 have found that people who had low trust in governments were more likely to believe in conspiracy theories, such as those that claimed that the pandemic was orchestrated by governments and powerful actors to enslave humanity. Such conspiracy beliefs were found to reduce people's willingness to comply with government policies. Thus, we also hypothesise that:

- H2: Belief in COVID-19 conspiracy theories reduces willingness to comply with government advice.

Based on individual and collective agency theory (Abel & McQueen, 2021), we also assume that people adopted the practices voluntarily because '*individuals are agents of changes in their own lifestyles and in the case of collective agency; their behaviour has major implications on the structural level as well*' (Skyles and Wills, 2018, cited in Abel & McQueen, 2021). In particular, as Able & McQueen (2021) argued, in the case of COVID-19, health literacy—the ability to access, understand, appraise, and apply health information—empowers individuals to see themselves as agents in a collaborative effort to fight the pandemic. That is, by understanding that changes in their behaviour can contribute to society at large, people would perceive adopting new normal practices as

exercising their agency. Indeed, studies conducted during COVID-19 (Clark et al., 2020; Nazione et al., 2021) show that perceived efficacy of health precautions in avoiding COVID-19 predicts voluntary compliance behaviours. From the perspective of health communication, the effect of perceived efficacy on health outcomes is moderated by health literacy (Squiers et al., 2012). Based on this premise, we hypothesise that

- H3: Perceived efficacy of new normal measures increases willingness to comply with government advice.
- H4: Health literacy moderates the effect of perceived efficacy on willingness to comply with government advice.

Last, we constructed a theoretical model (Figure 2) of the four hypotheses with age, gender, education, and government trust included as control variables.

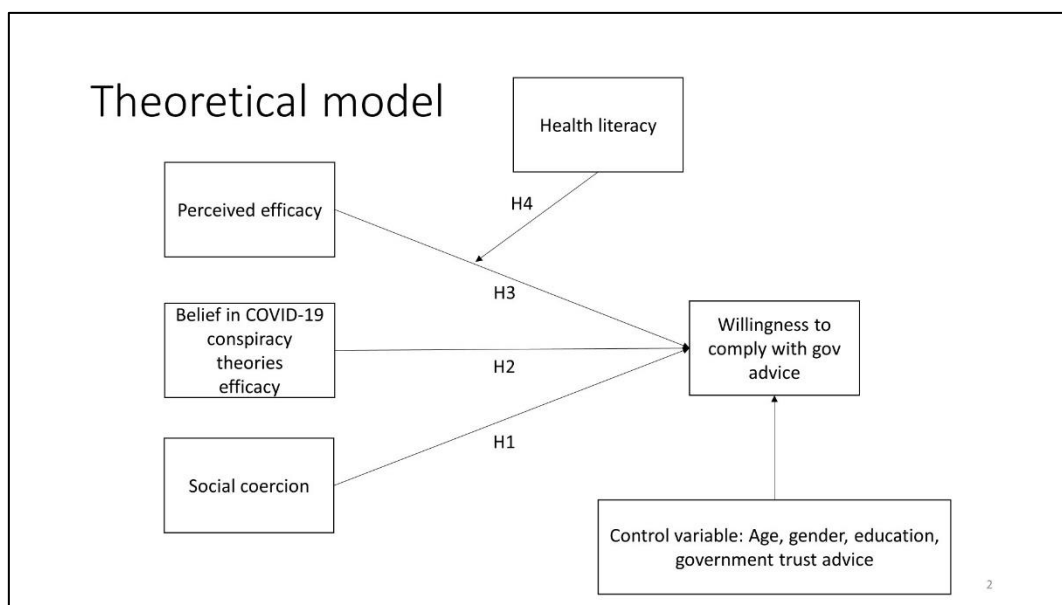


Figure 2 Theoretical model

Data and method

Data were collected from an online questionnaire survey conducted in October 2021³, right after Japan's fourth state of emergency, which lasted ten weeks, was lifted. The survey was carried out by a professional survey company, in which we collected responses from 3,100 adults living in the Greater Tokyo Area questions. The samples were selected from the survey company's panel using quota sampling with equal numbers of male and female respondents in each of the ten age groups (20 to 69 in five-year-steps). We employed confirmatory factor analysis (CFA) to verify the validity and reliability of the variables followed by structural equation modelling (SEM) to test the hypotheses. The data were analysed using IBM SPSS and AMOS version 27.

