Effectiveness "Kamio" on Treatment Compliance and Quality of Life Bipolar Disorder Patient

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Effectiveness "Kamio" on Treatment Compliance and Quality of Life Bipolar Disorder Patient in Dr. Iskak General Hospital, Tulungagung, East Java

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ABSTRACT

Background: Bipolar Disorder is a chronic disease with various variations in the course of the disease that are often unknown, misdiagnosed and even when diagnosed are often not adequately treated. The aim of the study was to analyze the effectiveness of KamiO on quality of life in Bipolar Disorder patients at dr. Iskak Tulungagung Hospital.

Subjects and Method: Observational study with randomized control trial was conducted at dr. Iskak General Hospital, Tulungagung, East Java, from May 25 to August 25, 2022. The study population were 160 patients with bipolar disorder. A 114 sample was selected using the simple random sampling divided into (1) 57 sample in the treatment group and (2) 57 sample in control group. In this study, the independent variable was KAMIO. The dependent variable is medication adherence and quality of life. While the measuring instrument used is a questionnaire. Data analysis using Mann Whitney test.

Results: Patients in the intervention group more adherent to visit medical treatment (Mean= 63.00) than control group (Mean= 52.00), with p= 0.039. Quality of life in bipolar disorder patients in the intervention group (Mean= 72.25) was higher than in the control group (Mean= 42.75) and it was statistically significant (p<0.001).

Conclusion: Quality of life in the intervention group (kamio cards) is higher than in the control group.

Keywords: kamio effectiveness, treatment adherence, quality of life, bipolar

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BACKGROUND

Every normal individual will experience changes in mood or mood in him. These changes are influenced by an event or problem experienced by the individual. Individuals will experience a happy mood at a certain time if everything goes well according to their wishes. The individual's mood can also change or even he feels discouraged, sad, and like losing hope if something is not according to his wishes. Bipolar disorder, also known as manic-depressive disorder, is a medical disease characterized by changing moods, which can increase (hypomanic or manic) or decrease (depressive) for no reason. Bipolar disorder is a chronic disease with various variations in the course of the disease that is often unknown (Evans, 2000; Tohen and Angst, 2002; Toni et al., 2000).

The provision of psychopharmaceuticals in bipolar disorder is divided into three phases, namely the acute phase, stabilization and maintenance. These three phases take a long time. At the beginning of treatment, the therapist needs to build awareness of the patient about his disease condition that requires long-term treatment and to his family to provide support and supervision of treatment. Often patients feel bored with the long-term treatment, feel they have recovered or are not sick so they decide to stop treatment. Adherence to treatment in people with bipolar disorder has an impact on their quality of life (Idaiani et al., 2019).

Based on data from The Institute for Health Metrics and Evaluation in 2017 (Ritchie and Roser, 2018), 0.6% of the world's population or around 46 million individuals suffer from Bipolar Disorder. According to the World Health Organization (WHO), about 5.7 million individuals (about 1%) of the entire world population suffer from Bipolar Disorder and it is the 6th leading cause of disability. The prevalence of Bipolar Disorder in Indonesia according to Bipolar Care Indonesia (BCI) in 2016 was 1% and in 2017 it was 2% of the population. A total of 72,860 individuals in Indonesia suffer from Bipolar Disorder (BCI, 2018).

Based on patient data at RSUD dr. Iskak Tulungagung, Bipolar Disorder in 2016 was not included in the top 10 most types of disease in the Psychiatric Poly. In 2017 Bipolar Disorder was ranked 8th (a total of 22 patients) and in 2018 it was still ranked 8th (a total of 26 patients). In 2019 the number of Bipolar Disorder patients increased rapidly so that it was ranked 3rd (a total of 106 patients). In 2020 in the midst of the Covid-19 Pandemic, Bipolar Disorder patients who came to the Psychiatric Polyclinic decreased and ranked 4th (48 patients). As the Covid-19 Pandemic decreased, until September 2021 the Psychiatric polyclinic served 160 Bipolar Disorder patients. Of the 160 patients, 48 patients (30%) did not adhere to treatment.

Adherence to the treatment of bipolar disorder patients is strongly influenced by the patient's insight into their illness, current episodes of bipolar disorder, the accuracy of the type and dosage of psychopharmaceuticals, side effects of drugs, family support, ease of access to health and so on. Belief patients and those around them that long-term treatment can damage organs and psychiatric drugs are a class of drugs that cause addiction to play a role in medication adherence.

