

Short-Term Effects of Psychoeducation Group Therapy for Schizophrenic Inpatients

統合失調症患者に対する心理教育グループの短期効果に関する研究

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Abstract

The aim of this study was to evaluate the short-time effects of group psychoeducation program on inpatients with schizophrenia on an acute care unit in a psychiatric hospital in Tokyo, Japan.

The subjects were 105 inpatients diagnosed with schizophrenia; 71 completed the four sessions of the psychoeducation program. The program consisted of four sessions for two weeks which designed to encourage patients with various diagnoses to discuss their admission to hospital, their illnesses, medication, and coping with problems relating to taking medication and was offered to groups of 5 to 8. Two measures were used in semi-structured interviews to assess program effects Medication and Treatment Adherence (MTA) and Schedule for Assessment of Insight Japanese version (SAI-J). In addition, neuroleptic dosage, Brief Psychiatric Rating Scale assessment and demographic data were collected at baseline.

Scores on the two outcome measures were significantly improved for the program participants. Awareness of the necessity of medication and treatment increased. An effect of the psychoeducation group program may have been to accelerate or focus participants' understandings and skills for self-management after hospitalization.

Further research is needed to develop therapeutic interventions that improve patients' empowerment and inspires their desire for recovery.

Key Words Psychoeducation, Schizophrenic Inpatients

Awareness of Illness, Compliance with Medication

キーワード 心理教育, 統合失調症患者, 病の認識, 服薬コンプライアンス

. Introduction

Treatment of schizophrenia by combining medication treatment with a psychosocial approach has been found to be more effective in reducing a length of stay in hospital and preventing a relapse than pharmacotherapy alone. In recent by, psychiatric care for people with mental illness has been shifting from a hospital to

community in order to provide care and support that can restore social functioning and improve quality of life.

Compliance of antipsychotic medication on schizophrenia patients tends to be poor¹⁾, and has been found to be significantly associated with a patient's level of knowledge about schizophrenia²⁾. Non-compliance with medication has frequently appeared to result in a relapse and the need for rehospitalization that cause disadvantages for living difficulty in the community, or feelings of powerless. Also, non-compliance related to some factors such as severity of illness, social isolation, fear of dependency, and side effects³⁾. However, these factors expected to change to positive outcomes when patients got self-awareness, early symptom recognition,

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and more positive attitude toward the illness and treatment⁴). Moreover, positive attitude toward care during psychotic experience has been found to be significantly related to good outcome at follow-up⁵).

Studies have shown that insight is a clinical modulator of compliance with treatment^{6) 7)}, and poor insight into illness has been shown to be associated with lack of compliance with treatment⁸⁾. The effect of insight on both compliance and outcome has been investigated, and the results have been conflicting, but most studies have demonstrated a positive relationship about compliance and insight^{7) 9)}. Patients with good insight are said to be less likely to be rehospitalized and tend to comply more with treatment, whereas patients who lack insight are said to be more likely to be non-compliance with treatment¹⁰⁾.

Insight has been defined both as awareness of having an illness and as a complex, multidimensional construct that includes much more than awareness of having an illness; no consensus about the definition and meaning of insight has been reached. For example, David (1990) suggested that insight has three dimensions: (a) awareness of illness, (b) capacity to re-label psychotic experiences correctly, and (c) compliance with treatment¹¹⁾. Mayer-Gross¹²⁾ in a now classical study found that although patients with schizophrenia lack insight in terms of logical comprehension, they often come to assume certain attitude toward their illness. Psychoeducation is likely to influence this "certain attitude toward their illness".

Over the years, education efforts have been directed toward people with schizophrenia and their families¹³⁾¹⁴⁾. Although the effect of psychoeducation in improving symptoms or preventing relapses has never been clearly demonstrated¹⁵⁾, a number of studies have indicated the positive effects of education. For example, patients who participated in a compliance therapy group had higher scores on measures of insight and attitudes to treatment and also longer survival days in the community prior to admission¹⁶⁾. Another study demonstrated that psychoeducation improved patients' understanding of their illness and compliance with neuroleptic medication¹⁷⁾.

