

Social distance toward schizophrenia among parents of adolescents

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ABSTRACT

Social distance toward schizophrenia is a reason for delays in receiving early treatment for the disorder. This study attempted to identify the factors underlying social distance. The participants were 2690 parents of adolescents. Factor analysis using a social distance scale identified two factors: private relationship and social relationship. Regression analysis revealed that gender, age, and participation in welfare activities for people with mental illnesses had independent effects on the factor private relationship ($p < 0.05$). These results suggest that women aged 40 - 49 years should be targeted for activities that attempt to counteract social distance and that they would benefit from taking part in public welfare activities for individuals with mental illnesses.

Keywords: Schizophrenia; Social Distance; Parents of Adolescents

1. INTRODUCTION

In the recent psychiatric literature, there has been an increasing focus on early detection and intervention for schizophrenia [1-3]. Early detection and intervention can result in effective health management and improved quality of life [1,4,5], while late detection and intervention are associated with lower quality of life and a need for costly residential healthcare [6,7]. One reason for delayed treatment is negative perceptions of schizophrenia [8-10]. Schizophrenia is associated with a number of negative associations [11-13], e.g., that recovery is impossible and that individuals with the disorder are dangerous or incompetent [9,14,15]. However, schizophrenia can be effectively treated [3,4]. In fact, early treat-

ment can result in a satisfactory work and social life [16,17]. The negative image of schizophrenia is thus the greatest obstacle to improving the lives of people with schizophrenia and their families [9,10,18]. Therefore, improving understanding of schizophrenia and dispelling negative images toward the disorder are very important.

Because the opinions and behaviors of parents are very important in help-seeking, the present study investigated the parents of junior and senior high school students in Japan. Schizophrenia patients typically have difficulties in understanding their condition. Therefore, early treatment requires parental assistance. Parents with strong negative images of the disorder may not be open with and about their child and might not seek treatment.

We evaluated social distance toward schizophrenia among parents of adolescents. In addition, because of the importance of determining the characteristics of social distance associated with schizophrenia, we attempted to identify the most common forms of social distance toward schizophrenia so as to develop anti-stigma programs that target early intervention.

2. PARTICIPANTS AND METHODS

2.1. Participants

The participants were enrolled by a Japanese company specializing in research. A total of 2690 parents of junior and senior high school students completed a questionnaire, the details of which have been previously described [19]. The study was approved by the Ethics Committee of the Niigata University School of Medicine.

2.2. Measurement

The questionnaire asked about sociodemographic data such as area of residence, marriage status, and employment status and type. It also included items on attitudes toward schizophrenia, based on the Social Distance Scale-

Japanese version (SDS-J) [20], which was adapted from the Whatley Social Distance Scale [21]. This scale consists of eight questions graded using a 4-point Likert scale (0 - 3 points), with higher scores representing increased social distance.

2.3. Statistical Analysis

All analyses were performed by using the Statistical Package for Social Sciences (SPSS) version 16.0. A *p*-value less than 0.05 was considered to indicate statistical significance, and all statistical tests were two-tailed. Factor analysis with the major factor method and Promax rotation was used to examine the factor structure of the Social Distance Scale. Cronbach's α was used to evaluate the reliability of scales with multiple items. Differences in the distributions of factor scores between categories were analyzed with the *t* test when the factor had two categories and with ANOVA when it had more than two categories. Multiple regression analysis was used to examine the relative importance of different sociodemographic variables in predicting the factor scores.

3. RESULTS

3.1. Participant Characteristics

The participants were 2690 Japanese parents of junior and senior high school students (age range, 32 - 64 years). Area of residence was Kanto for 1069 (39.7%) parents, Kinki for 496 (18.4%), and Tokai for 327 (12.1%). Regarding marriage status, 2552 (94.9%) were married and 121 (4.5%) were divorced. With regard to employment

status, 1373 (51.0%) were full-time employees and 542 (20.1%) were housewives. A total of 2602 (96.7%) respondents had no close relationship with someone with schizophrenia. Other details of the responses have been previously described [22].

