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Cross-cultural comparisons of attitudes toward schizophrenia amongst the general population and physicians: A series of web-based surveys in Japan and the United States

Misty Richards [a,b,c], Hiroaki Hori [a,*], Norman Sartorius [d], Hiroshi Kunugi [a]

[a] Department of Mental Disorder Research, National Institute of Neuroscience, National Center of Neurology and Psychiatry, 4-1-1, Ogawahigashi, Kodaira, Tokyo, 187-8502, Japan
[b] Semel Institute for Neuroscience and Human Behavior, University of California at Los Angeles (UCLA), Los Angeles, CA 90024, USA
[c] Fulbright Foundation, New York, NY 10025, USA
[d] Association for the Improvement of Mental Health Programmes, Geneva, Switzerland

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ABSTRACT

Cross-cultural differences in attitudes toward schizophrenia are suggested, while no studies have compared such attitudes between the United States and Japan. In our previous study in Japan (Hori et al., 2011), 197 subjects in the general population and 112 physicians (excluding psychiatrists) enrolled in a web-based survey using an Internet-based questionnaire format. Utilizing the identical web-based survey method in the United States, the present study enrolled 172 subjects in the general population and 45 physicians. Participants' attitudes toward schizophrenia were assessed with the English version of the 18-item questionnaire used in our previous Japanese survey. Using exploratory factor analysis, we identified four factors labeled "social distance," "belief of dangerousness," "underestimation of patients' abilities," and "skepticism regarding treatment." The two-way multivariate analysis of covariance on the four factors, with country and occupation as the between-subject factors and with potentially confounding demographic variables as the covariates, revealed that the general population in the US scored significantly lower than the Japanese counterparts on the factors "social distance" and "skepticism regarding treatment" and higher on "underestimation of patients' abilities." Our results suggest that culture may have an important role in shaping attitudes toward mental illness. Anti-stigma campaigns that target culture-specific biases are considered important.

1. Introduction

Negative attitudes toward mental illness, schizophrenia in particular, are considered the most significant obstacles impeding improvement in the lives of individuals with these conditions and their families (Kadri and Sartorius, 2005). While stigmatizing attitudes toward schizophrenia are prevalent worldwide (Thornicroft et al., 2009), such attitudes can be shaped by cultural and historical forces (Fabrega, 1991). There is marked heterogeneity in the outcomes of schizophrenia across countries (Sartorius et al., 1996; Hopper and Wanderling, 2000), and one of the reasons for this may be the cross-cultural differences in stigma (Pescosolido et al., 2008). Therefore, understanding the cultural differences in attitudes toward schizophrenia is critical as it could lead to stigma reduction and subsequent improvement in course and outcome.

Studies comparing attitudes toward schizophrenia between Japan and other countries have revealed even more negative attitudes in Japan than in other countries (Furnham and Murao, 2000; Kurihara et al., 2000; Kurumatani et al., 2004; Griffiths et al., 2006). Furnham and Murao (2000) compared British and Japanese lay theories of schizophrenia and found that the British believed individuals with schizophrenia to be less dangerous and abnormal than did the Japanese. Kurihara et al. (2000) contrasted public attitudes toward the mentally ill between the general public in Indonesia (Bali) and those in Japan using case vignettes, and observed that the Balinese held more favorable attitudes toward schizophrenia than the Japanese. Kurumatani et al. (2004) compared elementary school teachers' attitudes toward schizophrenia between Japan and Taiwan, showing that Japanese teachers were more likely than their Taiwanese counterparts to predict that parents and neighbors of individuals with schizophrenia would display stigmatizing attitudes toward such individuals. Griffiths et al. (2006) used case vignettes and compared stigma toward depression and schizophrenia between the general public in Australia and that in Japan, demonstrating more negative attitudes

* Corresponding author. Tel: +81 42 341 2711; fax: +81 42 346 1744.
E-mail address: hori@ncnp.go.jp (H. Hori).

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in the latter. To our knowledge, however, no reports have been published thus far that compare attitudes toward schizophrenia in Japan and those in the United States – countries that are comparable in terms of economic development as well as psychiatric treatment options. We recently conducted a web-based survey to investigate differences in attitudes toward schizophrenia between the general public and three groups of healthcare professionals (i.e., psychiatric staff, physicians and psychiatrists) among a Japanese population (Hori et al., 2011). The main finding of this study was that attitudes of the general population and of physicians were equally stigmatizing, as compared to those of psychiatric staff and psychiatrists (Hori et al., 2011).

In this context, the present study aimed to investigate the potential differences in attitudes of the general public and of medical specialists between the United States and Japan. To make cross-cultural comparisons possible, we herein apply the same web-based approach to the target population in the United States as the one used in our previous survey conducted in Japan. We hypothesized that negative attitudes of both the general population and medical specialists in Japan would be greater than those of each counterpart in the United States.