In Japan patients with schizophrenia who attended an education program showed significant improvement in knowledge of their illness and medication¹⁸⁾.

Also, a medication management module for schizophrenic inpatients was effective in improving their symptom management, social skills and knowledge of

medication¹⁹⁾. Results of another study suggested that psychoeducation programs for patients should not only provide patients with knowledge but also improve patients' motivation and attitude²⁰⁾.

A comprehensive approach to psychoeducation of patients with schizophrenia means not only providing correct information about the illness, antipsychotic agents and symptom management, but also providing a comprehensive program includes improvement of patients' social function. The aim of psychoeducation is to enable patients to manage their own symptoms, cope with problems living in the community, acquire skills for maintaining their well-being, and improve their quality of life. It should draw out the disabled peoples' latent ability and autonomy, encourage patients to actively participate in their treatment, and restore their dignity and self-esteem²¹⁾²²⁾. Psychoeducation has the potential to increase schizophrenic patients' acceptance and integration of their illness experience²³⁾. The ultimate goal is for people with mental illness to be able to receive treatment and care based on making appropriate treatment choices by themselves and making their own decisions. Patients should be aware of their attitude toward their illness and treatment, because these attitudes seem to be related with thoughts about "intention to recover from psychosis" and "rebuilding self-esteem"²⁴⁾.

Poor awareness of illness and the psychotic experience seems to be a psychopathological trait of acute rather than chronic schizophrenia²⁵⁾. Thus, the acute care unit of a large hospital in Tokyo developed a group-based psychoeducation program that included attention to those issues. The aim of the psychoeducation program was to motivate patients to accept hospital treatment and medication, encourage patients to review their treatment by discussing their experiences, and to prepare patients to maintain compliance with medication after discharge from the hospital. The unit provided an opportunity to examine the effects of such a program. A pre-test and post-test design could be used to examine the effects of a group-based psychoeducation program for schizophrenic inpatients on the acute care unit.

. Methods

1 . Subjects

All subjects were inpatients between 2000 to 2002 on an acute care unit in a large (686 beds) psychiatric hospital in Tokyo. The unit consisted of sixty beds, and the mean of stay in hospital was 60.9 days in 2002. During the

study interval 154 patients participated in the psychoeducation program. Of these 105 were diagnosed with schizophrenia (ICD-10). All the patients diagnosed with schizophrenia entered the study. Thirty-four (34) participants were discharged from the hospital before completing the program, after completing one or two sessions. Therefore, seventy-one (71) participants were the subject of this study.

Informed consent to participate in the study was obtained before patients began the program per procedures approved by the Ethics Review Committee in the hospital.

2. Measures

Two outcome measures were administered at these interviews: Medication and Treatment Adherence (MTA) Scale and Schedule for Assessment of Insight (Japanese version) (SAI-J). Interviews were conducted by two co-researchers; the first 20 administrations confirmed satisfactory inter-rater reliability for scoring the MTA and SAI-J.

2-1. Medication and Treatment Adherence (MTA) Scale

The MTA consists of 12 questions to measure level of recognition about hospitalization, symptoms, medication, coping behaviors and knowledge (Table 1). One point was recorded for a "correct or proper" response and 0 for "incorrect or unsuitable" response²⁶⁾.

2-2. Schedule for Assessment of Insight Japanese version (SAI-J)²⁷⁾

SAI-J was used as an insight measure (David AS. 1990; translation and partial modification by Kim Y, Table 2)¹¹⁾. It consists of three items on treatment compliance, three on awareness of illness, and two on awareness of psychotic experiences, each scored on a scale of 0 to 2 points. Higher scores on each sub-scale mean better insight.

2-3. Brief Psychiatric Rating Scale (BPRS)

Patients' psychiatric symptoms were assessed by the 18-item version of the BPRS during sessions A and B of the psychoeducation program by the psychiatrist responsible for the patients' care.