Dependent and independent variables

DV: 'Willingness to comply to government advice' was operationalised by asking respondents, on a five-point scale, whether they would follow government advice (five) or their own judgements (one) regarding five new normal practices advocated by the Japanese government, such as 'telework/remote schooling,' 'refrain from social gatherings' and 'avoid crowded places' (Cronbach alpha=.937; mean/SD of all five items=3.04/1.32).

IV: 'Social coercion' was operationalised by asking respondents, on a seven-point scale (one=very much to seven=not at all), whether they would feel angry if they see someone not following three main new normal practices, such as 'wearing a mask' and

³ The survey of this study was part of a large survey on the Japanese's COVID-19 behaviours sponsored by Mitomo Lab at Waseda University.

‘refrain from social gatherings’ (Cronbach alpha=.739; mean/SD of all three items=4.36/1.29).

IV: ‘Belief in COVID-19 conspiracy theories’ was represented by a modified version of Jolley & Paterson’s (2020) five-item scale. In which, we asked respondents, on a seven-point scale (one=not at all, seven=very much), how much they believe five widespread COVID-19 conspiracy theories such as ‘reporters, scientists, and government officials are involved in a conspiracy to cover up important information about the origin of the novel coronavirus’ and ‘the real truth about the origin of the novel coronavirus is being kept from the public’ (Cronbach alpha=.739; mean/SD of all five items=4.32/1.15).

IV: ‘Perceived efficacy of new normal measures’ was operationalised by asking respondents, on a five-point scale (one=not at all to five=very much), whether they think four key new normal practices (e.g., refrain from gathering and avoid crowded places) were effective in containing COVID-19 (Cronbach alpha=.882; mean/SD of all five items=4.09/0.83).

Moderator: Health literacy was represented by Okan et al.’s (2020) HLS-COVID-Q22 health literacy scale. It comprises 22 items covering the accessing (six items), understanding (six items), appraising (five items), and applying (five items) of COVID-19-related health information. For example, respondents were asked, on a four-point scale (one=very difficult, four=very easy), how easy or difficult it is to ‘find information on the internet about protective behaviours that can help to prevent infection with the coronavirus’ (accessing), ‘understand risks of the coronavirus that I find on the internet’ (understanding), ‘judge if information on the coronavirus and the coronavirus epidemic in the media is reliable’ (appraising), and ‘use media information to decide how to handle

an infection with COVID-19' (applying) (Cronbach's alpha=.921; mean/SD of all 22 items=2.65/0.43).

Result and analysis

The model fit indices of the CFA⁴ and SEM⁵ were satisfactory according to the criteria recommended by Hair et al. (2014). The variables' validity and reliability were also sufficient⁶.

Results of the SEM⁷ (Figure 3) show that, after controlling for sociodemographic factors including age, gender, government trust, and education, 'social coercion' and 'perceived efficacy' had significant and positive effects on 'willingness to comply with government advice.' Hence, H1 and H2 were supported.

Similarly, H3 was also supported as 'belief in COVID-19 conspiracy theories' had a significant and negative effect on the willingness to comply. It is worth noting that

⁴ CMIN/DF=4.363; GFI=.951; CFI=.962; RMSEA=.033; PCLOSE=1; SRMR=.039

⁵ CMIN/DF=5.973; GFI=.996; CFI=.985; RMSEA=.040; PCLOSE=.937; SRMR=.026

⁶ The Cronbach's alpha of all variables were greater than .6. Their composite reliability (CR) were greater .7. Their maximum shared variance (MSV) were lesser than their corresponding AVE. Their average variance extracted (AVE) were greater than .5 except for 'social coercion' and 'health literacy.'

For 'social coercion,' since its AVE (.495) was just below .5, and its CR and MSV were satisfactory, we accepted it with caution.

For 'health literacy,' although its AVE was .342, considering its large number (22) of observed variables and its CR (.940) and MSV were satisfactory, we accepted it with caution.

⁷ Obtained with 2,000 bootstrap samples with 95% confidence intervals.

the effects of the control variables show that older people and people who had higher trust in the government were more willing to follow government instructions.