3.2. SDS-J Scores in Parents of Adolescents

Mean score on the SDS-J was 12.1 (standard deviation [SD] = 4.05), and the total score ranged from 0 to 24. Cronbach's α for the SDS-J was high, at 0.849. The median score was 11.92, which indicates moderate social distance.

Results of factor analysis of the SDS-J revealed two factors with eigenvalues ≥ 1 . Factor 1 was private relationship (proportion of variance, 50.2%; α coefficient, 0.82), and factor 2 was social relationship (proportion of variance, 12.72%; α coefficient, 0.709), for a total variance of 16.3%. The mean score was 8.60 for factor 1 (SD, 2.85; range, 0 - 15) and 3.47 for factor 2 (SD, 1.63; range, 0 - 9; **Table 1**).

3.3. SDS-J Factor 1 Scores and Demographic Factors

The mean scores for factor 1 and related demographic factors are shown in **Table 2**. Gender was significantly associated with the score for factor 1. Women had a higher score ($p < 0.05$). Regarding age, respondents aged 40 - 49 had the highest score ($p < 0.05$). Regarding employment status, participants with a side job had the highest score ($p < 0.05$). With respect to occupation, re-

Table 1. Factor loading of social distance Scale-Japan (major factor method and Promax rotation).

Factor		
No. of SDSJ item	Factor 1	Factor 2
Factor 1: Private relationship		
Q4. I would not ride in a taxi driven by someone with schizophrenia who had been in a mental hospital	0.827	-0.062
Q5. I would rather not hire a person with schizophrenia who had been in a hospital	0.718	0.148
Q6. School teachers with schizophrenia who have been in a mental hospital should not be allowed to teach	0.677	0.065
Q8. I would be against any daughter of mine marrying a man with schizophrenia who had been in a hospital	0.723	-0.051
Q7. If I needed a baby sitter, I would be willing to hire a woman with schizophrenia	0.536	-0.128
Factor 2: Social relationship		
Q1. It is best not to associate with a person with schizophrenia who had been in a mental hospital	0.046	0.818
Q3. It would bother me to live near a person with schizophrenia who had been in a mental hospital	0.339	0.413
Q2. It is wrong to shy away from a person with schizophrenia	-0.185	0.682
Eigenvalue	4.017	1.017
Explained variance %	50.212	12.718
α	0.820	0.709

Factor loadings >0.5 are used. Total variance, 16.373 %; $\alpha = 0.849$. SDSJ: Social Distance Scale-Japan. Q2 and Q7 were reversed items and were reverse-scored.

Table 2. Factor scores in factor 1.

	n	mean	p
Gender			0.002
Male	1381	8.43	
Female	1309	8.78	
Age, years			0.003
30 - 39	221	8.56	
40 - 49	1904	8.72	
50 - 59	548	8.26	
60 - 69	17	7.41	
Employment status			0.038
Full-time	1373	8.52	
Part-time	461	8.72	
Self-employed/housework/liberal profession	259	8.81	
Side job	10	9.20	
Full-time homemaker	542	8.70	
Unemployed	34	7.21	
Other	11	7.82	
Occupation			0.030
Agriculture	10	8.60	
Forestry	0	-	
Fisheries	1	-	
Mining	2	8.50	
Construction	144	8.47	
Industry	454	8.45	
Electricity/gas/heat/water	31	8.29	
Information/correspondence	70	8.07	
Transportation	71	8.24	
Distributor/retailer	194	8.84	
Finance/insurance	116	9.01	
Real estate	39	9.00	
Restaurant/lodging	58	8.76	
Medicine/welfare	194	9.32	
Education/learning support	144	8.06	
Mixed	5	9.80	
Service	282	8.62	
Official duty	144	8.32	
Others	155	8.64	
Family income, yen			0.002
<1 million	41	9.10	
1 million to 3 million	196	8.62	
3 million to 5 million	502	8.47	
5 million to 10 million	1465	8.48	
>10 million	486	9.06	
Participation in welfare activities for people with mental illnesses			0.001
Yes	222	8.01	
No	2468	8.65	
t-test, ANOVA			

spondents who answered “mixed” had the highest score ($p < 0.05$). In addition, people in families earning less than 1 million yen per year had the highest score ($p < 0.05$). Respondents were asked whether they participated in welfare activities for people with mental illnesses, and those who had not participated in such activities scored higher than those who had ($p < 0.05$).