Table 1 Medication and Treatment Adherence (MTA) Scale

1) Why were you taken to the hospital?
2) What kind of symptoms do you have?
3) What is the role of neuroleptics?
4) What should you do when symptoms occur?
5) What should you do to prevent symptoms from occurring in the future?
6) What is an auditory hallucination?
7) What is a delusion?
8) What are the side effects of neuroleptics?
9) What should you do when you have side effects?
10) What happens if you stop taking your medicine by yourself?
11) Why is it necessary to keep taking your medicine?
12) What should you do when you forget to take your medicine?

Table 2 Schedule for Assessment of Insight (Japanese version) (SAI-J)

1a. Observation of patients' acceptance treatment
1b. What would you do if you were entrusted with continuing take your medicine in the future?
1c. What do you think about your admission?
2a. Do you think you have an illness? or Do you think there is something wrong with you (mental, physical, unspecified)?
2b. Do you think you have a mental or psychiatric illness?
2c. How so you explain your illness?
3a. Do you think the belief that [insert specific delusion] is not really true?
3b. How do you explain these phenomena [the belief that hearing voice or seeing image, etc.]?

3 . Procedure

The psychoeducation groups were closed. Nineteen separate programs were held. Each group consisted of 5 to 8 inpatients some diagnosed with schizophrenia and others with different diagnoses. The four sessions (A to D) of each program were conducted in one series during two weeks (Table 3). The program was provided by a multi-disciplinary team composed of a psychiatrist, a nurse, and a pharmacist; two conducted each session, depending on session focus. All groups experienced the program by the same team. Each session included lecture and discussion. Patients were given a booklet outlining the content of the sessions in advance. A member of the research team attended the sessions as an observer.

The semi-structured interviews, which took 40 to 50 minutes, were conducted before session A and after session D. In addition to the questions of the MTA and the SAI-J patients were asked about their impression of the psychoeducation group.

4 . Statistical analysis

The scores were analyzed with statistical analysis system software. Changes over time in the experimental group were tested for significance by the paired *t*-test. Probability values less than 0.05 were regarded as statistically significant.

. Findings

1 . Characteristics and clinical data of subjects

Demographic characteristics and clinical descriptors for study participants (those who completed the study) are shown in Table 4.

2 . Analysis of the results for the MTA Scale (Table 5)

For study participants, scores after the program was significantly higher than those at baseline (mean score, baseline 5.82, after 7.75; *t* = - 5.49, *p* < 0.001).

Changes in scores for study participants on particular items differed; mean scores for all items showed increase in acceptable scores. Four questions showed comparatively greater increase in percentage of patients giving an acceptable response: “ Why were you taken to the hospital? ” (from 43.7% to 64.8%; +21.1), “ What should you do to prevent symptoms from occurring in the future? ” (from 26.8% to 56.3%; +29.5), “ Why is it necessary to keep taking your medicine ? ” (from 38.0% to 62.0%; +24.0), and “ What should you do when you forget to take your medicine? ” (from 22.5% to 50.7%; +28.2). Increases were least for the following three items: “ What is an auditory hallucination? ” (from 76.1% to 81.7%; +5.6), “ What is a delusion? ” (from 66.2% to 66.2%; no change), and “ What are the side effects of neuroleptics? ” (from 74.6% to 85.9%; +11.3).

