



DOI:

10.22301/IJHMCR.2528-3189.1992

Article can be accessed online on:

<http://www.ijhmcr.com>

ORIGINAL ARTICLE

**INTERNATIONAL JOURNAL
OF HEALTH MEDICINE AND
CURRENT RESEARCH**

OPTIMIZATION ON THE USE OF MEDICATION RECORD CARD BY CAREGIVERS TO ACHIEVE MEDICATION ADHERENCE IN SCHIZOPHRENIC PATIENTS

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ARTICLE INFO

Article History:

Received 21th Dec, 2020.

Received in revised form

25th Jan 2021.

Accepted 22th Feb, 2021.

Published online 31th March, 2021.

Key words:

Medication Record Card,
Caregiver, Medication Adherence,
Schizophrenia

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ABSTRACT

Schizophrenia is a mental disorder which is common to find in Indonesia. Some issues that occur on handling schizophrenia are relapse. Relapse in schizophrenia occurs in 60-70% of clients who do not receive medication therapy. Strategies to improve compliance in clients with mental disorders including schizophrenia are relied on factors that cause non-compliance, thus giving memory aid (bell or card) might help.

This research aims to determine the effect of using medication record card by caregiversto achieve medication compliance in schizophrenic patients. The research design used "*Quasy experimental pre posttest with control group*". The research population was all caregivers of schizophrenic patients in the community who were on medication. The research subjects were taken by total sampling technique, 42 respondents divided into 21 respondents in intervention group and 21 respondents in control group. The intervention group was treated by the medication record card. Data analysis using *pair t test*.

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Citation: Mukhadiono ⁽¹⁾, DyahWahyuningsih⁽²⁾Widyo Subagyo ³⁾RutiWiyati⁴⁾, 2021 "OPTIMIZATION ON THE USE OF MEDICATION RECORD CARD BY CAREGIVERS TO ACHIEVE MEDICATION ADHERENCE IN SCHIZOPHRENIC PATIENTS", *International Journal Of Health Medicine And Current Research*, 6, (01), 1992-1997.

The research result shows a significant difference in medication adherence scores for mental disorders patients before and after treatment in the intervention group (p value 0.02). The difference is the increase in adherence score from 97.14 to 99.52. On the other hand, a significant decrease occurs in medication adherence scores for mental disorders patients before and after in the control group (p value 0.02). The adherence score for the control group decreases from 98.57 to 92.38. A recommendation for this research of medication record card is to apply this strategy as a medium to remind patients to take medicines for mental health patients in community.

Background

Basic Health Research in 2018 shows data about the prevalence of psychotic mental disorders in Indonesia which is 7.0 per mile. Patients with mental disorders who do not seek treatment are 15.1% of total diagnosed patients, and 51.1% of total patients who are treated do not take their medicines regularly. The problem that often occurs in handling schizophrenia is relapse. Relapse in schizophrenia occurs 60-70% of patients who do not receive medication therapy, 40% who only receive medication therapy, 15.7% who receive a combination of medication therapy, psychotherapy, family and community support (Oltson, et.al, 2000 in Stuart & Laraia, 2005).

The high rate of relapse in patients who do not receive medication therapy is influenced by several factors. In accordance with research conducted by Sandriani (2015) stated that there is a relationship between the level of adherence and relapse in mental disorder patients. Of 100 respondents, it was found that 61.9% of them did not adhere to medication routine and had high relapse. Kampman & Lehtinen (1998) stated that the rate of non-adherence to antipsychotic treatment in schizophrenic

patients has been reported to range from 11% to 89% (Opjordsmoen et al., 2010). Research by Sirait and Mustika (2009) stated that 77.8% of non-adherence to medication is influenced by family factors.

Strategy to improve adherence to mental disorders patients including schizophrenia is the counter measure from factors that lead to non-adherence. When non-adherence originated from the patient's factor, the strategy for this is provision of cognitive therapy, health education about diseases and benefits of medication and providing memory aid (bell or card).

