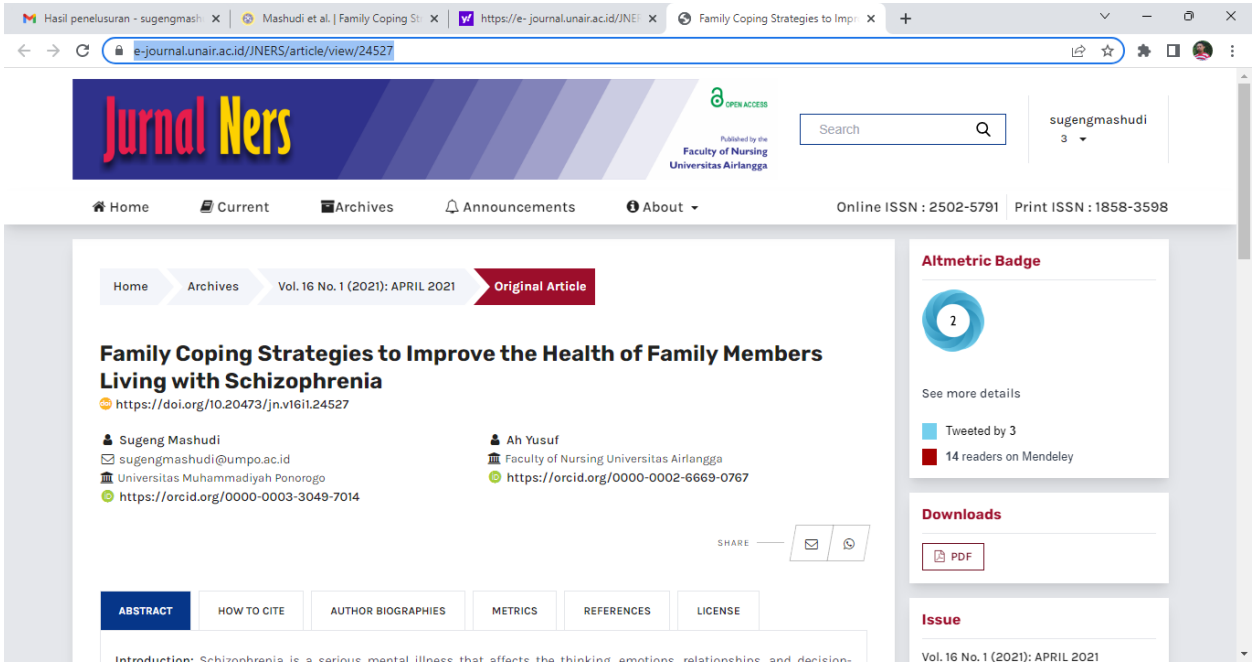

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BUKTI KORESPONDENSI

1. **Submite Artikel ke Jurnal Ners**
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   12 Maret 2021
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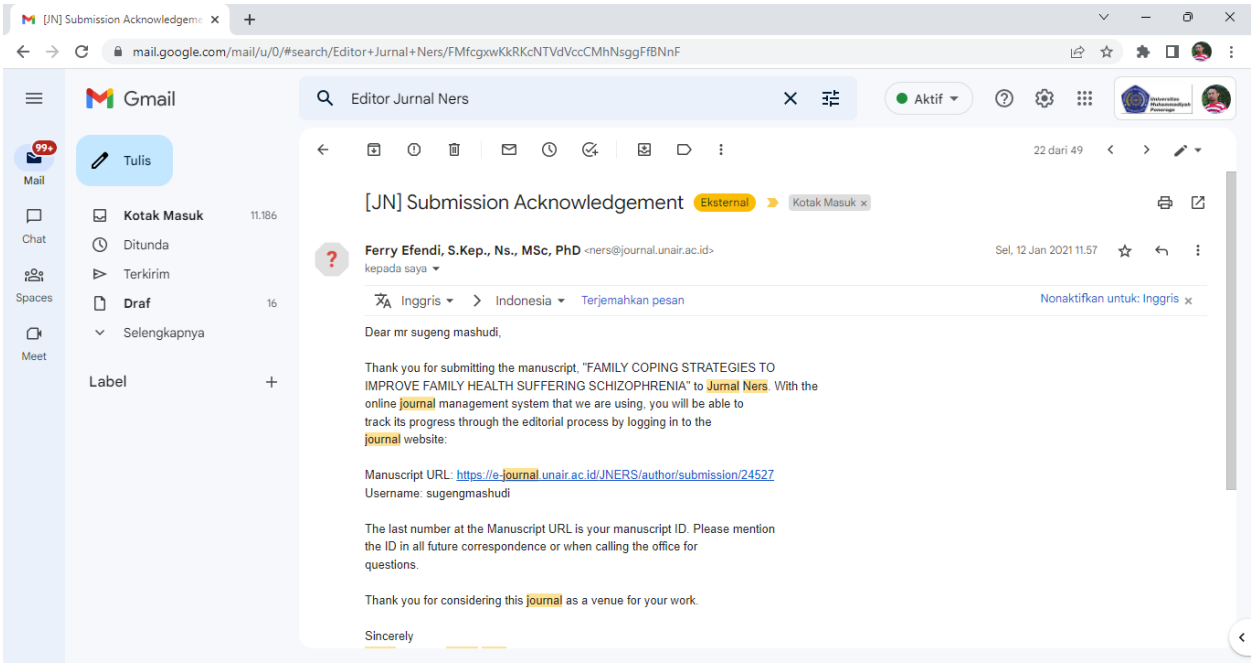

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FAMILY COPING STRATEGIES TO IMPROVE FAMILY HEALTH SUFFERING SCHIZOPHRENIA

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Faculty of Nursing Sciences, Universitas Airlangga Surabaya East Java Indonesia
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ABSTRACT

Studies concerning positive outcomes of Schizophrenia treatment are still rare. One of the positive outcomes of Schizophrenia treatment to patients is family health. Family wellness management strategies provide help for family coping, family care preparation, organizing family meetings, and family mentoring. This study aimed coping family strategies for maintaining the health of schizophrenia.

The study used a cross-sectional design by choosing 160 respondents randomly. Independent variable of the study is family coping which consist of two sub-variables (problem-focused coping mechanism and emotion-focused coping mechanism). Whereas dependent variable is family health which consists of three sub-variables (efficient, satisfaction, and happiness). The SMART PLS (2.0 Version) was used to prove the impact of the variables.

The results of the study indicated that family coping significant impacts on family health. The hypothesis was taken from the value of the T-test on the structural model analysis, which shows T-statistics (13.966) > T-critical (1.96). The impact of family coping on family health is equal to 0.682. It means that if family coping are given one-unit value, it will increase the family health by 0.682 times.