Non-adherence to treatment is a patient condition that requires special attention so that a separate code (Z91.1) is made in the International Classification of Diseases (ICD) X andGuidelines for the Diagnostic Classification of Mental Disorders (PPDGJ) III which is still in use today. During more than five years of practice as a psychiatrist, the author often encounters Bipolar Disorder patients and some of them do not comply with treatment. This condition is a special problem that requires intervention so that patients adhere to treatment immediately. Some of the reasons for patients not complying with treatment include patients forgetting to take their medicine, feeling they have recovered, not feeling sick, no family taking or routinely controlling patients to take medicine, information from people around the patient who say long-term drugs are damaging to the kidneys, make patients addicted to drugs or drugs, the

class of drugs and the influence of the social media they read.

Theory of Planned Behavior developed revealed that behavioral intentions are influenced by attitude variables (attitude toward behavior), subjective norms (subjective norms) and perceived behavioral control variables. Based on this theory, researchers are interested in conducting research on "Analysis of mix method theory of planned behavior model of the effectiveness of KamiO on medication adherence and quality of life in Bipolar Disorder patients at dr. ISKAK Tulungagung (Ajzen,1987).

SUBJECTS AND METHOD

1. Study Design
This research belongs to the type of quantitative research, with the design of this study using a Randomized Control Trial with a posttest control group design approach. The research was conducted on May 25-25 August 2022 in RSUD dr. Iskak Tulungagung

2. Population and Sample
This study the population was all patients with Bipolar Disorder totaling 160 respondents in RSUD dr. Iskak Tulungagung. The sample in this study is 114 respondens was divided into two, in the case group as many as 57 respondents and the control group as many as 57 respondents. The sampling technique in this study used a simple random sampling method.

3. Study Variables
The independent variable in this study is the effectiveness of KamiO. The dependent variables in this study were medication adherence and quality of life in bipolar patients.

4. Operational definition of variables
KAMIO intervention is medication card used to control bipolar patients, with para-

meter KAMIO intervention was contolled for 3 months.

Obedience is behavioral that is classified as following the rules and orderly in acting, with parameter obedience exercises self control. And Quality of Life is assessment of a person's lengt of life and effectiveness his life with parameters WHOQOL-BREF

5. Study Instruments
In this study, the measuring instrument used was a questionnaire. The questionnaire is a list of statements that have been well structured, mature, where the respondent gives a certain mark.

6. Data analysis
The analysis used is univariate and bivariate analysis. In this study using the independent T test if the data is normally distributed or using the Mann Whitney test if the data is not normally distributed.

RESULTS

1. Sample Characteristics
The results of the study were patients with bipolar disorder in the area of RSUD dr. Iskak Tulungagung a total of 114 respondents. The frequency distribution table for the characteristics of the research subjects is described in table 1.

Table 1 shows the results of the characteristics of research subjects based on age, gender and last education. In the age category of respondents, the results showed that most of the respondents in the control group were older than the average value, namely 33 respondents (28.9%). While in the intervention group the majority of respondents were less than 37 years old, namely 29 respondents (25.4%).

The gender of the respondents in the control group were mostly women, namely 40 respondents (35.1%). While in the intervention group the majority had female sex, namely 43 respondents (37.7%). In the control group education category, the majo-

rity of respondents were high school education, namely 26 respondents (22.8%). While in the intervention group, most of the 21 respondents (18.4%).

Table 2 shows the results of the characteristics of the research variables based on medication adherence and quality of life. In the category of respondent's medication adherence, it was found that most of the respondents in the control group were not compliant, namely 31 respondents (27.2%). While in the intervention group, the majority of respondents obeyed, namely 37 respondents (32.5%). The quality of life category of respondents showed that most of the respondents in the control group were not good, namely 35 respondents (30.7%). While in the intervention group the majority of respondents were good, namely 42 respondents (36.8%).

