Relationship between Family Knowledge and Compliance in Medication for Schizophrenia Outpatient at Prof. M. Ildrem Mental Hospital

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Abstract

BACKGROUND: Schizophrenia is a global health problem that demands care and support. Compliance with taking medication for schizophrenia patients is influenced by the efficacy of taking medication, support for patients, side effects of drugs, and patient attitudes. The family is the closest person to the patient who has an important role in the patient's recovery.

AIM: The objective of the was to determine the relationship between family knowledge and compliance with schizophrenia outpatient at Prof. M. Ildrem Mental Hospital.

METHODS: This study was a comparative analytic study using a cross-sectional design. Questionnaire data obtained from 50 respondents of schizophrenia patients and 50 of their families were processed and then analyzed using the Chi-square test.

RESULTS: Chi-square test with p = 0.008, $< \alpha$ 0.05, indicating that there is a relationship between family knowledge and adherence to medication in schizophrenia outpatients.

CONCLUSION: Many factors affect compliance in the treatment of schizophrenic patients, one of which is the level of family knowledge about schizophrenia. Family knowledge about schizophrenia is very important, because the higher the level of family knowledge about schizophrenia, the patient's adherence to treatment will also be better.

Introduction

Schizophrenia is the term for a mental disorder, in which thought and perception are severely impaired. People suffering from schizophrenia have delusional beliefs and, in many instances, these are accompanied by auditory hallucinations, visual hallucinations, and delusion. People with schizophrenia display disorganized thinking and behavioral changes that cause impairment in activity and social functioning. The fifth edition of the diagnostic and statistical manual of mental disorders now understands all psychoses as variants of schizophrenia. This schizophrenia spectrum includes schizophrenia, other psychotic disorders, as well as schizotypal disorder. Schizophrenia typically has an onset in adolescence or young adulthood and most estimates are that approximately 1% of the population is affected. Schizophrenia is thought to have a genetic component and having first degree relatives with the disorder greatly increases the risk of developing schizophrenia. Recent research indicates that mutations at genetic loci related to schizophrenia are heterogenous, with a relatively weak contribution on of any single mutation [1]. For decades it was thought that incidence of schizophrenia

was consistent regardless of the geography and the time period. However, several systematic reviews have elucidated high variability of schizophrenia incidence rates among sites, ranging from 8 to 43 per 100,000 individuals. There is also high inconsistency in results among studies regarding the prevalence of schizophrenia, reporting up to 13-fold variation (from 0.12 to 1.6 per 100) [2]. Mental health is still a serious problem in Indonesia. Basic Health Research Data (Riskesdas) 2013 recorded that the prevalence of severe mental disorders in Indonesia reached 1.7 per mile, meaning that 1–2 people out of 1,000 people in Indonesia experience severe mental disorders [3].

Data from Riskesdas 2013 stated that the total number of households analyzed for mental disorders was 294,959 consisting of 1,027,763 household members from all ages [3]. Severe mental disorder is a mental disorder characterized by impaired ability to judge reality or poor insight. Severe mental disorders are known as psychosis and one example of psychosis is schizophrenia [4].

Nearly 70% of patients treated in psychiatry in Indonesia are due to schizophrenia [5], [6]. Many families of patients with schizophrenia do not fully

understand the course of schizophrenia, the impact of the disease, and the length of treatment for schizophrenia. Even though this disease can be controlled with strong self-will and family support, the sufferer can live a normal life [7]. Although the standard of care for schizophrenic patient includes antipsychotic drugs, poor medication adherence is pervasive globally and leads to negative outcomes that affect not just individuals with schizophrenia, but also families and communities [8].

In Indonesia, the average relapse of people with schizophrenia in 2 years is 1.48 times. Jalil revealed, based on the results of his research at Dr. Sardjito Yogyakarta in 2003, the relapse rate of people with mental disorders reached 25% in the 1st year, 70% in the 2nd year, and even 100% in the 3rd year [9]. There are four factors that cause schizophrenic patients to relapse and need to be treated in mental hospitals, including patients, families, doctors, and case managers. The family is the main support system that provides direct care for every patient's condition, whether healthy or sick. Health status in a family is influenced by family knowledge and attitudes [7]. Approximately 25% of patients with schizophrenia, psychosis, or severe mental disorders fail to comply with the treatment program. Compliance with taking medication in schizophrenic patients can be influenced by the efficacy of taking medication, support for patients, side effects of drugs, and patient attitudes [10]. Non-compliance to medication in schizophrenia is a common problem. It leads to frequent recurrence of psychosis which has negative impact on individuals and their families. Understanding and reducing non-adherence are therefore a key challenge to quality care for schizophrenia patients [11].