Table 3 Group Psychoeducation Program

<p>Session A: Orientation (confirm content and purpose of the psychoeducation program, self-introduction) Theme: Illness and treatment Leader: a psychiatrist / Co-leader: a nurse</p>
<p>Session B: Theme: Benefits and side effects of medicine Leader: a pharmacist / Co-leader: a nurse</p>
<p>Session C: Theme: How to deal with medication Leader: a nurse / Co-leader: a nurse</p>
<p>Session D: Theme: Review of treatment and preparation for discharge Following by a question and answer period Leader: a nurse / Co-leader: a psychiatrist</p>
<p>(Four sessions at 40 ~ 50 min per session)</p>

Table 4 Characteristics of study participants at baseline (n=71)

Age	Mean (s.d.)	40.3	(12.4)
Gender	Male (%)	36	(50.7)
	Female (%)	35	(49.3)
Admission type	Voluntary (%)	24	(33.8)
	Involuntary (%)	47	(66.2)
Age at onset	Mean (s.d.)	23.6	(7.3)
Marital status	Single (%)	45	(63.4)
	Married (%)	12	(16.9)
	Divorced (%)	14	(19.7)
Education completed	< High school (%)	11	(15.5)
	High school (%)	29	(40.8)
	College (%)	17	(23.7)
	Post graduate (%)	2	(3.1)
	Others (%)	12	(16.9)
Number of admissions	Mean (s.d.)	3.8	(2.7)
Days before participating	Mean (s.d.)	32.1	(21.0)
Daily doses (Chlorpromazine equivalents)	Mean (s.d.)	603.8	(381.2)
BPRS-all	Mean (s.d.)	43.5	(10.9)

Table 5 Scores of MTA and SAI-J before and after the psychoeducation program

	Study participants (n=71)		
	Before Mean (s.d.)	After Mean (s.d.)	p-value
MTA (range 0-12)	5.82 (3.11)	7.75 (3.13)	0.000
SAI-J (range 0-16)	6.34 (3.76)	7.97 (4.12)	0.000

(paired *t*-test)

3 . Analysis of the SAI-J scores (Table 5)

The mean total score of the SAI-J for the study participants was significantly higher after the program (mean score, baseline 6.34, after 7.97; $t = -3.97$, $p < 0.001$).

For the study participants, scores on some items increased while on others they decreased; all changes reflected positive response to program content. In regard to compliance with medication; "Observation of patients' acceptance treatment" (1a), those who adhered to medications increased (from 67.6% to 87.4%; +19.8); who showed refusal verbally or emotionally decreased (from 30.9% to 9.8%; -21.1). Also, "What would you do if you were entrusted with continuing take your medicine in the future?" (1b); those who answered "Ask a doctor or continue to take my medicine" increased (from 49.2% to 61.9%; +12.7); those who answered "Stop taking some (select medicine I needed) without consulting a doctor" decreased (from 21.2% to 12.6%; -8.6), and those who answered "Stop taking my medicine" decreased (from 28.1% to 16.9%; -11.2).

Similarly, in regard to awareness of their illness: "Do you think you have an illness? or "Do you think there

is something wrong with you? (mental, physical) (2a)", those who answered "Often think so" or "Sometimes think so" increased (from 53.5% to 63.9%; +10.4), and "Do you think you have a mental or psychiatric illness?" (2b); those who answered "Never think so" decreased (from 38.0% to 21.2%; -16.8).

Lastly, concerning awareness of psychotic experiences; "Do you think that your psychotic experiences are not really true or happening?" (3a)", those who answered "They are really true" decreased (from 15.5% to 5.6%; -9.9), while those who answered "part of my illness" increased (from 16.9% to 23.9%; +7.0). Also, "How do you explain these phenomena (hearing voices, seeing that image, etc.)?" (3b)", those who answered "reaction to outside event (tiredness, stress etc.)" increased (from 7.0% to 15.5%; +8.5). However, about half of the 71 study participants answered, "I have no idea" to questions, "How do you explain your illness?" (2c)", "Do you think that your psychotic experiences are not really true or happening?" (3a)" and "How do you explain these phenomena (hearing voices, seeing image, etc.)?" (3b)".

. Discussion

The overall purpose of this study was to examine the effects of a psychoeducation group for inpatients with schizophrenia on acute care unit. Participating patients showed significant improvements in compliance with treatment and awareness toward their illness as short-term effect after the program; this finding is consistent with the results of previous reports²⁸⁾.