Field studies showed that the number of mental disorder patients in 2016 detected in Karang Moncol Community Health Center in Purbalingga Regency, Central Java Province, Indonesia was 75 patients. Most of them were of productive age. Also, from survey of 20 patients, 10 patients out of them did not routinely take medicines.

Based on description above, the researcher is interested in conducting research with the title "*Optimization on the Use of Medication record card by Caregivers to Achieve Medication Adherence in Schizophrenic Patients* "

Research Method

The design used in this research was "*Quasy experimental pre posttest with control group*". The research is conducted to determine the effect of using medication record card by caregiver for medication adherence in patients with mental disorders. The target population in this research were all caregivers of schizophrenic patients in community who were on medication. The sampling technique in this research was purposive sampling with inclusion criteria as follows: living together with a mental disorder patient, able to read and write, and willing to assist the patient during the research process. The number of samples was

42 divided into 21 respondents in intervention group and 21 respondents in control group.

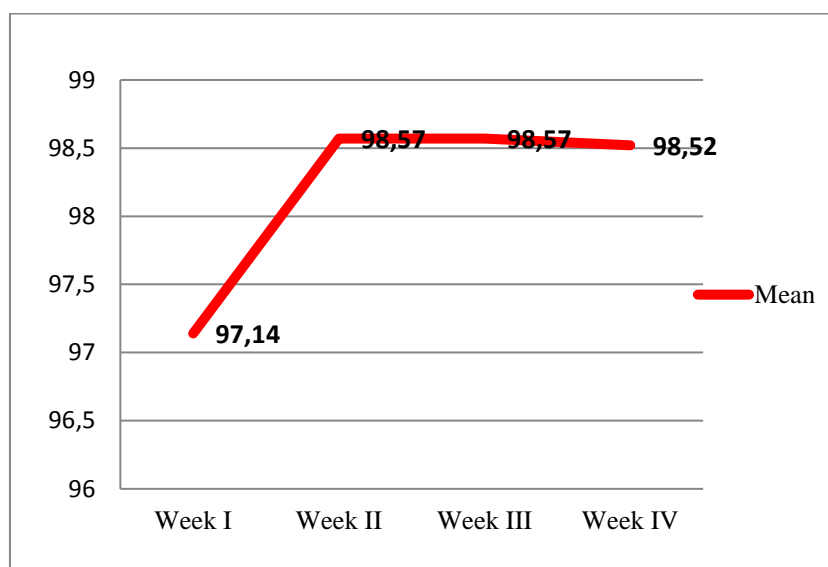
The research hypothesis was the effect of using medication record card by caregivers for medication adherence in schizophrenic patients. The effect of medication record card for medication adherence in intervention and control group was assessed using *paired t test*. The difference in medication adherence in intervention and control groups was assessed by *independent t test*.

Research Result

The average age of the respondents (caregiver) is 16.93 years old, with the youngest being 15 years old and the oldest 20 years old. The average age of respondents in the intervention group is 16.8 while the control group is 17.01. Additionally, the average age of mental disorder patients in Karang Moncol Community Health Center is 35.40 years old, with details of average age in the intervention group as 37.19 years old and the control group 33.62 years old.

Diagram 1.

Distribution of average medication adherence scores for mental disorder patients in the intervention group during treatment cycle in Karang Moncol Community Health Center in Purbalingga, Indonesia, 2017
(n=21)



The conclusion drawn from diagram 1 above is that there is an increase in the mean score of medication adherence for mental disorders patients in the intervention group from week I with score 97.14, up in week II and week III with score 98.57, but a slight decrease in adherence score at week IV with score 98.52.

Table 1.

The score of medication adherence for mental disorders patients before and after intervention by caregivers in Karang Moncol Community Health Center in Purbalingga, Indonesia, 2017
(n=42)

Variable	N	Average	SD	SE	<i>P value</i>
Intervention Group					
1. Before	21				0,021
2. After		97,14	4,62	1,01	
		99,52	2,18	0,48	
Control Group					
1. Before	21				0,006
2. After		98,57	6,54	1,45	
		92,38	10,44	2,27	

Table 1 shows that there is a significant difference in medication adherence scores for mental disorders patients before and after treatment the intervention group (*p value 0.02*). There is also notable contrast in the medication adherence score of mental disorders patients before and after in the control group (*p value 0.02*). The contrast is a decrease in adherence score from 98.57 to 92.38.

