Impact of changing the Japanese term for “schizophrenia” for reasons of stereotypical beliefs of schizophrenia in Japanese youth

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1. Introduction

The stigma of mental disorders stands in the way of improving the quality of life of people with disorders as well as their families. The stigma leads to discriminations in education, employment, personal relationships, marriage and housing. To reduce mental illness-related stigma (particularly regarding schizophrenia), various programs are underway internationally (Sartorius, 2007; Thornicroft et al., 2007). In Japan as well, a strategy to change the term for schizophrenia was introduced. Since each Chinese character conveys its own meaning, and the old term for schizophrenia, “Seishin-Bunretsu-Byo” (Mind-Split Disease), has been replaced by “Togo-Shitcho-Sho” (Integration Disorder) in Japan. Stigma research requiring individuals to report personal beliefs is useful but is subject to social desirability bias. Using the Implicit Association Test, a measurement designed to minimize this bias, we assessed the impact of this renaming on the stereotype of schizophrenia held by a younger generation. The old term was strongly associated with “criminal”, and this association became significantly weaker with the new term. The strategy of renaming holds considerable promise for tempering negative bias toward this disorder in Japan.
One measure designed to minimize response bias is the Implicit Association Test (IAT) (Greenwald et al., 1998). IAT assesses associations that exist beyond conscious evaluation, allowing a measurement of automatic biases even if people are unaware or unwilling to report them. This method has been widely used to assess implicit attitudes and stereotypes associated with many characteristics, including age, race, and gender (Greenwald et al., 2002). Recently, IAT has been applied to the assessment of negative attitude toward mental illness (Teachman et al., 2006). Using IAT, we assessed the impact of renaming on the implicit stigma associated with this disorder in Japan. The most prevalently held stereotype is that of people with mental illness being unpredictable and dangerous (Angermeyer and Matschinger, 2004). The media are an important source of public information on mental illness (Stark et al., 2004), and negative depictions (criminality and dangerousness) of mental illness predominate (Coverdale et al., 2002). The media tend to present sensationalized and stereotypic depictions of mental illness and emphasize propensities toward violence and crime (Hinshaw and Stier, 2008). However, previous studies have revealed that people with mental illness are far more likely to be victims of crime than perpetrators (Hinshaw and Stier, 2008; Teplin et al., 2005). We assessed the association between schizophrenia and criminal versus victim. We hypothesized that the new term would have less automatic association with criminal.

2. Materials and methods

2.1. Participants

Sixty-eight non-medical undergraduate students (28 males and 40 females, mean age 21.5 years, S.D. = 1.4) participated. All were Japanese. They were asked if they were aware of the replacement of the term for schizophrenia. They were further asked about their knowledge of schizophrenia using a 7-point scale (1 = none, 7 = very much). The average score of knowledge was 3.5, indicating that the participants did not have enough or accurate knowledge of schizophrenia, although the majority (88%) knew of the renaming from the media. After complete explanation of the study, written informed consent was obtained from all participants, and the study was approved by the Ethics Committee.

2.2. Measures and procedures

To assess explicit attitudes, participants reported their attitude about mental illness using the Japanese version of the 4-point Link’s devaluation–discrimination-scale (Link, 1987; Shimotsu et al., 2006), a 12-item scale that has been widely used to measure stigma in relation to mental illness. Each item is designed to report what a subject thinks most people’s opinion is concerning mental illness rather than to report the subject’s own opinion. The items include, for example, “Most people think less of a person who has been in a mental hospital.” Each statement is rated on a 4-point scale ranging from “strongly disagree = 1” to “strongly agree = 4”, yielding a total score from 12 to 48. To assess the automatic association between schizophrenia and criminal, IAT was administered according to standard procedures (Greenwald et al., 1998). Briefly, a physical chronic illness, diabetes mellitus, was used for comparison, since schizophrenia is a generally chronic illness, and awareness of comorbid diabetes in schizophrenia has been increasing with the introduction of atypical antipsychotics. The associations of these illnesses with two attributes (criminal and victim) were assessed. We conducted an initial survey to select target words associated with schizophrenia, diabetes, criminal, and victim. Twenty university students other than the participants of this study were screened. They were asked to come up with up to 30 words associated with each of schizophrenia, diabetes, criminal, and victim. We selected the most commonly proposed 10 words for each. Then an experienced psychologist (TI), who was a trained experimenter of IAT, and two experienced psychiatrists (HT and MK) assessed the selected words in terms of word length, complexity, familiarity and clarity. Five words for each category meeting a consensus were finally selected. Schizophrenia (hallucination, delusion, psychiatry, bizarre, seclusion), diabetes (obesity, insulin, diet, sugar, internal medicine), criminal (violence, jail, murder, theft, robbery) and victim (disaster, family, accident, casualty, the bereaved) stimuli appeared in the center of the computer screen. In congruent condition (CC), the concept “schizophrenia” and attribute “criminal” were paired in the top left corner while “diabetes” and “victim” were simultaneously paired in the top right corner. Participants were told to classify any stimuli that belonged to either the schizophrenia or criminal categories on the left, and any that belonged to either the diabetes or victim categories on the right, as quickly as possible by pressing a left or right button. In incongruent condition (IC), the labels were switched and the same categorization task was completed while pairing “schizophrenia” with “victim” and “diabetes” with “criminal”. There were 40 trials for both CC and IC. Since negative attitudes toward mental illness are observed in many cultures (Kadri and Sarthorius, 2005), it was predicted that CC categorizations would be easier and thus made more quickly than IC ones. Strong implicit associations should lead to fast congruent and slow incongruent categorizations. As a result, the IAT effect (reaction time for IC minus CC) provides a measure of the strength of implicit associations. To examine the impact of changing the term for schizophrenia, 2 versions of IAT were run for each participant. The old term for schizophrenia was used in one version, and the new term in the other version. The order of the two versions was counterbalanced across the subjects.