Morken *et al*. found that poor medication compliance among schizophrenic patients is common, with a proportion of 30.9–60.3%. Research shows that young women have better medication adherence than men, that elderly patients may be affected by memory impairment, and that patients with poor socioeconomic status and severe mental symptoms also have poor medication adherence [12]. The problem faced is because most families of schizophrenic patients do not understand and do not know about patient care. In fact, this factor can cause relapse in outpatient schizophrenia patients [13]. One of the factors to prevent recurrence in schizophrenic patients is to carry out regular treatment programs. The treatment referred to in this study is medication compliance [14].

Obedience is defined as liking according to orders, obeying orders, while compliance is behavior according to rules or discipline [15]. Compliance can also be defined as positive behavior of patients in achieving therapeutic goals, dose, and frequency of using the drug throughout the specified time [16]. The patient compliance is defined as "the extent to which the patient's behavior is in accordance with the provisions given by health professionals [17]." Several factors that support patient compliance consisting of five elements such as education, accommodation, modification of environmental factors and social, changing therapeutic models, and increasing health professional interactions with patients [18].

Based on this, the authors wanted to find out whether there was a relationship between the level of family knowledge on medication compliance in schizophrenia outpatient at Prof. M. Ildrem Mental Hospital.

Methods

This study is a comparative analytical descriptive study with a cross-sectional approach, conducted at Prof. M. Ildrem Mental Hospital, with inclusion criteria for outpatient schizophrenia patients based on PPDGJ III, who have had treatment for 6 months, while the criteria for the patient's family are people who live at home with the patient and care for the patient a minimum of 6 months. The number of samples in this study was 50 respondents. Data were collected using a questionnaire distributed to the respondent's family, a knowledge level questionnaire that had been validated, and then, the respondent was given a medication adherence questionnaire, Morisky Medication Adherence Scale. The questionnaire was filled in directly by each respondent. Because this study is an unpaired categorical comparative analytic study, the Chi-square statistical test is used.

Results

The characteristic of the participants is shown in Table 1.

Table 1: Baseline characteristics of the study subject

Respondents characteristics	n	%
Gender		
Male	33	66.0
Female	17	34.0
Age		
15–25	6	12.0
26–35	17	34.0
36–45	14	28.0
46–55	13	26.0
Education		
Elementary school	5	10.0
Junior high school	11	22.0
Senior high school	30	60.0
University	4	8.0
Employment status		
Employed	32	64.0
Unemployed	18	36.0
Marital status		
Married	25	50.0
Single	25	50.0

Table 2: Distribution of knowledge of family respondents

Knowledge	n	(%)
High	27	54.0
Low	23	46.0
Total	50	100.0%

Based on Table 1, there were more male patients, amounting to 33 people (66%), the patient's age of onset is dominated by the age range of 26–35 years as many as 17 people (34%), the level of education of patients is more than high school, namely, 30 people (60%), more schizophrenic patients, are working, which is 32 people (64%), patients who are not married and who are married are the same.

Based on Table 2 shows that out of a total of 50 respondents from the patient's family, 27 people (54.0%) have high knowledge and 23 others (46.0%) have low knowledge.

Based on Table 3 showed that from a total of 50 patient respondents, 22 people (44%) had moderate adherence and the least had high adherence, namely, 11 people (22%).

Table 3: Distribution of the patient medication compliance

Compliance	n	(%)
High	11	22.0
Moderate	22	44.0
Low	17	34.0
Total	50	100.0%

Table 4 shows that the results of statistical test analysis using Chi-square obtained p = 0.008, it can be concluded that there is a relationship between family knowledge and compliance to medication for schizophrenia outpatient.

