Mechanism of Family-coping in Treating Patient with Schizophrenia Viewed from Factors that Affected it at Public Health Center of Balowerti, Kediri

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Abstract
Coping is a cognitive process and behavior that aims at reducing depression while facing stress situation. Treating patient with schizophrenia is a stressor for family and the family will tend to undergo pressure situation from either the environment or the inside part until it can influence family-coping in treating family who suffers mental disorder, such as schizophrenia. Moreover, this research aimed at knowing factors that influenced mechanism of family-coping in treating patient with schizophrenia. Data analysis utilized logistic-regression-test. The result showed that the factors that influenced against family-coping were self-esteem and social-support, meanwhile, the factors that did not influence it were knowledge, stress, and patient’s behavior in social-isolation.

Keywords: schizophrenia, family, coping

Introduction
The problem of mental health actually does not become one of problems of the mortality cause directly, but this problem can cause someone’s inability to do many things and to behave well. Hence, it can cause a problem for a group, including society.(1) There are three types of hard mental disorder, which are schizophrenia, bipolar disorder, and acute psychosis. Schizophrenia is the most dominant disease that is suffered by the population in the world, which is in 1% until 3% in the world(2).

Schizophrenia is a multifactorial disorder of neural development that is influenced by either genetic factor or environment factor and it is characterized by either positive, negative, or cognitive symptoms. Psychotic symptom is indicated by abnormality in form and content of mind, perception, emotion, and behavior. The symptoms that can be observed in the patient with schizophrenia are the appearance and general behavior, speech disruption, behavior disorder, affective disorder, perception disorder, and mind disorder. Cognitive symptoms often precedes the occurrence of psychosis. The positive symptom includes suspicion, hallucination, being rowdy restless, strange behavior, hostility attitude, and formal thinking disorder. The negative symptom includes difficulty in starting conversation, flat effect, less motivation, less attention, being passive, being apatis, self-withdrawal socially, and discomfort. However, patient with schizophrenia tends to self-withdrawal socially(3).

According to report result from WHO(4), sufferer of mental disorder with schizophrenia diagnosis had reached 24 millions of people around the world. Meanwhile, according to data of Basic-Health-Research(5), in Indonesia, mental disorder rate had undergone significant increase from 0.5 per mil in 2007 to be 1.7 per-mil in 2013, from the total population in 251 millions of people. West Java Province was one of provinces with the highest rate of mental disorder in Indonesia that reached 20% from 45 millions of people or around 9 millions of people. Among mental disorders which were often found, one of them was schizophrenia. Meanwhile, in East-Java showed rate of 2.2 of people...
based on population data in East-Java, which was 38,005,413 peoples, hence, it could be concluded that 83,612 peoples underwent mental disorder in East Java-Indonesia.

Patient with schizophrenia who could not function normally caused she/he needed a caregiver. Caregiver was an individual who generally treated and supported another individual in her/his life. Family was the closest unit and was a “main caregiver” for the sufferer. Support from family and routine treatment could minimize the symptoms of schizophrenia. In line with the treatment process for the patient with schizophrenia, family would undergo physical and emotional fatigue. In order to overcome this condition, the family needed to conduct coping strategy during treating patient with schizophrenia. Lazarus & Folkman defined coping strategy was as a change from a condition to another condition as a way to face unexpected situation which empirically, it was known as a process and divided it into problem focused coping (PFC) and emotion focused coping (EFC).

Method

Data collection in this research was conducted by using questionnaire that was distributed to 70 respondents of family with schizophrenia patient in area of Public Health Center of Balowerti, Kediri, East Java, Indonesia. The dependent variable was mechanism of family variable in treating patient with schizophrenia and the independent variables were knowledge, self-esteem, stress, social-support, patient’s behavior in self-withdrawal socially. The data were analyzed by utilizing logistic-regression-test.

Findings

Table 1. Distribution of knowledge, self-esteem, stress, social-support, coping-effort of care-giver and aggressive-behavior and social-isolation of patient

<table>
<thead>
<tr>
<th>Care-giver’s knowledge</th>
<th>Percentage</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Less</td>
<td>17.1</td>
<td>12</td>
</tr>
<tr>
<td>• Adequate</td>
<td>52.9</td>
<td>37</td>
</tr>
<tr>
<td>• Good</td>
<td>30</td>
<td>21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Care-Giver’s Self-esteem</th>
<th>Percentage</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Negative</td>
<td>50</td>
<td>35</td>
</tr>
<tr>
<td>• Positive</td>
<td>50</td>
<td>35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Care-giver’s stress</th>
<th>Percentage</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>• High</td>
<td>21.4</td>
<td>15</td>
</tr>
<tr>
<td>• Medium</td>
<td>54.3</td>
<td>38</td>
</tr>
<tr>
<td>• Low</td>
<td>24.3</td>
<td>17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Care-Giver’s Social-support</th>
<th>Percentage</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Less</td>
<td>21.4</td>
<td>15</td>
</tr>
<tr>
<td>• Adequate</td>
<td>45.7</td>
<td>32</td>
</tr>
<tr>
<td>• Good</td>
<td>32.9</td>
<td>23</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Care-Giver’s coping-effort</th>
<th>Percentage</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Emotional based coping</td>
<td>45.7</td>
<td>32</td>
</tr>
<tr>
<td>• Problem based coping</td>
<td>54.3</td>
<td>38</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient’s aggressive-behavior and social-isolation</th>
<th>Percentage</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Social-isolation</td>
<td>78.6</td>
<td>55</td>
</tr>
<tr>
<td>• Aggressive-behavior</td>
<td>21.4</td>
<td>15</td>
</tr>
</tbody>
</table>
It showed that the care-giver’s knowledge mostly had adequate, the most of care-giver’s self-esteem was negative, the most of care-giver’s stress was in medium, the most of care-giver had adequate social-support, the most of care-giver’s coping-effort had problem based coping, the most of patient with schizophrenia had behavior of social-isolation.