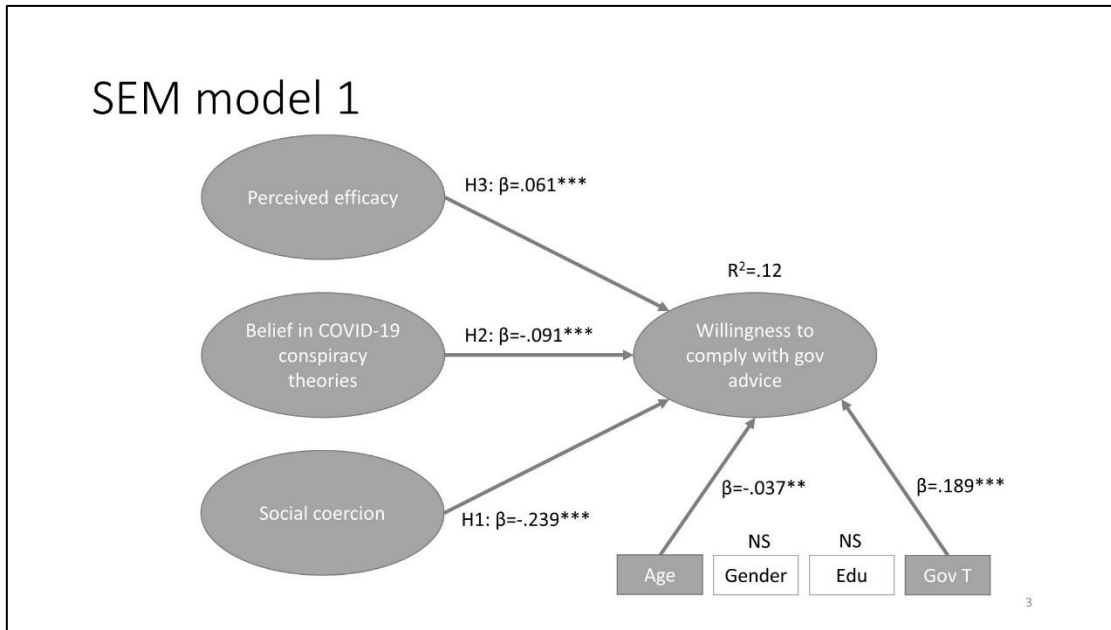


Figure 3 SEM results

For H4, to test the moderation effect of health literacy, we added both ‘health literacy’ and its interaction effect with ‘perceived efficacy’ (health literacy x perceived efficacy) as independent variables to the model. The fit indices of the modified model⁸ were satisfactory. The results (Figure 4) show that the interaction effect had a significant and positive effect on ‘willingness to comply with government advice.’ Thus, H4 was supported.

⁸ CMIN/DF=7.643; GFI=.992; CFI=.972; RMSEA=.046; PCLOSE=.774; SRMR=.030

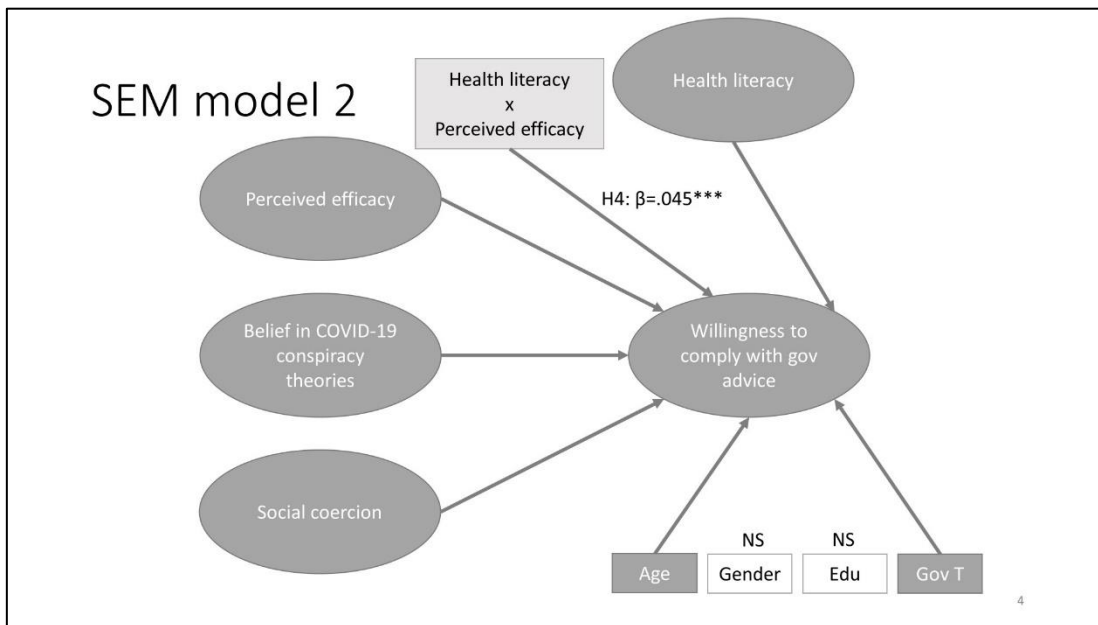


Figure 4 SEM results (moderation effect)

Next, we plotted the effects of ‘perceived efficacy,’ ‘health literacy,’ and their interaction on the willingness to comply using an Excel macro by Gaskin (2016). The results (Figure 5) indicate that ‘health literacy’ strengthens the positive relation between ‘perceived efficacy’ and ‘willingness to comply with government advice.’