The implementation of the family coping strategy would improve the capacity of the family to clarify health issues encountered, resolve family behaviors effectively and minimize risk factors. Coping mechanisms chosen by families in facing stress will impact on the reduction of illness symptoms in family members with schizophrenia.

KEYWORDS

Keywords: family coping , family health, positive outcomes, schizophrenia.

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The Family Health Theory (FHT) developed by Doornboss (2002) is a middle-range theory based on the Goal Attainment Theory made by E. King (1983). The FHT specifically predicts family health in a family with mental-disorder patients. However, family health in the FHT only measures the level of family satisfaction in treating patients with mental disorders (Doornbos MM, 2002). The theoretical definition of family health is the adaptive potential and functional ability of a family in social roles (King, 1983). King (1981) consistently defines health as two goals of nursing practice. According to King (1981), the first goal of nursing practice is “A functional state in the life cycle”. For this goal, King generally focuses on its function as the indicator of health. The second goal of nursing practice according to King (1981) is efforts to reach “A useful, satisfying, productive, and happy life”. Based on that, it can be inferred that the definition of health for family health should focuses on “A useful, satisfying, productive, and happy life. Various factors of deterioration in family health involve a diverse structure of health and care systems and family issues. (PPNI 2017). Methods for enhancing family health provide help for family coping (Krishnan and Orford 2002; PPNI 2017), Promote family

care planning, arrange family conversations (Behroozi, Mazowita, and Davis 2008);(García et al. 2006) and Family Support (Labrum 2020; García et al. 2006). One of the most important strategies to enhance family wellbeing is to encourage family coping. Improving family health is seldom addressed. One of the most important strategies to enhance family wellbeing is to encourage family coping. Improving family health is seldom addressed. The data taken from WHO show that 21 million people suffered from mental disorders (WHO 2018). 1% of the population in the United Kingdom are people who experienced mental disorders (Smith 2015). The 2018 RISKESDAS (Basic Health Research) data in Indonesia show an escalation of proportion in the number of households with mental disorders by 7 per mil from 1.7 per mil. Specifically, the East Java Province shows that only 2.2 per mil households experienced mental disorders in 2013 and went up to 5 per mil in 2018 (RISKESDAS, 2013; 2018). Generally, similar incident rate also occurred in Ponorogo, with as many as 1.321 out of 600.336 residents in productive ages who experienced mental disorders (Nasriati, 2017). However, a higher prevalence rate was found in Paringan Village and Dukuh Mirah, where the prevalence rate of mental disorders in Paringan Village was at 11.2 per mil (Mashudi, Widiyahseno 2016). Decreased family health effects on patients and relatives.

Family health is affected by coping mechanisms (Doornbos, 2002). The study conducted by Çuhadar, Savaş, Ünal, and Gökpınar in 2015 strengthens the previous studies which found coping mechanism affects family health. Studies regarding stress and coping mechanisms in family with Schizophrenia members show that there is an effect of stress on coping mechanisms (Geriani et al. 2015). Family coping consists of problem-focused coping and emotion-focused coping. Family coping is a cognitive assessment and behavior to manage internal and external needs that exceed ability (S.Lazarus and Folkman 1984). The study done by Crowe and Lyness in 2014 shows that family coping affects family health. A better family coping will increase the level of family health.

MATERIALS AND METHODS

Sample

This study was conducted in Ponorogo Regency, East Java, Indonesia with a sample of 160 respondents and a cross-sectional design. The data were collected through questionnaires that have been tested for validity and reliability. Respondents were taken by using a random sampling technique from five primary healthcare centers in the North and West Ponorogo.

Participants were 81 men (50.6%) and 79 women (49.4%). Their average age was 49 (SD = 14.2). Furthermore, there were 139 married respondents (86.6%) and 10 single respondents (6.3%). Regarding education level, 102 respondents have completed basic education (24.4%), 39 respondents have achieved secondary education (48.68%), and 3 respondents have completed tertiary education (1.9%).

Variables and Instruments

Family coping variables were compiled based on the FACE questionnaire. A higher score reflects a better family coping. The Cronbach's alpha coefficient for the scale was 0.534.

Family health variables were made based on the indicators of Useful, APGAR family, and HAPPY questionnaire. A higher score reflects a better family health. The Cronbach's alpha coefficient for the scale was 0.883.

Statistical Analysis

Before the statistical analysis, the data were selected based on three standard deviations above or below the average score. Missing values are excluded from the analysis. Descriptive statistics and correlation analysis were performed with the SPSS program (Version 22.0, IBM Corp, Armonk, NY, USA). Structural equation models were tested with Mplus (Version 7.4, Muthen & Muthen, Los Angeles, CA, USA). The study of the structural model with a corrected level of confidence (CI) of 95% used 5000 bootstrap samples.

RESULTS

Characteristics of Family with Schizophrenia Patients.

The data used in this study were taken from 160 caregivers of Schizophrenia patients who seek treatments in primary healthcare centers located in the North and West Ponorogo. Selected respondents were those who meet the criteria of random sampling.

The observation of the study was done in the selected primary healthcare centers. The complete characteristics of caregivers who handle Schizophrenia patients can be seen in Table 1.

Table 1: Characteristics of Caregivers who Handle Schizophrenia Patients in Ponorogo.

Characteristics	Frequency	Percentage
Gender		
Men	81	50.6%
Women	79	49.4%
Age:		
Productive (18-54)	102	63.8 %
Not productive (55-80)	58	36.2%
Status:		
Married	139	86.8 %
Single	10	6.3 %
Widower/widow	11	6.9 %
Education		
High	76	74.5 %
Low	84	52.5 %
Job		
Private	47	29.4 %
Farmer	90	56.2 %
Others	23	14.4 %
Family members (amount)		
≤ 3		
>3	73	45.6 %
	87	54.4 %
Salary		
< IDR 1,500,000,-	132	82.5 %
≥IDR 1,500,000	28	17.5%

Table 1 shows that the majority of caregivers are men (50.6%), at the age of 18-54 (63.8%). Most of them were married (86.8%) and graduated from high education (74.5%). They worked as farmers (56.2%) with >3 family members (54.4%) and salary < IDR 1,500,000 (82.5%). Caregiver burden was positive correlation with age of caregiver, employment of caregiver and level of education (Sugeng Mashudi, Ah. yusuf, Rika Subarniati T, Kusnanto 2019).