It showed that the value of Hosmer and Lemeshow Goodness of Fit was 4.689; p-value was 0.790, hence, the model was fit.

**Table 2. Overall Model Fit**

<table>
<thead>
<tr>
<th>Interaction</th>
<th>-2 Log likelihood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 0</td>
<td>96.526</td>
</tr>
<tr>
<td>Step 1</td>
<td>67.246</td>
</tr>
</tbody>
</table>

It was occurred the decrease value between the value of -2 Log Likelihood in block 0 and the value of -2 Log Likelihood in block 1, which was in 96.526 – 67.246 = 29.280. This condition showed that the model was hypothesized in fit with the data, which meant that overall, logistic regression model that was used was a good model.

Based on logistic-regression-test:

1. **Knowledge**
   
   Regression coefficient was 1.105; Wald-value was 3.302; p-value was 0.069: there was no significant influence of knowledge on family-coping.

2. **Self-esteem**
   
   Regression coefficient was 2.062; Wald-value was 7.123; p-value was 0.008: there was a significant influence of self-esteem on family-coping.

3. **Stress**
   
   Regression coefficient was -1.308; Wald-value was 3.417; p-value was 0.065: there was no significant influence of stress level on family-coping.

4. **Social-support**
   
   Regression coefficient was 1.402; Wald-value was 7.506; p-value was 0.006: there was a significant influence of social-support on family-coping.

5. **Social-isolation**
   
   Regression coefficient was -1.368; Wald-value was 2.641; p-value was 0.104: there was no significant influence of behavior of social-isolation on family-coping.

**Discussion**

**Coping-mechanism**

The result showed that the most number of coping-mechanism category was problem based coping. It was supported by a conducted research by Bakhtiar & Ariani\(^8\). Coping was defined as all cognitive and behavior efforts to solve, prevent, and endure the demands\(^9\). Family’s burden in treating the schizophrenia was a psychological distress for family situation which was indicated by the increase of physical activities, there was emotional and social pressure in treating the schizophrenia patient\(^10\). The family could have high pressure if they did not have good adaptive coping-mechanism\(^11\). High pressure would be faced as a result of financial problem, lack of time to socialize, poor family health, the dependence from the family members to the schizophrenia, and there was family conflict. Moreover, that condition impacted to the family’s ability in treating schizophrenia patient and the decrease of family’s life quality\(^6\).

When the family knew that there was a family member suffered schizophrenia, this family would be in emotional focused coping stage. In this phase, the family would respond this as a hurtful situation and could make them feel stressful. In this phase, the family also could be through escape-avoidance coping strategy, which meant that they tended to avoid this problem, to escape from reality, and how to make important decision. Along the time, the experience and belief that they had and perception that was gradually positive to the family member who suffered schizophrenia could make the family in planful problem solving condition, that was a condition when the family showed their real effort to solve the problem. The way they solved the problem could be from asking for more information about this disease, how to treat the patient, and how to prevent the relapse of this disease\(^12\).

**Knowledge**

The result showed that knowledge did not affect coping-mechanism toward schizophrenia patient. This result was not in line with Bakhtiar & Ariani\(^8\). Treating
patient with chronic disease like schizophrenia was not easy. They needed knowledge, high willing, loyalty, and patience. The family would do some treatments continuously to make the patient got better, normal, and got back to the family again\textsuperscript{(13)} and this was not in line with conducted research by Wardaningsih et al.\textsuperscript{(14)}, who showed that factors that affected coping-mechanism were faith, financial, knowledge, communication, and social-support. Coping-strategy that was often used could be seen from the family-coping strategies, such as internal family-coping that relied on family, problem control, holding and solving problem, and revealing the problem together.

**Self-esteem**

The result showed that self-esteem had a significant influence on family-coping. Coping-mechanism was influenced by several factors, such as physical health, faith or positive mindset, problem solving skill, social skill, social-support, occupation, age, sex, and education. Respondent’s anxiety level was also influenced by several factors, such as family-coping material, intimidation against self-esteem that was coming from external factors like the fear of losing the loved one, divorce, the change of occupation status, group pressure, and social culture\textsuperscript{(15)}.