Table 2

Mean difference in medication adherence score for mental disorders patients before and after intervention in the intervention and control groups in Karang Moncol Community Health Center in Purbalingga, Indonesia, 2017(n=42)

Variable	n	Group	Mean Difference	<i>p value</i>
Medication Adherence Score	42	Intervention	2.39	0.000
		Control	6.19	

Table 2 medication adherence for mental disorder patients using Medication record card and family assistance is 2.39 compared to the group with family assistance only with score 6.19 which is significantly different (*p value <0.05*).

Discussion

In this research, the average age of mental disorder patients is 35.40 years old which means they are in the middle adulthood phase. The measures of middle adulthood success are success in finance, power and prestige. If this has not been achieved, it will cause

psychological pressure for the middle adults (Pieter, H.Z, Janiwarti, B & Saragih, M, 2011). Caregivers (respondents) who participated in this research are at minimum 25 years old and at maximum 68 years old. The age range of caregiver for mental disorder patients varies depending on who the patient is. Most of

caregivers come from members of the patient's main family, either husband or wife, parents and children.

Adherence fluctuation could be caused by side effects of medication and patient boredom. Antipsychotic medications have slow onset in action, so the patients do not immediately feel the positive effects of antipsychotics, instead they sometimes tend to experience the side effects first. Therefore, in this phase, assistance from family is needed through motivation and reminding strategy (Kinasih, F, 2015).

Research by Wardani I, Y (2012) revealed four factors that influence non-adherence in schizophrenia client treatment, such as: factor related to treatment, factor related to clients and family and factor related to the environment. Research by Karmila, Lestari, DR and Herawati (2014) on family support for medication adherence to mental disorder patients in Banjarbaru Community Health Center stated that having a good family support for mental disorder patients influence the proportion of patients to be adherence by 42.86% or 100% of well-supporting families.

In this research, strategies to increase adherence in addition to family support consist of medication administration for each week and providing Medication record card to help explain and remind the medication administration. medication given to patients was divided for only 1 week so it does not seem exaggerated. The medication record card contained name or color of the medicine, medicine schedule, and the sign after taking medicines with an attractive color design in order to help families and patients to remind themselves the right medicine schedule. This card is one of the permanent reminder. This method could use permanent marker like as laminated A4 paper to remind repetitive activities such as taking medication for a long period of time (Scot, 2006). Involving family members in observing the patient's oral medication could help ensure adherence.

Research on "Effect of drug reminder packaging on medication adherence: a systematic review revealing research gaps" mentioned that of 30 studies, 17 studies (57%) demonstrated drug reminder packaging has a significant effect on at least one parameter of adherence. The research has also concluded positive effects of drug reminder packaging on adherence and clinical outcomes (Boeni et al., 2014).

Conclusion and Suggestion

The conclusion of this research is: there is a significant difference in the medication adherence score of mental disorder patients before and after treatment in the intervention group (*p value 0.02*). The difference is an increase in the adherence score from 97.14 to 99.52. On the other hand, there is a notable contrast in the adherence score of mental disorder patients before and after treatment in the control group (*p value 0.006*). The difference is a decrease in the adherence score from 98.57 to 92.38. The difference in medication adherence score for patients with mental disorders using Medication record card and family assistance is 2.39 compared to the group with only receiving family assistance by 6.19 which is significantly different (*p value <0.05*).

The research suggestion is that the caregiver for mental disorders patients has a role in increasing medication adherence for their patients, thus it is expected that every mental disorder patient in community/post hospital treatment has a caregiver. Additionally, medication record card could be used as a medium to remind mental disorder patients in the community when to take medication combined with family assistance in order to reduce relapse in mental disorder patients due to drug dropouts.

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