DATA NOTE

A dataset for the perceived vulnerability to disease scale in Japan before the spread of COVID-19 [version 1; peer review: 1 approved]

Yuki Yamada¹, Haoqin Xu², Kyoshiro Sasaki³

¹Faculty of Arts and Science, Kyushu University, Fukuoka, Japan
²Graduate School of Human-Environment Studies, Kyushu University, Fukuoka, Japan
³Faculty of Informatics, Kansai University, Takatsuki, Japan

Abstract
The COVID-19 outbreak is a worldwide medical and epidemiological catastrophe, and the number of psychological studies concerning COVID-19 is growing daily. Such studies need baseline data from before the COVID-19 outbreak for comparison, but such datasets have not yet been accumulated and shared. Here, we provide a dataset on the perceived vulnerability to disease scale for 1382 Japanese participants obtained through an online survey conducted in 2018 that will be useful for comparison with current or post-COVID-19 perceived vulnerability to disease data.

Keywords
coronavirus, disgust, emotion, Japanese, perceived infectability, germ aversion

This article is included in the Disease Outbreaks gateway.

This article is included in the Coronavirus collection.
Corresponding author: Yuki Yamada (yamadayuk@gmail.com)

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Introduction
Currently, a new type of coronavirus infection (COVID-19) is spreading on a global scale. Although the details of this infection are not yet clear, it is rapidly spreading in many countries, and the strength of the infection is likely to be great. In response to this unprecedented situation, governments are asking people to take social distancing measures and limit their outside activities. Under such threats and political measures, the state of mind of the people must also be quite different from before. Therefore, many social and behavioral studies of such factors including people’s political attitudes, controllability, emotional states, anxiety, and stress in COVID-19 situations are being conducted simultaneously and rapidly (Van Bavel et al., 2020). However, it is difficult to predict how long the current pandemic will last, and even if the situation is under control, it is unclear whether the psychological traits of people in the post-COVID-19 world who experienced this pandemic will be similar to those before COVID-19. Thus, such survey studies need pre-outbreak data as a baseline for comparison and data obtained before the COVID-19 outbreak are of great importance. Accordingly, we here provide a dataset for the perceived vulnerability to disease scale obtained in Japan in 2018 (Yamada, 2020).

With the spread of COVID-19 and under the guidance of the World Health Organization (WHO), people have begun to wash their hands more often. Concomitantly, we have become more afraid of infection than ever before. People have begun to disinfect various places and objects with alcohol and to wear masks. These behaviors are based on a heightened perceived vulnerability to disease (PVD). A psychological scale has been developed to measure this tendency (Duncan et al., 2009). The PVD scale is composed of two subscales: “perceived infectability,” which is related to the beliefs of one’s own susceptibility to infecting diseases, and “germ aversion,” which is related to an awareness of discomfort in situations with a high likelihood of infection with a pathogen. This scale has already been localized in Japan (Fukukawa et al., 2014). It has also been translated not only in Japan but other countries as well (Ahmadzadeh et al., 2013; Klavina et al., 2011; Prokop et al., 2010; Skolnick & Dzokoto, 2013). In the early stages of the COVID-19 spread (i.e., January 2020), a Chinese study had already compared PVD scale scores with those of other countries (Goh, 2020). These results suggest that the generality of this scale and the necessity of baseline data are both striking. Therefore, we provide data on the pre-pandemic PVD scale for use in comparative studies (Yamada, 2020).

Methods
Participants
We recruited a maximum of 2000 participants through Yahoo! Crowdsourcing Service and recorded the data collected during the survey period. As a result, a total of 1428 Japanese people in Japan participated in this survey (868 men, 543 women, 17 unknown; mean age 43.40 years).

Scale
We used the Japanese version of the PVD scale developed by Fukukawa et al. (2014). The scale consists of a total of 15 items. Each item was scored on a seven-point scale (1: strongly disagree, 7: strongly agree). Items 3, 5, 11, 12, 13, and 14 were reverse-scaled items. All the items of this scale are available from the original papers (English: Duncan et al., 2009; Japanese: Fukukawa et al., 2014).

Procedure
The survey was conducted from September 22–23, 2018. Participants accessed the Yahoo! Crowdsourcing service page for the link to the web address of the survey page on Google Forms. The participants were first asked to input their age and sex (male, female, or other). The order of items on the scale was randomized across participants based on the setting of Google Forms. In order to check whether the participants were concentrating on the task, a calculation problem (171 − 169 = ?) was inserted as an attention check question to identify respondents who do not answer seriously (Sasaki & Yamada, 2019). After the survey, the participants received 10 T-points (Japanese point service, in which one T-point is worth one JPY) as a reward.

Inclusion
The survey was posted on the website of the crowdsourcing service and users of the service were free to view it and participate in it.

Exclusion
We excluded participants who gave an incorrect answer to the attention check question. As a result, we eliminated the data of 46 participants. We present the remaining dataset for 1382 participants (833 men, 533 women, 16 unknown; mean age 43.46 years) as a relatively reliable one.

Ethical approval and consent to participate
The present study received approval from the psychological research ethics committee of the Faculty of Human-Environment Studies at Kyushu University (approval number: 2016-017). Completion of the survey was taken as consent to participate from participants. Participants had the right to withdraw from the survey at any time without providing a reason. Although we did not obtain personal information about the participants, as this was a crowdsourced survey, it was explained to them that their responses would not be tied to them personally.

Data availability
Underlying data

This project contains the following underlying data:
• PVDJapan2018.xlsx. (The dataset.)
• Description of Dataset.txt.

Data are available under the terms of the Creative Commons Zero “No rights reserved” data waiver (CC0 1.0 Public domain dedication).

Acknowledgments
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References


http://www.doi.org/10.17605/OSF.IO/7Y4AV
The authors provide a dataset of the PVD scale from a Japanese sample in September 2018, which would serve as a baseline for comparison with the PVD in the current and post COVID-19 situations. The study will give not only a dataset but also an important message for future studies on the changes in human behavior during and after this COVID-19 period. I would like to give some minor comments.

**Introduction:**
- To be precise, COVID-19 is an abbreviation for coronavirus disease 2019.
- “perceived infectability” and “germ aversion” may be capitalized, according to Duncan et al. (2009).
- It might be better to clarify that Goh (2020) was a cross-sectional study (i.e., no comparison with pre-COVID-19 data) to underscore the necessity of baseline.

**Participants, Exclusion:**
- It would be better to report SD of participants’ age.

**Procedure:**
- Please clarify whether the calculation problem was inserted between or after the PVD scale items.

**Is the rationale for creating the dataset(s) clearly described?** Yes

**Are the protocols appropriate and is the work technically sound?** Yes

**Are sufficient details of methods and materials provided to allow replication by others?** Yes

**Are the datasets clearly presented in a useable and accessible format?** Yes
**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Cognitive psychology

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