Characteristics of Schizophrenia Patients

Table 2: Characteristics of Schizophrenia patients

Characteristics	Frequency	Percentage
Gender		
Men	95	59.6%
Women	65	40.4%
Age:	131	

Productive (17-45)	29	81.9%
Not productive (46-71)		18.1%
Relationship with caregiver:		
Son/Daughter	63	39.4 %
Parent	14	8.8 %
Others (Siblings)	83	51.8 %

Table 2 explains that the majority of Schizophrenia patients are men (59.6%) in the age of 17-45 (81.9%), and siblings of the caregivers (51.8%). The majority of Schizophrenics in productive age tend to behave in smoking, even though the effects of nicotine contained in cigarettes affect oocyte maturity (Dwirahayu and Mashudi 2016).

Table 3: Loading factors and T-statistical value.

Variables	Sub-variables	Loading (λ)	T-Statistics	T-table
Coping Mechanisms	Problem-focused Coping	0.915		
	Emotion-focused Coping	0.710	14.393	1.96
Family Health	Efficiency	0.912		
	Satisfaction	0.914		
	Happiness	0.873		

Table 3 illustrates that coping mechanisms done by the family are dominantly problem-focused coping (λ =0.915), whereas family health is determined by the satisfaction level in treating Schizophrenia patients (λ =0.914). Coping mechanisms have an effect on family health (α=0.05; t-statistics = 14.393).

DISCUSSION

Family Coping significantly impact family health. This is based on the T-test in the structural model analysis, where T-statistics (13.966) is greater than T-critical (1.96). The effect value ofcoping mechanisms on family health is 0.682. This means that if family coping are given one-unit value, it will increase family health by 0.682 times.

Family health is measured from the aspects of efficiency, satisfaction, and happiness. Some roles of the family may include knowing health problems experienced by patients, choosing the best action to treat patients, maintaining a conducive environment, and utilizing health facilities for patients. The family stated that family satisfaction with Schizophrenia patient care may be obtained by adapting with patients, discussing about the best solution to overcome problems that befall patients, showing affections and responses, such as anger, suffering, and love, and spending time together with patients. In terms of happiness, the family could enjoy the moment of treating patients with Schizophrenia compared to other caregivers with Schizophrenia patients. Also, they could enjoy everything and obtain optimal treatment for Schizophrenia patients.

Efficiency indicator (0.912) has the second-highest value in determining family health. Efficiency throughout the treatment process can be seen when a family could identify patients' health problems, decide the best decision for them, take care of them well, keep a conducive environment, and take advantages of health facilities for them.

Satisfaction indicator (0.914) possesses the highest value in determining family health. Satisfaction throughout the treatment process can be found when a family can adapt, choose the best solution for problems, show affection, respond positively to patients, and spend some time together with patients. Family satisfaction in treating Schizophrenia patients can not be separated from the impact of coping mechanisms (problem-focused coping and emotion-focused coping) done by the family.

Happiness indicator (0.873) shows the smallest value in determining family health. The decline of happiness in treating Schizophrenia patients can be seen when family feel less happy compared to other families with Schizophrenia patients and cannot enjoy everything and obtain optimal caregiving. It is related to stress factors, such as economy, abusive behavior, and stigma that befalls the family.

Being healthy is defined as an ability to adapt physically, mentally, and socially as a single unit free from illness and disability (WHO 1948). The characteristics of being healthy according to WHO involve the ability to reflect an individual as a person in internal and external contexts and to involve creativity and productivity. King (1981) stated that being healthy is a form of efficiency, satisfaction, productivity, and happiness (Alligood 2017). In this study, family health refers to healthy family (King 1981). However, the productivity indicator in this study is invalid and unreliable because the submitted questions only focus on attendance, while the respondents of the study are farmers who were unable to attend regularly.

The essential finding of this study is that family coping affect family health. Family Health Theory written by Doornbos in 2002 shows that coping mechanisms affect family health, whereas this study, in addition to the existing theory, finds family health indicator was measured not only based on family satisfaction, but also family efficiency and happiness. Coping mechanisms chosen by families in facing stress will impact family health (Martínez-montilla, Amador-marín, and Guerra-martín 2017).

Stress may come from chronical diseases, such as mental disorders (Schizophrenia), addictions, accidents, disabilities, and economic problems. On the other hand, family coping used by families in treating Schizophrenia patients are problem-focused coping and emotion-focused coping. Stress tin a family with Schizophrenia patients can transform the family's life balance. That is why every family need to have great coping strategies. Caregivers with patients who have mental disorders also need to identify the main stress factor in their family. The best coping strategy is also needed so that family health can improve. Based on the theoretical and empirical studies, it can be inferred that family coping affect family health.

Family coping strategies include observation, counseling, education and cooperation. (PPNI 2017). An emotional reaction needs to be defined by the nurse (Caqueo-urízar et al. 2017), Prognosis strain (Fusar-Poli et al. 2020), decision-making (Mandarelli et al. 2018) Expectations of family and family (Knight et al. 2018). Applying the family coping strategy may improve the capacity of the family to clarify experienced health issues, family practices to better resolve health problems, and minimize risk factors. The implementation of family coping that can have an impact on reducing the symptoms of disease in family members.

CONCLUSIONS

This research reinforces the family health theory. Coping mechanisms done by families (problem-focused coping and emotion-focused coping) affect family health. Apart from family satisfaction, family health can also be measured from the aspects of Efficiency and Happiness. This research Further studies are necessary to be conducted to find out whether or not patients and treatment factors contribute to family health.