Study participants showed increased knowledge and coping skills. The MTA items where the changes were greatest were those reflecting cognition and coping skills: reason of admission in hospital, necessity of continuance of taking medication, doing for prevention of recrudescence of symptoms, doing when forgetting to take medicine.

The majority of patients (66.2 %) recognized that their admission was voluntary. Improved coping skills were shown in answers such as “ I consult the nurse or doctor when I forget to take my medicine ”; where the patient had begun to exhibit help-seeking behaviors. With regard to other cognitive items, most patients already knew the meaning of “ auditory hallucination ” (76.1%) and “ delusion ” (66.2%), and “ side effects of neuroleptics ” (74.6%) before the program, perhaps because there were only fifteen patients among the 71 study participants (21.1%) for whom this was the first admission. Additional sources of information are associated with hospital stay: patients probably exchanged information which each other, particularly in regard to the side effects of neuroleptics, and many patients had opportunities to see or hear about the condition of other patients. Inpatients have opportunities to acquire knowledge about treatment from each other every day.

And, the number of study participants who showed verbal or emotional refusal speech and action toward compliance with medication (SAI-J, 1a) decreased after the program. If patients were to be responsible for taking medicine independently (SAI-J, 1b) the number of patients answered that they would confirm with a doctor and continue taking medicine increased, while those responding that they would partially quit or stop taking medicine decreased. Participants seem to have realized the advantage of taking medicine or the disadvantages of interrupting their medication based on the experiences of other patients in the psychoeducation group. Patients perceive the benefits of medication were more likely to take medication than those who did not perceive benefit²⁹⁾. About awareness of illness (SAI-J, 2a, 2b), the

number of study participants who did not think their illness mental or psychiatric decreased. They seem to feel vague about their illness. Further, the number of patients who thought their delusional experiences were really true (SAI-J, 3a) decreased, and those who regarded their psychotic phenomena as part of their illness or as a reaction to outside events increased. This recognition of their symptoms may affect motivation for self-symptom management. These results suggest that structure of the program, which was oriented to direct patient-to-patient communication based on shared views of the illness, empowered individuals. That the wards function as small communities for the inpatients may also promote interaction between inpatients that may affect compliance with treatment. Thus, it might be that a program effect is to provide a sprout of awareness toward their illness and adherence to treatment or awareness that they may be mentally ill that is later associated with seeking treatment. Many patients took their medicine even though they did not have sufficient insight into their illness.

Previous research has indicated that illness recognition and perceived need for treatment significantly contribute to the help-seeking behavior of persons with schizophrenia³⁰⁾. However, understanding of how patients come to be aware of their illness even if slightly is still lacking.

What meaning does a psychoeducation group for schizophrenia patients on an acute care unit have? As outlined Table 3, this psychoeducation program aims to influence patients ' motivation for the admission and medication treatment and preparation for compliance after discharge from hospital. Those patients who completed the four sessions of the program showed responses that might indicate improved motivation for admission and treatment and in understandings about purpose of medication treatment, concrete coping skill and help-seeking behavior, and awareness of their illness or symptoms. Further research is needed about which dimensions of awareness toward illness are related to behavioral changes in medication adherence as a long-term effect. Especially, it is important to understand subjective experiences of their own illness and taking medicine of patients who do not believe they are mentally ill.

Although the acute care unit provided a setting for evaluating its psychoeducation program over a number of iterations, its clinical imperatives prevented use of randomization to a control group or even post-program

assessment of those participants who began the program but then were discharged as soon as they showed improvement. A more sophisticated design could answer questions more definitively. The need for further quantitative and qualitative research, including that which examines post-discharge experience, is great.

. Conclusion

The results of this study suggest that the psychoeducation group program for the schizophrenia patients on an acute care unit was probably effective in improving their awareness of the necessity of medication and treatment immediately after the intervention as a short-term effect. Further research is necessary to develop a therapeutic intervention that will improve patients' empowerment and inspire their desire for recovery and rehabilitation.

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