Schizophrenia patient had limited ability in doing activities. Many psychological problems such as the loss of independency, social-role, health and mental condition, and other problems made them need continuous treatment. This treatment would cost much. Besides, this condition also could cause a pressure for the family\textsuperscript{(16)}. One of psychological responses that was in subjective pressure was the feeling of shame\textsuperscript{(17)}. The family who had another family member who suffered schizophrenia would feel embarrassed and this feeling tended to cause low self-esteem on the family. The pressure that was felt by the family and low self-esteem on the family would cause disorder against family’s role and function, including for how mechanism of family-coping in treating family who suffered health problem.

**Stress**

The result showed that stress level did not affect coping-mechanism. Stress was part of human life. It was caused by transaction among individual with the environment that created gap among demands which were coming from many situations biologically, psychologically, and socially.

Family was an internal strength so that they had control against life and torture. Significant situation, such as having a family member who suffered this disease made them stressful so that it became demand to cope and adapt with the problem for surviving and developing. Stress emerged when the family felt that they could not cope the problem because of the condition of the family who suffered the disease, thus, they would feel stressful. Nevertheless, stress was not one of the factors that influenced coping-mechanism because the stress level from each person would be different. This difference could alter the stress level. Person with low stress level would be able to manage himself/ herself and would try to give strength to the other family members to manage their stress level and support each others for the effort of increasing family welfare with the schizophrenia patient.

**Social-support**

The result showed that social-support gave significant influence against coping-mechanism. According to Taylor et al.\textsuperscript{(18)}, people with high social-support would feel that the other people noticed more and needed the individual and could direct the individual to the healthy life style, thus, for the family who had health problem on the family members could increase their caring to the environment, particularly against the family member’s health.

Support from family, working colleagues, society in social space had negative correlation with the emergence of positive symptom from schizophrenia patient. It explicitly meant that social-support could minimize the patient’s relapse, hence, the family could treat the patient easily and they could also manage self the coping. Sarafino\textsuperscript{(19)} stated that interaction with other people could modify even change people’s perception toward particular situation.

Support from family showed positive impact to the patient in which they would have better health and it was different with the patient who did not have support anymore. People with high relation with others also had higher chance to live with better health and it was different with those who had low relation with other people\textsuperscript{(20)}. Gerungan\textsuperscript{(21)} stated that social relation could support people’s health and welfare. Moreover, health and happiness were not only influenced by social welfare but also close relation that supported each others would cause low risk from a disease. Support would decrease a
chance to suffer from disease. It meant that people with good relation would have intimate relationship with other people, could rely on, could support each other so that they could prevent the disease.

**Social-isolation Behavior**

The results showed that exclusion behavior from the schizophrenia patient did not give any significant aspect against coping-mechanism. Keliat et al. (22) stated that schizophrenia was a chronic disease that was indicated by inability or communication difficulties, reality problem, abnormal behavior, cognitive disturbance, and the difficulty to do daily activities. There were positive and negative symptoms of this disease. The positive symptoms included missed perception, hallucination, sense problem (hearing, sighting, tasting, smelling, and touching) without any external stimulation, the change of thinking and behavior. Negative symptoms included apathy or ignorance, blocking, social-isolation from the society and decrease daily social activities. Besides, the negative symptoms on schizophrenia patient caused the client underwent function disorder in social-isolation.

Coping-ability for schizophrenia patient would need external input, such as social-support. It could be from family, working colleagues, or communities. Sarason (23) stated that social-support would really help individual to adapt well, along with positive coping and self-building. It could prevent someone to get disturbance from psychological effect especially for schizophrenia patient who tended to exclude themselves from society. According to Friedman et al. (24), there were four aspects of supports which could be given by the family. They were emotional support, informational support, instrumental support, and assessment support and they were correlated each others. If the individual got the support maximally, they would learn to use positive coping to defense themselves from either internal or external pressure.

Social-isolation on schizophrenia patient did not have any significant influence against family-coping-mechanism, but family-coping-mechanism and teamwork would give positive impact for the patient. It was because the tendency to isolate from society was influenced by how good the relation between the patient with other people around. Moreover, schizophrenia patient had limited ability to do activities. Some psychosocial problems such as the loss of independency, social roles, health and mental problem became a stimulus of stressor, hence, they had difficulty to adapt in society. In this case, family support and routine treatment would be very important for schizophrenia patient, hence, the patient could adapt well with the social function and this could prevent the patient to isolate from the society. In conclusion, good social-support would give positive influence for coping-mechanism and good family-coping would give positive influence against schizophrenia patient’s behavior. Nevertheless, skill that was obtained by the individual regarding good coping strategy from family could make the individual to behave independently. Thus, the individual could do his/her role in social function as usual without having any social-isolation.

**Conclusion**

The result showed that the factors that influenced against family-coping were self-esteem and social-support.

**Source of Funding**-Author

**Conflict of Interest**- No

**Ethical Clearance**- Yes

**References**