Multiple regression analysis revealed that gender, age and participation in welfare activities for people with mental illnesses were significantly associated with factor 1 ($p < 0.05$; **Table 3**).

4. DISCUSSION

In Japan, 333,000 people were hospitalized for mental illness in 2008 [23]. In the past, the government kept such patients in isolation, which led to international criticism. The transition from an institution-based to a community-based mental care system was formally initiated by the “Law Related to Mental Health and Welfare of Persons with Mental Disorders” of 1999. However, support after discharge from mental hospitals was not included in the legislation, which partially explains why many Japanese have a negative image of mental illness [24]. These negative attitudes toward mental illness affect patient quality of life and treatment. Thus, combating unfavorable images of people with mental illness is essential [15,25-28]. In 1996, the World Psychiatric Association began its Open the Door anti-stigma campaign [11]. In Japan, it was promoted in a number of areas, including the cities of Obihiro, Sendai, Okayama, and Ichikawa. We surveyed the present population because it was not included in the Open the Door campaign. We hope that our findings will help people at risk of mental illness.

There are two types of stigma scales. One measures social stigma, e.g., Link’s Devaluation-Discrimination Measure. The Devaluation-Discrimination Measure asks respondents to evaluate statements such as “most people would accept a person with schizophrenia as a close friend” or “most young women would be reluctant to

date a man who has schizophrenia”. Other instruments assess individual stigma, e.g., the Social Distance Scale. It includes statements such as “It is wrong to shy away from a person with schizophrenia” or “If I needed a baby sitter, I would be willing to hire a woman with schizophrenia”. We examined social distance toward schizophrenia. In our study, two factors were revealed by factor analysis of the Social Distance Scale: private relationship and social relationship. The former was of particular interest because this scale measures individual stigma (factor 1). The results showed that lack of participation in public welfare activities for individuals with mental illnesses was associated with greater social distance ($p < 0.05$). In contrast, we previously found that social stigma was significantly greater among those who participated in public welfare activities for individuals with mental illnesses [19]. That is to say, lack of participation in public welfare activities for people with mental illnesses was the largest contributor to stigma for the individual, while participation in public welfare activities resulted in the greatest stigma in social relationship. These results are similar those reported in a study by Tania [29], which investigated implicit and explicit attitudes to schizophrenia.

We investigated private relationships. The results suggest that it is necessary to develop measures to address social distance toward schizophrenia among Japanese women aged 40 - 49 years and to encourage them to participate in public welfare activities. We caught focus target. Provision of stigma by private relationship is a social activity. We must plan public campaigns that encourage busy mothers of adolescents to take part in welfare activities. Finally, we hope that similar investigations will be conducted in other countries.

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Table 3. Results of multiple regression analysis of factor 1 and factor 2 as dependent variables ($n = 2690$).

Variable	Factor 1			Factor 2		
	β	t	p	β	t	p
Gender	0.060	3.135	0.002	-0.045	-2.352	0.019
Age	-0.053	-2.746	0.006	0.002	0.121	0.904
Employment status	0.008	0.437	0.662	-0.044	-2.264	0.024
Marital status	-0.013	-0.657	0.511	-0.040	-2.075	0.038
Welfare activities for people with mental illness	0.062	3.230	0.001	0.099	5.141	0.001

β : standardized regression coefficient; t: t-value; R: multiple correlation coefficients.

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