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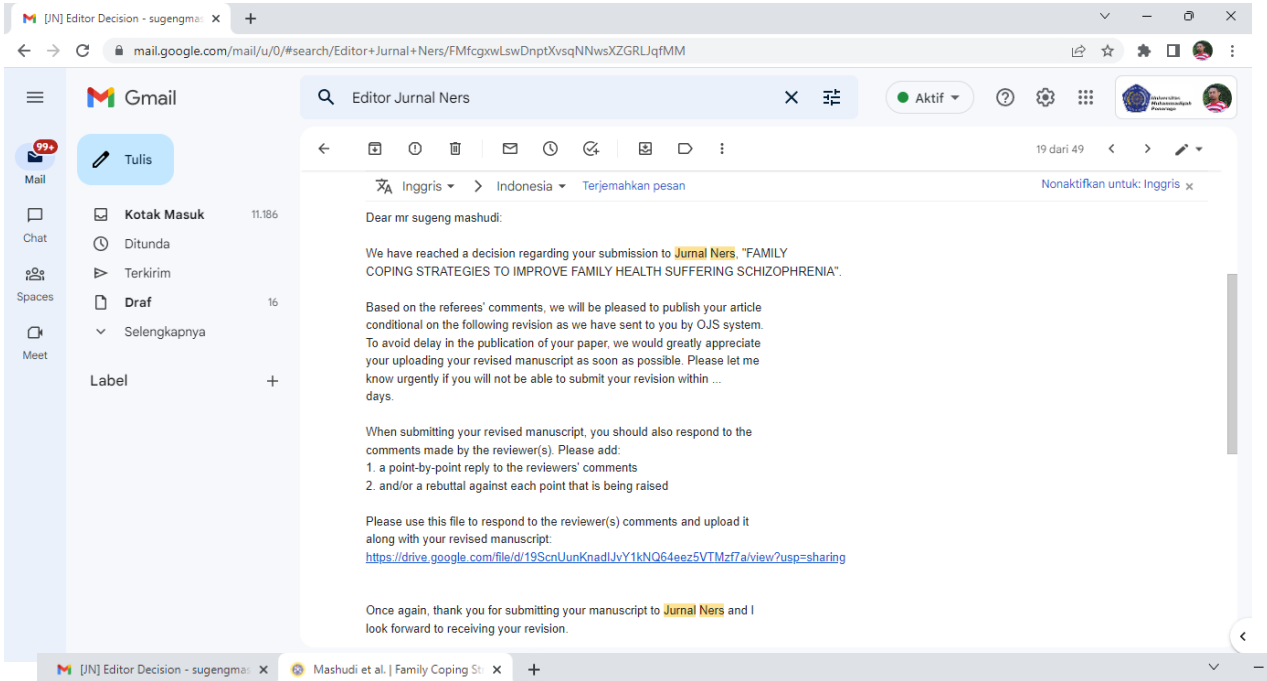
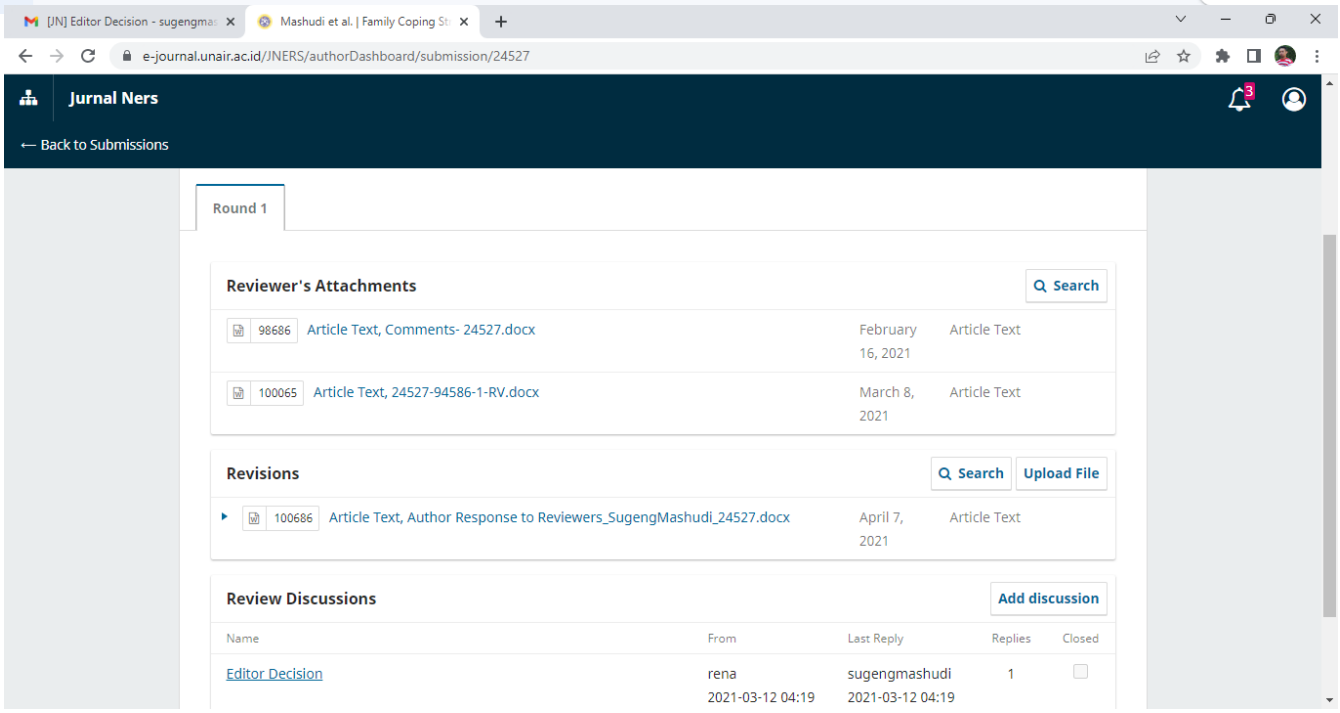
2. Revisi dari Jurnal Ners
12 Maret 2021





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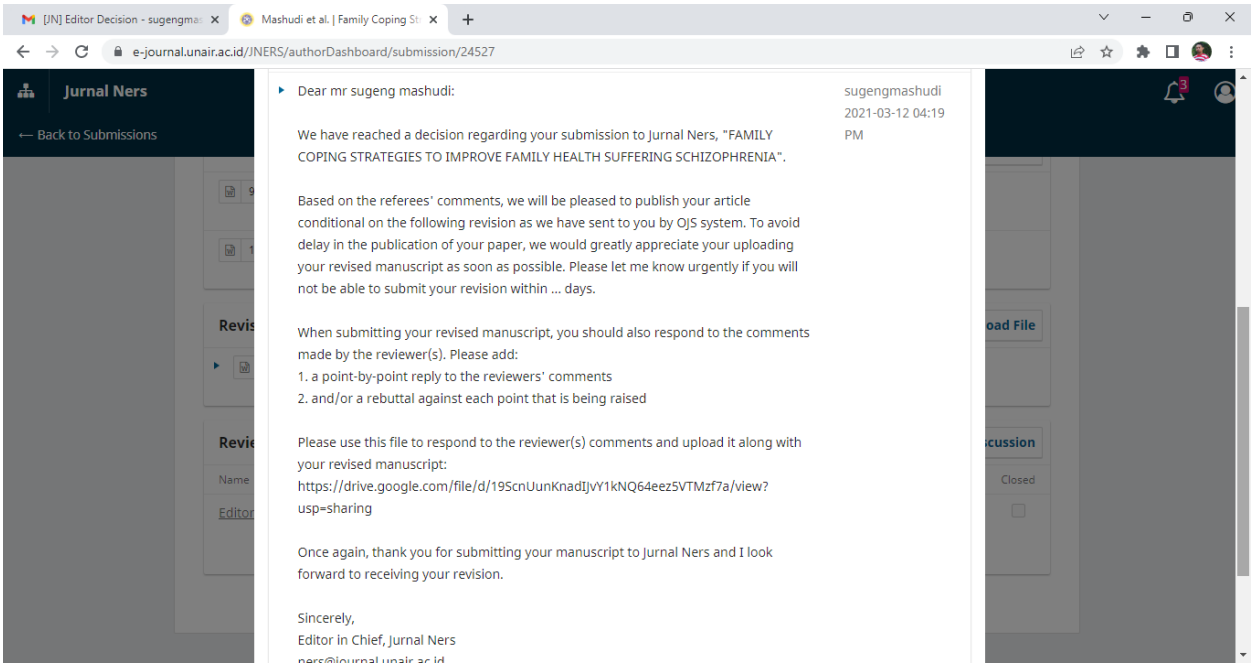