3. Results

The average total score of Link’s devaluation–discrimination-scale was 31.9 (S.D. = 5.5). This was in very good agreement with the study of reliability and validity of the Japanese translated version, in which the average total scores for males and females were 31.6 and 31.9, respectively (Shimotsu et al., 2006). For the “Seishin-Bunretsu-Byo” version, average response latency for CC and IC was 844 ms (SEM = 21) and 927 ms (SEM = 25), respectively, yielding an 84-ms averaged IAT effect. For the “Togo-Shitcho-Sho” version, average response latency for CC and IC was 871 ms (SEM = 24) and 892 ms (SEM = 23), respectively, yielding a 21-ms averaged IAT effect.
Response latencies were analysed by a 3-way analysis of variance (ANOVA) with term (old term vs. new term) and condition (CC vs. IC) as within-subject factors and gender as between-subject factors. ANOVA yielded a significant condition main effect, $F(1, 66) = 15.6, p < 0.001$, and a significant interaction between term and condition, $F(1, 66) = 8.6, p < 0.005$. There was neither significant term main effect ($F(1, 66) = 0.15$) nor gender main effect ($F(1, 66) = 0.60$). There was neither significant interaction between term and gender ($F(1, 66) = 0.35$) nor between condition and gender ($F(1, 66) = 0.03$).

The significant interaction effect was explored further using a simple main effects analysis, which revealed that response latencies were significantly longer ($p = 0.03$) for the old term than for the new term in IC. In CC, there was no significant difference in response latencies between the old and new terms. Response latencies were significantly longer ($p < 0.001$) for IC than for CC in the old term experiment, but not in the new term experiment (Fig. 1). There were loose negative correlations between explicit Link’s scale and IAT effect for both the new and old terms ($r = -0.252, p = 0.05$ and $r = -0.281, p < 0.05$ respectively). There was no significant correlation between explicit Link’s scale and other IAT measures (response latencies for CC and IC).

### 4. Discussion

The current study demonstrated that the old term “Seishin-Bunretsu-Byo” (Mind-Split Disease) was more incongruent with victims than the new term “Togo-Shitcho-Sho” (Integration Disorder), suggesting that the old term was strongly associated with “criminal” vs. “victims”, while the automatic association between the new term and criminal was not strong. There was no positive significant correlation between the explicit Link’s scale and IAT measures. On the contrary, a loose negative correlation between Link’s scale and IAT effect was observed. The lack of positive correlation was expected, but the negative correlation was an unexpected result. Although we do not have precise explanations, several factors might have contributed to this result. Link’s scale is intended for mental illness in general, not only for schizophrenia, and it assesses what a subject thinks most people think about mental illness rather than report the subject’s own opinion. What the subject believes personally and what the subject thinks most people believe might have been different. Moreover, explicit measures are said to possibly be influenced by social desirability bias (Dovidio et al., 1997; Gaebel et al., 2002; Griffiths et al., 2006; Hinshaw and Stier, 2008). Thus, our result suggested the importance of implicit measures in addition to explicit measures in the field of stigma research (Thornicroft et al., 2007). The IAT results indicated that the strategy of renaming seemed successful for tempering the negative bias toward this disorder in Japan. Obviously, it might be superficial and not deal with the root cause of stigma (Lieberman and First, 2007). Still, our results showed that words play some role in the creation of negative images.

The current study has some limitations. First, we did not survey a larger group, systematically, from a wide range of decades. Generational differences in the effect of renaming would be another important topic needing investigation in future studies, as older people would have a longer history with the old term and stigma, and discrimination toward mental illness would have been more evident when they were young. Second, we investigated only the association between schizophrenia and criminal using diabetes as control illness. There are prevalent stereotypes other than “criminal, dangerous and violent” that contribute to stigma for schizophrenia, e.g. incompetent (Hinshaw and Stier, 2008). Further IAT studies to investigate the association between schizophrenia and other stereotypical attributes using different control illnesses are recommended. Finally, the knowledge concerning schizophrenia was assessed using the participants’ self-evaluation of their knowledge about schizophrenia. Future studies will require tools with greater objectivity for assessing knowledge of schizophrenia and examine the effect of knowledge or experience on attitudes toward schizophrenia. We hope that this report will stimulate discussion concerning renaming not only in several Asian areas where identical Chinese characters are used for “schizophrenia”, but also in western societies.
Role of funding source

Funding for this study was provided by a Health and Labor Sciences Research Grant for Comprehensive Research on Disability Health and Welfare (H20-SYOGAI-011) from the Japanese Ministry of Health, Labor and Welfare; the sponsor had no further role in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the paper for publication.

Contributors

Author Takahashi and Ideno designed the study and wrote the protocol. Author Takahashi and Ideno managed the literature searches and analyses. Authors Ideno, Okubo S. and Matsui undertook the statistical analysis, and author Takahashi wrote the first draft of the manuscript. All authors contributed to and have approved the final manuscript.

Conflicts of interest

The authors have no conflict of interest.

Acknowledgment

Emi Yaoita is gratefully acknowledged for data collection.

References