Table 4: The relationship between family knowledge and medication adherence in outpatient schizophrenia patients

Family knowledge	Compliance take medication			p
	High	Moderate	Low	
	n %	n %	n %	
High	8 (29.6)	15 (55.6)	4 (14.8)	0.008
Low	3 (13.0)	7 (30.4)	13 (56.5)	
Total	11 (22.0)	22 (44.0)	17 (34.0)	

Discussion

Schizophrenia is a clinical syndrome of various very disturbing psychopathological conditions involving thought processes, emotions, perceptions, and behavior with a greater incidence in men than in women. This is consistent with this study, the number of male respondents was 33 people (66%) while 17 women (34%).

The onset of schizophrenia before the age of 10 years or after 50 years is very rare. Approximately 90% of patients on treatment for schizophrenia are between the ages of 15 and 55 years [4]. In line with this study, six people aged 15–25 years (12%), aged 26–35 years were 17 (34%), aged 36–45 years as many as 14 people (28%), and age 46–55 years as many as 13 people (26%). Schizophrenia poses a burden to the government, families, and society because the patient productivity decreases and ultimately creates a large cost burden for patients and families. From the government's point of view, this disruption costs a lot of health care costs [3].

The results of the Chi-square analysis showed a significant relationship between family knowledge and medication adherence in schizophrenia outpatient with p = 0.008. These results are in accordance with the study of Zygmunt *et al.*, where, in this study, the results obtained that there was a relationship between family knowledge and medication adherence in schizophrenia patients. Family knowledge about schizophrenia is very important, because the higher the level of family knowledge about schizophrenia, the patient's adherence to treatment will also be better [14].

Similar results were also found in the study of Sharif *et al.*, where family education showed a positive effect on treatment in preventing relapse [19]. An observational analytical study conducted by Yudi *et al*. showed that there was a relationship between family knowledge and relapse in schizophrenic patients, based on bivariate statistical tests. It shows a prevalence ratio of RP = 2.5 meaning, families with low knowledge, and schizophrenic patients that will have a 2.5 times chance of experiencing a relapse compared to families with high knowledge.

Compliance with taking medication is the alignment of the patient with the recommendations of health care providers in accordance with the time, dose, and frequency of using drugs throughout the specified time [18]. Sometimes the cause of the patient's non-adherence to treatment therapy may be due to the length of time taking the drug so that the patient feels bored.

Factors that support patient compliance consist of five elements, namely, education, accommodation, environmental and social factors, changes in therapeutic models, and health professional interactions with patients [18]. Families are expected to be able to better understand, know, and understand which in the end can play an active role in supporting schizophrenic patients to always be obedient in following treatment therapy, which is done directly or indirectly [20].

The study conducted by Nuralita et al., showed a significant relationship between the burden of treatment with expressed emotion. The burden of care has an impact on emotional, physical health, social life, and financial status as a result of caring for sick people. Some negative emotional responses expressed by the family, such as hostility, criticism and excessive emotional involvement, which are profound in cases of mental illness caused by unexpected social stigma and psychotic behaviour, are significantly associated

with recurrence in psychotic patients. Not only family knowledge about schizophrenia, expressed emotion in the family of schizophrenic patients also has an influence on medication adherence of schizophrenic patients [21]. Schizophrenia is a clinical syndrome that varies, but is very disturbing. The psychopathology of which involves cognition, emotion, perception, and other aspects of behavior. The manifestations of this expression vary across patients and from time to time, but the effects of the disease are always severe and usually have a long duration. Treatments for schizophrenia are typical antipsychotics and atypical antipsychotics. Typical antipsychotics drug can cause extrapyramidal symptoms, and atypical antipsychotics can cause metabolic syndrome such as increased blood glucose levels [22], [23]. Sometimes the side effects of this medication also make the patient non-compliance in taking medication. Therefore, families who care for patients with schizophrenia are expected to understand about the side effects of antipsychotic drugs, so that they can reduce the side effects that arise due to antipsychotic drugs used by schizophrenic patients. So that treatment adherence in schizophrenic patients can be carried out optimally.

Conclusion

Schizophrenia is a chronic disease and requires long-term treatment. Many factors affect adherence in the treatment of schizophrenic patients, one of which is the level of family knowledge about schizophrenia. Families who understand the illness of schizophrenic patients can help patients heal faster and can prevent relapse in schizophrenic patients.

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