Article 24-527

General comments
The study is interesting when the author can support it with the current's studies about the topic some common words are revised such as (who handled) and grammar check. The major concerns are the references is limited (please check the guideline of this journal)

Abstract:
The aim of the study does not mention clearly whether to assess, to examine or ??
how to present the result needs revision- such as T statistic > T critical- and one unit value—what the reader needs to know about this result

Introduction:

- Many paragraphs have not presented the currents literature about the topics (too old).
- Paragraph one only shows the theory without any current issues
- Paragraph one shows many literature review wFamily coping consists of problem-focused coping and emotion-focused coping. Family coping is a cognitive assessment and behavior to manage internal and external needs that exceed ability (S.Lazarus and Folkman 1984).
- Need to mention the gap from this study to previous studies
- It would be better to mention? Current study of family health, coping strategy, why those are important, the relationship between those variables

Material and methods

- Participants were 81 men = it should be in the result
- Variables and instruments need to mention how many items, variables and scoring
- What is the inclusion and exclusion criteria
- There is no clear statements how to divide education and age

Results;

- Who handle?
- What is the reason to present the patients?
- How to presents the loading factors and T value? Is it common presenting the results (no mean, SD etc)

Discussion
The discussion needs discuss the finding from the study compare with the previous studies, the similarities, the differences not just only present the result or literature

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Commented [A2]: Is it just in Indonesia or whole world?

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Commented [A9]: Please divide it into three paragraph contained of problems of research, scale of problem, chronology

Commented [A10]: Please provide a literature review about your topic, was there any gap of knowledge

Commented [A11]: Please add the aim of your study in the last sentence

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Please also describe the data collection process, how did the author conducted the sampling method? Were there all the participants fill all the questionnaire fully? Were there any missing? You should describe it in detail.
Please also describe when and where the data collection was conducted?

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Variables and Instruments

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Please describe the questionnaire in detail, for example whose questionnaire it was? In English or Bahasa? Did you make any modification or not?
How many component it has? How many questions? How do we describe the result of each questionnaire?

Statistical Analysis

Before the statistical analysis, the data were selected based on three standard deviations above or below the average score. Missing values are excluded from the analysis. Descriptive statistics and correlation analysis were performed with the SPSS program (Version 22.0, IBM Corp, Armonk, NY, USA). Structural equation models were tested with Mplus (Version 7.4, Muthen & Muthen, Los Angeles, CA, USA). The study of the structural model with a corrected level of confidence (CI) of 95% used 5000 bootstrap samples.

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RESULTS

Characteristics of Family with Schizophrenia Patients.

The data used in this study were taken from 160 caregivers of Schizophrenia patients who seek treatments in primary healthcare centers located in the North and West Ponorogo. Selected respondents were those who meet the criteria of random sampling.

The observation of the study was done in the selected primary healthcare centers. The complete characteristics of caregivers who handle Schizophrenia patients can be seen in Table 1.

Table 1: Characteristics of Caregivers who Handle Schizophrenia Patients in Ponorogo.

Characteristics	Frequency	Percentage
Gender		
Men	81	50.6%
Women	79	49.4%
Age:		
Productive (18-54)	102	63.8 %
Not productive (55-80)	58	36.2%
Status:		
Married	139	86.8 %
Single	10	6.3 %
Widower/widow	11	6.9 %
Education		
High	76	74.5 %
Low	84	52.5 %
Job		
Private	47	29.4 %
Farmer	90	56.2 %
Others	23	14.4 %
Family members (amount)		
≤ 3		
>3	73	45.6 %
	87	54.4 %
Salary		
< IDR 1,500,000,-	132	82.5 %
≥IDR 1,500,000	28	17.5%

Table 1 shows that the majority of caregivers are men (50.6%), at the age of 18-54 (63.8%). Most of them were married (86.8%) and graduated from high education (74.5%). They worked as farmers (56.2%) with >3 family members (54.4%) and salary < IDR 1,500,000 (82.5%). Caregiver burden was positive correlation with age of caregiver, employment of caregiver and level of education (Sugeng Mashudi, Ah. yusuf, Rika Subarniati T, Kusnanto 2019).

Characteristics of Schizophrenia Patients

Table 2: Characteristics of Schizophrenia patients

Characteristics	Frequency	Percentage
Gender		
Men	95	59.6%
Women	65	40.4%
Age:	131	

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Productive (17-45)	29	81.9%
Not productive (46-71)		18.1%
Relationship with caregiver:		
Son/Daughter	63	39.4 %
Parent	14	8.8 %
Others (Siblings)	83	51.8 %

Table 2 explains that the majority of Schizophrenia patients are men (59.6%) in the age of 17-45 (81.9%), and siblings of the caregivers (51.8%). The majority of Schizophrenics in productive age tend to behave in smoking, even though the effects of nicotine contained in cigarettes affect oocyte maturity (Dwirahayu and Mashudi 2016).

Table 3: Loading factors and T-statistical value.

Variables	Sub-variables	Loading (λ)	T-Statistics	T-table
Coping Mechanisms	Problem-focused Coping	0.915		
	Emotion-focused Coping	0.710	14.393	1.96
Family Health	Efficiency	0.912		
	Satisfaction	0.914		
	Happiness	0.873		

Table 3 illustrates that coping mechanisms done by the family are dominantly problem-focused coping (λ =0.915), whereas family health is determined by the satisfaction level in treating Schizophrenia patients (λ =0.914). Coping mechanisms have an effect on family health (α=0.05; t-statistics = 14.393).

DISCUSSION

Family Coping significantly impact family health. This is based on the T-test in the structural model analysis, where T-statistics (13.966) is greater than T-critical (1.96). The effect value of coping mechanisms on family health is 0.682. This means that if family coping are given one-unit value, it will increase family health by 0.682 times.