Table 1. Characteristics of Research Subjects Based on Age, Gender, and Education

Characteristics	control group		Intervention group	
	n	%	n	%
Age				
< mean 37	24	21.1	29	25.4
mean 37	33	28.9	28	24.6
Gender				
Man	17	14.9	14	12.3
Woman	40	35.1	43	37.7
Last education				
SD	5	4.4	6	5.3
Junior High School	21	18.4	13	11.4
Senior High School	26	22.8	21	18.4
D1/D2/D3/S1/S2	5	4.4	17	14.9

Table 2 Characteristics of Sample Based on Drug Compliance and Quality of Life

Characteristics	control group		Intervention group	
	n	%	n	%
Compliance with taking medication				
Not obey	31	27.2	20	17.5
Obey	26	22.8	37	32.5
Quality of life				
Not good	35	30.7	15	13.2
Well	22	19.3	42	36.8

2. Bivariate Analysis

Table 3. Mann Whitney Test Variable Kamio's Effectiveness on Medication Compliance in Bipolar Disorder Patients

	N	Mean Rank	Sum of Ranks	Z	p
Control	57	52.00	2964.00	-2.063	0.039
Intervention	57	63.00	3591.00		

Table 4. Mann Whitney Test Variable Kamio's Effectiveness on Quality of Life in Bipolar Disorder Patient

	N	Mean Rank	Sum of Ranks	Z	p
Control	57	42.75	2.437	-4.769	<0.001
Intervention	57	72.25	4,118		

Bipolar disorder patients in the intervention group (Mean= 72.25) was more adherent to visit medical treatment than in the control group (Mean= 42.75) and it was statistically significant (p 0.039).

Quality of life in bipolar disorder patients in the intervention group (Mean= 72.25) was higher than in the control group (Mean= 42.75) and it was statistically significant (p<0.001).

DISCUSSION

Efforts to prevent the relapse phase in bipolar sufferers is by taking medication. Mood stabilizer drugs have a significant impact in balancing the brain neurotransmitters of people with bipolar disorder, thereby reducing the relapse phase. There are two types of patients who do not adhere to the drug, namely, International Adherence, where the patient stops the treatment process or reduces the dose without the doctor's knowledge. Meanwhile, Unintentional Adherence, which depends on the patient's cognitive abilities such as forgetting (Winurini, 2020).

References regarding treatment patterns in patients with bipolar disorder are needed and need to be developed. This is done in an effort to find out how to treat bipolar disorder patients well, so that they can have a good impact on the patient's manic or depressive episodes. On the one hand, patients with bipolar disorder have a fairly high rate of drug non-adherence, it is estimated that 32-45% of patients with mental disorders such as bipolar disorder have not received sufficient attention from the wider community. Medical non-adherence for people with bipolar disorder is associated with weak clinical outcomes such as high hospital costs, high suicide attempts, and recurrence of acute episodes, especially manic episodes (Bipolar Care Indonesia, 2019).

Non-adherence to treatment is a patient condition that requires special attention so that a separate code (Z91.1) is made in ICD X and the Guidelines for Diagnostic Classification of Mental Disorders III which are still used today. During more than five years of practice as a psychiatrist, the author often encounters Bipolar Disorder patients and some of them do not comply with treatment. This condition is a special problem that requires more intervention so that patients immediately adhere to treatment. Some of the reasons patients do not comply with treatment include patients forgetting to take medicine, feeling healed, not feeling sick, no family taking or routinely controlling patients to take medicine, information from people around patients who say drugs taken long-term damage the kidneys, make patients addicted to drugs or drugs, the class of drugs and the influence of social media they read.

The researcher's opinion is that from the problem of bipolar disorder patients who do not comply with treatment such as forgetting to take medication, feeling healed, not feeling sick or no social support is a problem that really requires more intervention so that patients immediately comply with treatment, thus the application of KAMIO for people with bipolar disorder, it

is an effective means for people with bipolar disorder, because in Kamio, we have an appropriate schedule that makes it easier for patients and health workers to recover mental health.

Bipolar disorder is one of the serious mental disorders and can attack a person, its paralyzing nature is called mania-depression. Bipolar disorder is often associated with disorders that have characteristics, namely ups and downs in mood, activity and energy. Recurrence often occurs and will interfere with social functions, work, marriage and even increase the risk of suicide. The emotional states of people with bipolar disorder are extreme and intense that occur at different times, or can be called moods. These episodes were categorized as mania, hypomania, mixed episodes and depression (Conolly, 2011).

