

Japanese Schizophrenics and the Family

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Schizophrenia is a type of devastating psychiatric condition. Among various potential causes, family environmental factors may play an important role. The purposes of this study were to identify the patterns of presentation of parental problems in Japanese schizophrenics and to evaluate the significance of the problems. Thirty-five schizophrenics were selected from medical records in a mental hospital based on DSM-III criteria. An age and gender matched control group ($n = 29$) was selected at random. A questionnaire form was used to collect data from both groups. The following patterns were observed significantly more in the schizophrenic group than in the control group: i) absence of both parents, ii) the presence of problems in the social life of one or both parents such as alcoholism, anti-social behavior or domestic violence and iii) a history of serious illness or injury, e.g., that which requires hospitalization over 3 days time involving problems derived from auto accidents (loss of limb) or congenital disease suffered during the formative years of the patients. Family environmental factors appear to play a significant role in the development of schizophrenia in Japan. With changing family structures in Japan, sound family environment should be emphasized for the well-being of mental health in Japanese adolescent children.

Key words: family environment; schizophrenia

In Japan, as seen in other countries, schizophrenia is a major psychiatric condition. In 1990, over 200,000 patients or approximately 63% of the total number of hospitalized psychiatric patients were due to schizophrenia (Japanese Health and Welfare Statistics Association, 1995). This was far more than the second highest cause (geropsychosis; 11.1%).

In the etiology of schizophrenia, the previous studies have focused on organic changes in the brain (Asaka et al., 1981), genetic factors (Fukuda and Mitsuda, 1979), and effects of chemical substances (Shimizu, 1979).

Effects of family environment have been also studied. European researchers have recognized that parents may be important in the development of schizophrenia (Lidz and Lidz, 1949; Watt and Nicholi, 1979; Sham et al., 1992; Noordsy et al., 1994). In addition, expressed

emotion has been investigated, and high expressed emotion in the family has been related to the recurrence of schizophrenia (Brown et al., 1962, 1972; Leff and Vaughn, 1981; Vaughn, 1984; Leff et al., 1987, 1990; Tarrier et al., 1987, 1989; Barrelet et al., 1990). However, there has been no study considering expressed emotion in the development of schizophrenia.

In Japan, parental influences on schizophrenics have not been well studied (Okonogi et al., 1967). In Japanese families, a parent-child relationship is close and continues until children leave their homes. The children are expected to respect their parents, and the parents serve as a mirror for their children. Thus, research in effects of family environmental factors on development of schizophrenia is beneficial in Japan.

The purposes of this study were to identify

Abbreviation: DSM, diagnostic and statistical manual of mental disorders

Table 1. Description of samples

	Schizophrenic Group			Control Group		
	Total	Male	Female	Total	Male	Female
Number	35	16	19	29	16	13
Mean age at present *	32.9	31.6	34.2	28.9	29.2	28.6
Age range*	21–49	21–42	24–49	24–35	25–34	24–35
Mean age at onset*	18.8	19.1	18.4	NA	NA	NA

* Year.

NA, not applicable.

patterns in the influence of parental problems on hospitalized schizophrenics and to evaluate the significance of the problems.

Materials and Methods

A schizophrenic group ($n = 35$; 16 males and 19 females) was selected based on medical records of hospitalized schizophrenic patients in a mental hospital in Kitakyushu city, Japan (Table 1). The patient ages ranged from 21 to 49 years. The first episode of schizophrenia was confirmed by the age of 24 years. Diagnosis of schizophrenia was based on DSM-III criteria at the time of admission. At the time of this study, DSM-IV criteria had not yet been available. None of the patients had a schizophrenic parent. An age- and gender-matched control group ($n = 29$; 16 males and 13 females; age range of 24 to 35) was selected at random from healthy individuals (Table 1).

A questionnaire was used to collect data on various family environmental factors: i) age of onset of schizophrenia, ii) loss of a parent or

parents by the age of 24 due to death, separation, or divorce, iii) problems in the social life of a parent or parents such as alcoholism, anti-social behavior or domestic violence, iv) number of family members, v) genetic factors of mental disorders within first-degree relatives, vi) history of serious illness or injury, e.g., that which requires hospitalization over 3 days time involving problems derived from auto accidents (loss of limb) or congenital disease suffered during the formative years, vii) birth order and viii) other factors. For the control group, the author interviewed the individuals in order to fill out the questionnaires. A hospital psychiatrist reviewed the medical records to fill out the questionnaire based on the patient's medical records.

A chi-squared test was used to find out the statistical significance ($P < 0.05$) between the 2 groups among the following factors: i) loss of a parent or parents by age of 24, ii) problems in the social life of a parent or parents, iii) history of serious illness of the child during the formative years and iv) birth order.

Table 2. Loss of a parent or parents by age 24

Lost parent(s)	Schizophrenic group			Control group		
	Total [35]	Male [16]	Female [19]	Total [29]	Male [16]	Female [13]
Father	4	0	4	2	1	1
Mother	0	0	0	2	1	1
Both*	7*	2	5	0*	0	0

[], number of samples.