Family health is measured from the aspects of efficiency, satisfaction, and happiness. Some roles of the family may include knowing health problems experienced by patients, choosing the best action to treat patients, maintaining a conducive environment, and utilizing health facilities for patients. The family stated that family satisfaction with Schizophrenia patient care may be obtained by adapting with patients, discussing about the best solution to overcome problems that befall patients, showing affections and responses, such as anger, suffering, and love, and spending time together with patients. In terms of happiness, the family could enjoy the moment of treating patients with Schizophrenia compared to other caregivers with Schizophrenia patients. Also, they could enjoy everything and obtain optimal treatment for Schizophrenia patients.

Efficiency indicator (0.912) has the second-highest value in determining family health. Efficiency throughout the treatment process can be seen when a family could identify patients' health problems, decide the best decision for them, take care of them well, keep a conducive environment, and take advantages of health facilities for them.

Satisfaction indicator (0.914) possesses the highest value in determining family health. Satisfaction throughout the treatment process can be found when a family can adapt, choose the best solution for problems, show affection, respond positively to patients, and spend some time together

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with patients. Family satisfaction in treating Schizophrenia patients can not be separated from the impact of coping mechanisms (problem-focused coping and emotion-focused coping) done by the family.

Happiness indicator (0.873) shows the smallest value in determining family health. The decline of happiness in treating Schizophrenia patients can be seen when family feel less happy compared to other families with Schizophrenia patients and cannot enjoy everything and obtain optimal caregiving. It is related to stress factors, such as economy, abusive behavior, and stigma that befalls the family.

Being healthy is defined as an ability to adapt physically, mentally, and socially as a single unit free from illness and disability (WHO 1948). The characteristics of being healthy according to WHO involve the ability to reflect an individual as a person in internal and external contexts and to involve creativity and productivity. King (1981) stated that being healthy is a form of efficiency, satisfaction, productivity, and happiness (Alligood 2017). In this study, family health refers to healthy family (King 1981). However, the productivity indicator in this study is invalid and unreliable because the submitted questions only focus on attendance, while the respondents of the study are farmers who were unable to attend regularly.

The essential finding of this study is that family coping affect family health. Family Health Theory written by Doornbos in 2002 shows that coping mechanisms affect family health, whereas this study, in addition to the existing theory, finds family health indicator was measured not only based on family satisfaction, but also family efficiency and happiness. Coping mechanisms chosen by families in facing stress will impact family health (Martínez-montilla, Amador-marín, and Guerra-martín 2017).

Stress may come from chronical diseases, such as mental disorders (Schizophrenia), addictions, accidents, disabilities, and economic problems. On the other hand, family coping used by families in treating Schizophrenia patients are problem-focused coping and emotion-focused coping. Stress tin a family with Schizophrenia patients can transform the family's life balance. That is why every family need to have great coping strategies. Caregivers with patients who have mental disorders also need to identify the main stress factor in their family. The best coping strategy is also needed so that family health can improve. Based on the theoretical and empirical studies, it can be inferred that family coping affect family health.

Family coping strategies include observation, counseling, education and cooperation. (PPNI 2017). An emotional reaction needs to be defined by the nurse (Caqueo-urízar et al. 2017), Prognosis strain (Fusar-Poli et al. 2020), decision-making (Mandarelli et al. 2018) Expectations of family and family (Knight et al. 2018). Applying the family coping strategy may improve the capacity of the family to clarify experienced health issues, family practices to better resolve health problems, and minimize risk factors. The implementation of family coping that can have an impact on reducing the symptoms of disease in family members.

CONCLUSIONS

This research reinforces the family health theory. Coping mechanisms done by families (problem-focused coping and emotion-focused coping) affect family health. Apart from family satisfaction, family health can also be measured from the aspects of Efficiency and Happiness. This research Further studies are necessary to be conducted to find out whether or not patients and treatment factors contribute to family health.

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FAMILY COPING STRATEGIES TO IMPROVE FAMILY HEALTH PEOPLE ~~MEMBER WHO~~ LIVING WITH SCHIZOPHRENIA

~~FAMILY HEALTH SUFFERING SCHIZOPHRENIA~~

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Faculty of Nursing Sciences, Universitas Airlangga Surabaya East Java Indonesia
Corresponding author : sugengmashudi@umpo.ac.id

ABSTRACT

Schizophrenia is a serious mental illness that affects the thinking, emotions, relationships, and decision making. However, the studies on the positive outcomes of its treatment in Indonesia is limited and one of the positive effects of treating schizophrenia in patients is family health. The family wellfare management strategies provide help for coping, care preparation, organizing meetings, and mentoring. This study focuses on family coping strategies for improving the health of members living with schizophrenia.

A cross-sectional design was used by choosing 160 respondents randomly. The inclusion criteria are family members that deliver control schizophrenia patients to the Puskesmas, with a minimum age of 18. The independent variable is family coping, which consist of two sub-variables (problem- focused coping mechanism and emotion-focused coping mechanism). While the dependent variable is family health, which consists of three sub-variables (efficient, satisfaction, and happiness). The SMART PLS (2.0 Version) was used to prove the impact of the variables.

The results indicated that family coping have a significant impacts on the health. The hypothesis was taken from the value of the T-test on the structural model analysis, which shows T-statistics (13.966) > T-critical (1.96). The impact of family coping on the health is equal to 0.682 (OR). This means that if family coping are given one-unit value, it will increase the family health by 0.682 times.

The implementation of the family coping strategy will improve the capacity of the family to clarify health issues encountered, resolve family behaviors effectively and minimize risk factors. Furthermore, the coping mechanisms chosen by families in facing stress will have an impact on the reduction of illness symptoms in the members with schizophrenia.

~~Studies concerning positive outcomes of Schizophrenia treatment in Indonesia are still rare. One of the positive outcomes of Schizophrenia treatment to patients is family health. Family wellness management strategies provide help for family coping, family care preparation, organizing family meetings, and family mentoring. This study aimed family coping family strategies to improve family health for maintaining the health ofpeople living with schizophrenia.~~

~~The study used a cross sectional design by choosing 160 respondents randomly. Inclusion criteria are family members who deliver control schizophrenia sufferers to the Puskesmas and minimum age 18 years . Independent variable of the study is family coping which consist of two sub-variables (problem focused coping mechanism and emotion focused coping mechanism). Whereas dependent variable is family health which consists of three sub-variables (efficient, satisfaction, and happiness). The SMART PLS (2.0 Version) was used to prove the impact of the variables.~~

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~~The implementation of the family coping strategy would improve the capacity of the family to clarify health issues encountered, resolve family behaviors effectively and minimize risk factors. Coping mechanisms chosen by families in facing stress will impact on the reduction of illness symptoms in family members with schizophrenia.~~

KEYWORDS

Keywords: family coping , family health, positive outcomes, schizophrenia.