The cause of bipolar disorder is influenced by several factors such as genetic studies, neurotransmitter dysregulation, brain anatomical structure, neuroendocrine regulation, and psychosocial factors (Miklo and Johnson, 2020). The risk of children with parents with bipolar disorder is four times greater than the risk of children with healthy parents (McGuffins et al, 2016). In terms of neurotransmitters, it states that depression is tied to low levels of norepinephrine and dopamine, whereas mania is tied to high levels of norepinephrine and dopamine. Mania and depression are both assumed to be tied to low serotonin levels (Stockmeir CA, 2017). Life events and environmental stress are one of the factors that cause a person to suffer from bipolar disorder.

Quality of life is a multi-dimensional construct that affects aspects of personal life, physical health, work and social relationships, psychology and the environment in which individuals live. This definition suggests that quality of life refers to subjective judgments embedded in social, environmental and cultural values. In the field of health services, quality of life is used to analyze individual emotions, abilities, and social factors to meet the demands of activities in normal life and the impact of illness that has the potential to reduce health-related quality of life.

The researcher's opinion can be concluded that the quality of life is a person's subjective feeling about his or her well-being, based on his current life experience as a whole. Quality of life describes the achievement of an ideal or desired human life.Based on the results of the study showed differences in quality of life outcomes between the control group and the treatment group. So it can be concluded that KamiO can control the quality of life in patients with bipolar disorder.

AUTHORS CONTRIBUTION
The first author is the main researcher and the author of the publication manuscript. The second and third authors review the research document.

CONFLICT OF INTEREST
There is no conflict of interest.

REFERENCE
Bipolar Indonesia, BC (2019). Mental Disability.bipolarcareindonesia.co.id.

Bipolar Indonesia, BC (2020). Maintaining Mental Health During the Corona Virus Pandemic.

Conolly KR, Thase ME (2011). A Review of Evidence-Based Guidelines: The Clinical Management of Bipolar Disorder. Prim. Care Companion CNS Disord. 13(4). Doi: 10.4088/PCC.10-r01097.

Evans DL (2020). Bipolar disorder: diagnostic challenges and treatment considerations. J Clin. Psychiatry. 13: 26-31. PMID: 11153808.

McGuffins P, Rijdijk F, Andrew M, Shem P, Katz R, Cardon A (2016). The heritability of bipolar affective disorder and the genetic relationship to unipolar depresion. Archives Gen Psychiatry. 60(5): 497-502. Doi: 10.1-001/archpsyc.60.5.497.

Miklo JD, Jonhson SL (2020). The Psychopathology and Treatments of Bipolar Disorder. Annu Rev Clin Psycol. 2: 199-235. Doi: 10.1146/annurev.clinpsy.2.022305.095332.

Sadock BJ, Sadock VA (2020). Textbook of Clinical Psychiatry. Lippincott Williams and Wilkins, USA. 189-216.

Spitzer fL, Endicott J, Robins E (1978). Research diagnostic criteria: rationale and reliability. arch. Gene. Psychiatry. 35(6): 77S–782. Doi: 10.10-01/archpsyc.1978.01770300115013

Stockmeir CA (2003). Involvement of serotonin in depression: evidence from postmortem and imaging studies of serotonin receptor and the serotonin transporter. J Psychiatrists Res. 37(5): 357-373. Doi: 10.-1016/s0022-3956(03)00050-5.

Teles F, de Azevedo VFD, de Miranda CT, de Melo Miranda MP, Elias RM (2014). Depression in hemodialysis patients: The role of dialysis shift. Clinics. 69(3): 198–202. Doi: 10.6-061/clinics/2014(03)10.

Tohen M, Angst J (2002). Epidemiology of Bipolar Disorder. In MT Tsuang & Tohen M (Eds). Textbook in Psychiatric Epidemiology second edition. 427-447.

Tohen M, Stoll AL, Strakowski SM, Faedda GL, Mayer PV, Goodwin DC, Kolbrener M et al. (1992). The McLean First-Episode Psychosis Project: six-month recovery and recurrence outcome. Schizophr. Bull. 18(2): 273-82. Doi: 10.1093/schbul/18.2.273

Winurini S (2020). Permasalahan Kesehatan Mental Akibat Pandemi COVID-19. Info Singkat, XII. (15): 13–18.

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