* Loss of both parents versus presence of at least one parent between the schizophrenia and control group: chi-square with 1 degree of freedom, 6.51; $P < 0.05$.

Table 3. Presence of problems in the social life of a parent or parents

Problems in	Schizophrenic group			Control group		
	Total [35]	Male [16]	Female [19]	Total [29]	Male [16]	Female [13]
Father	3	2	1	2	1	1
Mother	10	4	6	1	0	1
Both	3	0	3	1	1	0

[], number of samples.

Chi-square with 1 degree of freedom, 7.52; $P < 0.01$.

Results

Loss of a parent or parents by age of 24

In the schizophrenia group, 4 patients had lost fathers, and 7 patients had lost both parents (Table 2). In the control group, 2 had lost their fathers and another 2 had lost their mothers. A chi-squared test showed no statistical difference in the following comparisons: i) loss of at least 1 parent versus the presence of both parents, ii) loss of father versus presence of father or both parents, and iii) loss of mother versus presence of mother or both parents. However, loss of both parents versus presence of at least 1 parent showed a significant difference between the schizophrenia and control groups ($P < 0.05$).

Problems in the social life of a parent or parents

Sixteen patients (3 who lost fathers, 10 who lost mothers, and 3 who lost both parents) and 4 control individuals (2 who lost fathers, 1 who lost his/her mother, and 1 who lost both parents)

had parents who had problems in their social life (Table 3). A chi-squared test showed a significance difference in the 2 groups ($P < 0.01$).

History of serious illness

The data were available for 31 of 35 patients (Table 4). Fourteen patients and 5 control individuals had a history of serious illness. The difference was significant ($P < 0.05$).

Birth order

The data were available for 34 of 35 patients (Table 5). Thirteen patients and 16 control individuals were first-born children. No statistically significant difference was found between the 2 groups.

Discussion

In this study, the author attempted to review the significance of family environment in the development of schizophrenia in Japan. There were 3 statistically significant findings in the

Table 4. Presence of history of serious illness

History of serious illness	Schizophrenic group			Control group		
	Total [35]	Male [16]	Female [19]	Total [29]	Male [16]	Female [13]
Positive	14	7	7	5	1	4

[], number of samples.

Chi-square with 1 degree of freedom, 5.39; $P < 0.05$.

Table 5. Birth order

Birth order	Schizophrenic group			Control group		
	Total [34]	Male [16]	Female [18]	Total [29]	Male [16]	Female [13]
First-born	13	7	6	16	9	7
Later-born	21	9	12	13	7	6

[], number of samples.

schizophrenic group: i) a high incidence of absence of both parents, ii) a high incidence of presence of problems in the social life of one or both parents and iii) a high incidence of serious illness during the formative years of schizophrenic patients. These significant findings may be classified into primary and secondary factors. The primary factors involved the child's own reactions to or recognition of specific problems such as loss of both parents, stress from parental maladjustment, and psychological trauma from serious illness. Secondary factors could be economic hardship, disruption of living conditions, and enforced morbidity due to the primary factors. Lack of parental guidance and care or the appearance of parental over-protection could be secondary factors.

In this study, expressed emotion was not reviewed. Expressed emotion involves criteria similar to those used in this study and includes critical comments, hostility and emotional overinvolvement (Brown et al., 1972). Expressed emotion is then classified into high and low. A high expressed emotion in a family environment was associated with the recurrence of schizophrenia (Brown et al., 1962, 1972; Leff and Vaughn 1981; Vaughn, 1984; Leff et al., 1987, 1990; TARRIER et al., 1987, 1989; Barrelet et al., 1990). It will be useful to apply these criteria and relate to the family environmental etiology of schizophrenia.

One of the primary factors for the onset of the disease was the loss of both parents in the schizophrenic group. In Europe and the United States, Pollock et al. (1939), Lidz and Lidz (1949), Lucas (1964), Watt and Nicholi (1979) found the loss of a parent to be significant in the development of schizophrenia in their research. Loss of both parents in the formative

years of schizophrenic patients was not discussed. In this study, loss of only 1 parent was not a significant factor. Loss of both parents was a significant factor. It is difficult to explain the difference in the results of this study and the previous studies. However, this might be at least in part due to a difference in family structures between Japan and Western countries.

Family environment has been changing in Japan. When this study was conducted in the early 80's, the divorce rate was low. Yet, in Europe and the United States, broken family environments were already present, and the term "single parent" was becoming popular. Currently in Japan, we see a similar trend in broken family environments. Family support for a single parent in Japan might not yet be common. A single parent was due to death of a parent. Now, divorce might be the most common cause of a single parent. Siblings may be raised separately due to divorce. It is necessary to study the family environment again at this point and compare it with the results of earlier studies in Europe, the United States and Japan. Based on the results of this study, family environmental factors are important in the development of schizophrenia in Japan, and further studies on the family environment are warranted.

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