2. Methods

The present research was programmed into an Internet-based questionnaire format, using a web-based survey tool. A series of web-based surveys were conducted, first in Japan and then in the United States. The survey methods in these two countries were virtually identical. The Internet penetration rate (% population) in Japan and in the US is 80.0% and 78.3%, respectively, according to Internet World Stats (http://www.internetworldstats.com/top25.htm).

2.1. Participants and procedures of the web-based survey in Japan

As detailed in our previous paper (Hori et al., 2011), a Japanese version of the questionnaire was distributed to panel registrants of an online research panel service provided by Yahoo! Japan Research (http://research.yahoo.co.jp). Yahoo is one of the most popular internet service companies in Japan and in the US. The research panel consisted of a wide range of subpanels based on their occupations (manufacturers, farmers, construction workers, physicians, and so forth). Thus, using this subpanel and by asking specific questions, we were able to identify our target participant groups. For example, psychiatrists were identified by requesting participants in the "physicians" subpanel to specify the medical specialty to which they belonged. All the subpanels except for those of medical personnel were classified here as the general population. An invitation email entitled "Lifestyle survey" was sent to panel registrants on 30.05.2009. Participants were given a couple of days to return the questionnaire. On 1.06.2009, the internet research company provided data for the randomly selected 450 subjects. The data were sent to us in the format of a Microsoft Excel file without identifying information (e.g., name, birth date or email address). Of the 450 subjects, one subject who was enrolled as a psychiatrist was excluded because this person demonstrated subpar knowledge pertaining to schizophrenia. Three subjects enrolled as the general population and one additional subject enrolled as a psychiatrist were also excluded because they answered "I disagree" to all of the 18 items on the questionnaire of attitudes toward schizophrenia. Consequently, analyses were performed for 445 participants; 197 subjects in the general population, 100 psychiatric staff other than psychiatrists, 112 physicians other than psychiatrists and 36 psychiatrists. In the present cross-cultural study, data for 197 subjects in the general population and 112 physicians were compared with data for the US counterparts.

With respect to ethical issues, the website has been run by conforming to the personal information protection law as well as the ethical standards, and the panel registrants had voluntarily agreed to participate in web-based surveys at the time of their service registration. There was no possibility for leakage of personal information because the data have been anonymized from the outset. These ethical issues also applied to the US survey.

2.2. Participants and procedures of the web-based survey in the United States

For the survey in the US, an English version of the questionnaire was distributed to panel registrants of an online research panel service provided by an overseas department of the Internet research service company in Japan (Yahoo Value Insight Corporation [now renamed to 'Macromill, INC']; http://www.macromill.com). We identified our target participant groups using the same method that was applied in the Japanese survey described above. An invitation email entitled "Lifestyle survey" was sent to panel registrants from 22.06.2009 to 30.06.2009. This email contained information about informed consent, point rewards and a hyperlink to the online survey. On 30.06.2009, the company provided data for the randomly selected 178 subjects in the general population and 47 physicians other than psychiatrists. At the outset of the present US survey, we had attempted to recruit approximately the same number of participants for each of the four panels as those in the Japanese survey. However, responses were obtained for only 19 psychiatric staff (other than psychiatrists) and one psychiatrist in the present US survey, which was due to the small size as well as low response rate for these panels in the US online research service. The sample sizes for these two groups had insufficient statistical power to detect a significant, if any, difference and were excluded from the analysis. Of these subjects, six subjects who were enrolled as the general population and two subjects enrolled as physicians were removed from our analysis as they answered either "I agree" or "I disagree" to all of the 18 items on the questionnaire of attitudes toward schizophrenia. Consequently, 172 subjects in the general population (male/female: 66/106) and 45 physicians (male/female: 20/25) were included in the analyses.

2.3. Questionnaires

As in the Japanese survey (Hori et al., 2011), the questionnaire used in the US survey was composed of three sections, namely demographic information, knowledge about schizophrenia, and the 18-item questionnaire on attitudes toward schizophrenia. Translation from Japanese to English was performed by two researchers (M.R. and H.H.), and the final version of the questionnaire was edited by staff of the Internet research company who had adequate English and Japanese reading and writing comprehension as well as sufficient experience with questionnaire surveys.

Demographic information of the potential participants included: gender, age, years of education, occupation/qualifications (e.g., manufacturers, farmers, physicians, nurses, and pharmacologists, and so on), specialty in medicine when relevant (e.g., Cardiology, Ophthalmology, Neurology, Psychiatry, etc.), self-reported location of living (i.e., Urban, Suburb, or Rural), household annual income (i.e., (1) Up to $20,000, (2) $20,000–39,999, (3) $40,000–59,999, (4) $60,000–79,999, (5) $80,000–99,999, (6) $100,000 +), experience of mental illness via family member or close friend (i.e., "Do you have family or close friends with a past history of psychiatric illness?"), experience of schizophrenia via