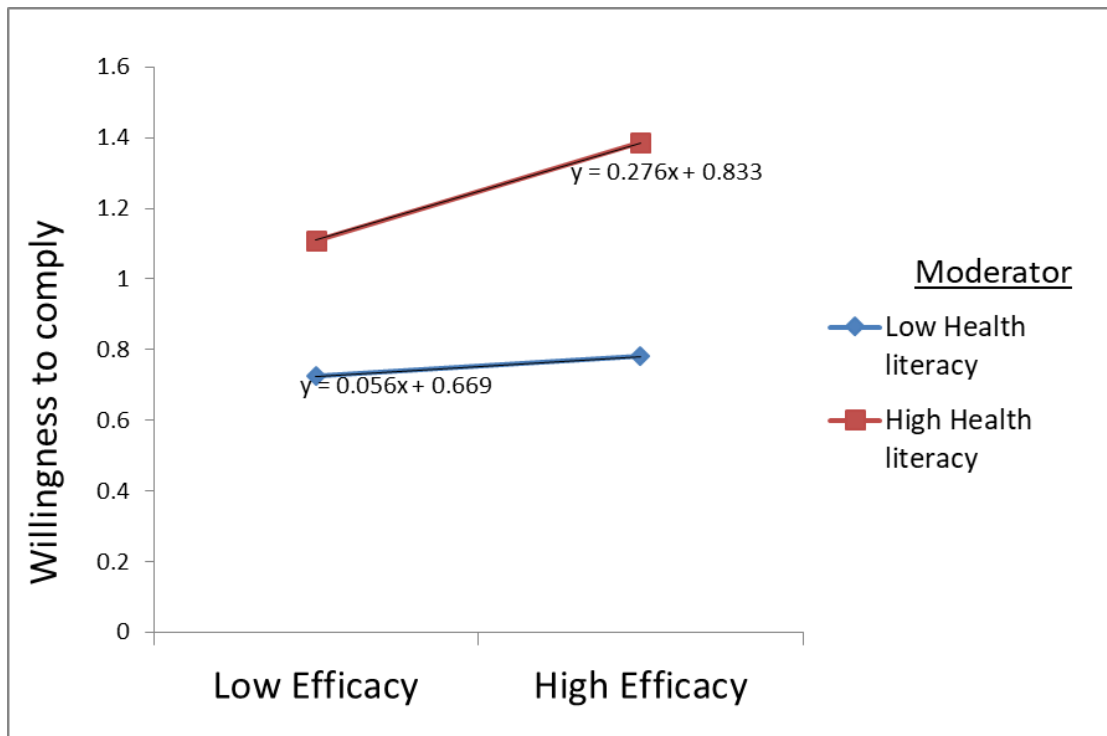


Figure 5 Moderation effect (high/low=greater/smaller than one standard deviation above/below the mean).

Discussion and conclusion

In summary, the results have shown that, in line with Smith's argument, social pressure is the main factor behind the Japanese public's high voluntary compliance with government advice on new normal practices. Specifically, as shown by the result of H1, social coercion increases people's willingness to follow government advice and its effect is the strongest among all the other variables in the model.

That being said, a 2011 poll by Yomiuri Shimbun (2021a) shows that 68% of the people in Japan already felt a sense of 'self-restraint fatigue.' Moreover, media reports (Yomiuri Shimbun, 2021b, 2022) also show many people, especially those in their 20s and 30s, felt that they had reached their 'self-restraint limit.' Some commentators and pundits (BBC News Japan, 2021; Suehiro, 2021; The Mainichi, 2021) have raised the

concern that people's frustration with self-restraining could cause a backlash against the government's advice. Moreover, as demonstrated by the result of H2, belief in COVID-19 conspiracy theory—a product of government distrust—significantly reduces people's willingness to comply with the advice. Therefore, considering the Japanese public's low trust in government, relying on social pressure might not be sustainable in the long run.

The results of H3 and H4 could shed some light on this challenge. They demonstrated that perceived efficacy of the advice increases people's willingness to comply with it. Furthermore, the effect can be strengthened by high health literacy. These findings imply that, on top of requesting the public to self-restraint, health policymakers can also incorporate health literacy education in their effort to contain the pandemic. Moving forward, our next step is to theorise and examine factors that influence specific preventive decisions, such as vaccination.

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