INTRODUCTION

Family caregivers are an important aspect of ~~the care~~caring ~~of those~~people with serious mental illnesses, but the needs of those who do it are often ~~un~~met (Yesufu-Udechuku et al., 2015). Furthermore, the ~~F~~family caregivers that ~~who~~ support a ~~person~~patients with psychosis frequently have poorer health (Sin et al., 2021). ~~(Sin et al., 2021).~~ Treating a patient ~~with~~ a schizophreni~~a~~c patient is a source of ~~tension~~stress for the family, and ~~the family~~ they may be ~~subjected to~~external or internal criticism ~~from either the outside or the inside~~ before it ~~has an~~ effects ~~on~~ the family (Byba Melda Suhita, Prima Dewi Kusumawati, Heri Saputro, 2020). ~~(Suhita, MB, 2020).~~ Caring for a patient with mental illness creates a wide range of issues that place a significant burden on family caregivers (Ebrahimi et al., 2018). ~~Various causes of decreased family health of people with schizophrenia include those from within and outside the family. The complexity of the health service system (Gear, Eppel and Koziol Mclain, 2018) and the complexity of the treatment program (Murugappan, Seifert and Farley, 2020) are factors that cause poor family health that comes from factors outside the family. Decision-making conflicts (Hamann and Heres, 2019), economic difficulties (Marazziti et al., 2020), and family conflicts (French, K.A, 2018) are external factors in decreasing family health.~~ The data ~~taken from~~obtained from t~~T~~he Institute for Health Metrics and Evaluation (IHME) show that schizophrenic disorders ~~affect another estimated~~affect about 1.5 million ~~people~~individuals (0.3%) (OECD/European Union, 2018). 1% of the population in the United Kingdom are also ~~people who~~ experience~~d~~ing mental disorders (Smith, 2015). The 2018 RISKESDAS (Basic Health Research) data in Indonesia show an escalation of proportion in the number of households with mental disorders by 7 per mil from 1.7 per mil. Specifically, the East Java Province shows that only 2.2 per mil households experienced mental disorders in 2013 and ~~went up~~increased to 5 per mil in 2018 (Riskesdas, 2018). ~~(RISKESDAS, 2013; 2018).~~ Generally, similar incident rate also occurred in Ponorogo, with ~~as many as~~about 1.321 out of 600.336 residents in productive ages ~~who~~ experienced mental disorders (Nasriati, 2017). However, a higher prevalence rate was found in Paringan Village and Dukuh Mirah, where the prevalence rate of mental disorders in Paringan Village was at 11.2 per mil (Mashudi, Widiyahseno, 2016). Decreased family health effects on patients and relatives.

Various causes of decreased family health of people with schizophrenia include those from within and outside the family. The complexity of the health service system (Gear et al., 2018). ~~(Gear, Eppel and Koziol Mclain, 2018)~~ and the complexity of the treatment program (Murugappan et al., 2020). ~~(Murugappan, Seifert and Farley, 2020)~~ are factors that cause poor family health that comes from factors outside the family. Decision-making conflicts (Hamann & Heres, 2019). ~~(Hamann and Heres, 2019),~~ economic difficulties (Marazziti et al., 2020). ~~(Marazziti et al., 2020),~~ and family conflicts (Lea Plessis , Philippe Golay , H ´ el ´ ene Wilquin , J ` er´ ome Favrod & Rexhaj, 2018). ~~(French, K.A, 2018)~~ are external factors in decreasing family health.

Various ways are used to improve family health, including family coping support (Rayes et al., 2021). ~~(Rayes et al., 2021),~~ care planning support (Nyman et al., 2020). ~~(Nyman et al., 2020),~~ coordinated family discussions (Storm et al., 2020). ~~(Storm et al., 2020),~~ and family mentoring (Andersen et al., 2020). ~~(Andersen et al., 2020).~~ Based on the family health theory, family coping support is very effective in improving family health (Doornbos MM, 2002). ~~(Doornbos, 2002).~~ Furthermore, ~~C~~coping is described as the method of balancing external or internal demands that are perceived to be taxing or exceeding the person's resources, it ~~. Coping~~ may be problem-focused or emotion-focused (Grover, S., Pradyumna, & Chakrabarti, 2015). Choosing the best coping strategy increases mental health ~~-~~(O'Hara et al., 2019). Increases in problem-focused coping were associated

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with higher levels of well-being (De Vibe et al., 2018). Little research has focused on examining family coping in the context of Studies on family coping support health areis, still rarelyseldom discussed.

The data taken from The Institute for Health Metrics and Evaluation (IHME) show that schizophrenic disorders affect another estimated 1.5 million people (0.3%). (OECD/European Union, 2018). 1% of the population in the United Kingdom are people who experienced mental disorders (Smith, 2015). The 2018 RISKESDAS (Basic Health Research) data in Indonesia show an escalation of proportion in the number of households with mental disorders by 7 per mil from 1.7 per mil. Specifically, the East Java Province shows that only 2.2 per mil households experienced mental disorders in 2013 and went up to 5 per mil in 2018 (RISKESDAS, 2013; 2018). Generally, similar incident rate also occurred in Ponorogo, with as many as 1.321 out of 600.336 residents in productive ages who experienced mental disorders (Nasriati, 2017). However, a higher prevalence rate was found in Paringan Village and Dukuh Mirah, where the prevalence rate of mental disorders in Paringan Village was at 11.2 per mil (Mashudi, Widiyahseno, 2016). Decreased family health effects on patients and relatives.

If a familyunhealthy caregiver who has poor health is not treated immediately, it can impactaffect people with schizophrenia. sufferers. Emotions of family caregivers that often increase will have an impact on increasing the recurrence of schizophrenics (Pardede, J. K., Sirait, D., Riandi, R., Emanuel, P., Ruslan, 2016). (Pardede, 2016). Therefore, So thatthe optimal caregiver health will support the rehabilitation of people with schizophrenia. Schizophrenics who receivinge occupational therapy are more appreciated by their families (Mashudi et al., 2020). (Mashudi, S. 2020).

The Family Health Theory (FHT) developed by Doornboss (2002) (Doornbos MM, 2002) is a middle range theory based on the Goal Attainment Theory made by E. King (1983). The FHT specifically predicts family health in a family with mental disorder patients. However, family health in the FHT only measures the level of family satisfaction in treating patients with mental disorders (Doornbos MM, 2002). The theoretical definition of family health is the adaptive potential and functional ability of a family in social roles (King, 1983). King (1981)(King, 1981) consistently defines health as two goals of nursing practice. According to King (1981), the first goal of nursing practice is "A functional state in the life cycle". For this goal, King generally focuses on its function as the indicator of health. The second goal of nursing practice according to King (1981) is efforts to reach "A useful, satisfying, productive, and happy life". Based on that, it can be inferred that the definition of health for family health should focuses on "A useful, satisfying, productive, and happy life. Various factors of deterioration in family health involve a diverse structure of health and care systems and family issues. (PPNI, 2017). Methods for enhancing family health provide help for family coping (Krishnan and Orford, 2002; PPNI, 2017), Promote family care planning, arrange family conversations (Behroozi, Mazowita and Davis, 2008);(García *et al*., 2006) and Family Support (García *et al*., 2006; Labrum, 2020). One of the most important strategies to enhance family wellbeing is to encourage family coping. Improving family health is seldom addressed. One of the most important strategies to enhance family wellbeing is to encourage family coping. Improving family health is seldom addressed. The data taken from The Institute for Health Metrics and Evaluation (IHME) WHO show that schizophrenic disorders affect another estimated 1.5 million people (0.3%). 21 million people suffered from mental disorders (OECD/European Union, 2018)(WHO, 2018). 1% of the population in the United Kingdom are people who experienced mental disorders (Smith, 2015). The 2018 RISKESDAS (Basic Health Research) data in Indonesia show an escalation of proportion in the number of households with mental disorders by 7 per mil from 1.7 per mil. Specifically, the East Java Province shows that only 2.2 per mil households experienced mental disorders in 2013 and went up to 5 per mil in 2018 (RISKESDAS, 2013; 2018). Generally, similar incident rate also occurred in Ponorogo, with as many as 1.321 out of 600.336 residents in productive ages who experienced mental disorders (Nasriati, 2017). However, a higher prevalence rate was found in Paringan Village and Dukuh Mirah, where the prevalence rate of mental disorders in Paringan Village was at 11.2 per mil (Mashudi, Widiyahseno, 2016). Decreased family health effects on patients and relatives.

Studies on the concerning positive outcomes of treating Sschizophrenia treatment in Indonesia are still rare. And Oone of the positive outcomes of Sschizophrenia treatment toin patients is family health,which is influenced . Family health is affected by coping mechanisms (Doornbos, 2007). (Doornbos, 2002). The study conducted by Çuhadar, Savaş, Ünal, and Gökpınar in 2015 strengthens

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the previous studies, which ~~found~~ reported that coping mechanism affects family health. The ~~S~~studies regarding stress and coping mechanisms in family with Schizophrenia members show that there is an effect of stress on coping mechanisms (Geriani et al., 2015). Family coping consists of problem-focused coping and emotion-focused coping. Furthemore, ~~Family coping~~it is a cognitive assessment and behavior to manage internal and external needs that exceed ability (S.Lazarus & Folkman, 1984). The study ~~done~~ carried out by Crowe and Lyness in 2014 shows that family coping affects family health. A better family coping will increase the level of family health. This study ~~aim~~ focuses on family coping strategies to improve the family health people living with schizophrenia.

~~This study aimed coping family strategies for maintaining the health of schizophrenia.~~

MATERIALS AND METHODS

Sample

This study was conducted in Ponorogo Regency, East Java, Indonesia with a sample of 160 respondents and a cross-sectional design. The data were collected through questionnaires, ~~that have been tested for~~ and the validity and reliability was tested. The ~~R~~respondents were ~~taken~~ selected by using a random sampling technique from five primary healthcare centers in the North and West Ponorogo. The ~~research~~ inclusion criteria included 1) family members accompanying control schizophrenia ~~sufferers~~patients to the ~~Puskesmas~~Public Health Center, 2) at least 18 years old. The ~~E~~exclusion criteria included 1) caregiver suffering from psychiatric or physical disorders that may interfere with patient care and cooperation during data collection, 2) there is more than one schizophrenic ~~sufferer~~patients in the family. The ~~F~~families with schizophrenia ~~who~~that ~~come to~~visit the health center according to the inclusion and exclusion criteria that have an odd number are targeted as research respondents. After filling in the informed consent of the schizophrenic family of people ~~who~~that filled out the questionnaire prepared by the researcher, after the questionnaire was filled in and submitted to the researcher, ~~the researcher~~they checked the completeness of the answers, if the answers were complete, then as a sign of anchovies, the researcher gave a gift ~~worth Rp. 20,000~~ to respondents.~~Kriteria inklusi penelitian diantaranya 1) anggota keluarga yang mengantar penderita Skizofrenia kontrol ke Puskesmas, 2) berusia minimal 18 tahun. Kreteria ekslusi diantaranya 1) pengasuh yang menderita gangguan kejiwaan atau fisik yang memungkinkan mengganggu perawatan pasien dan kerjasama selama pengambilan data, 2) terdapat lebih dari satu penderita skizofrenia dalam keluarga. Keluarga penderita Skizofrenia yang datang ke puskesmas yang sesuai dengan kriteria inklusi dan ekslusi yang memiliki nomor ganjil dijadikan target responden penelitian. Setelah mengisi informed consent keluarga penderita skizofrenia mengisi koesioner yang telah disiapkan peneliti, setelah koesioner diisi dan diserahkan ke peneliti, peneliti mengecek kelengkapan jawaban, jika jawaban lengkap maka sebagai tanda teri makasih peneliti memberikan bingkisan senilai Rp. 20.000 kepada responden.~~

~~Participants were 81 men (50.6%) and 79 women (49.4%). Their average age was 49 (SD = 14.2). Furthermore, there were 139 married respondents (86.6%) and 10 single respondents (6.3%). Regarding education level, 102 respondents have completed basic education (24.4%), 39 respondents have achieved secondary education (48.68%), and 3 respondents have completed tertiary education (1.9%).~~

Variables and Instruments

~~Sex~~Gender, age, marital status, education, number of family members, occupation, and income are all demographic variables. Family coping variables were compiled based on the Family Coping Questionnaire (FA~~C~~EQ) ~~questionnaire~~. FCQ is a questionnaire to measure family coping based on (Plessis et al., 2018), ~~(Lea Plessis et all, 2018)~~ which has been modified into Indonesian. There are two components, namely the problem of focus coping

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and emotional focus coping with 7 questions. I think to say in a harsh or dirty tone to the ~~sufferer~~patient, I will take care of the ~~sufferer~~patien –carefully, I share problems about the sufferer's condition with friends/relatives, I get help from People around me, I plan to leave the house temporarily when the ~~sufferer~~patients gets angry, I think of letting the ~~sufferer~~patient suffer a relapse, I think to pray more ~~so that the sufferer's~~in sach a way that the patient's condition is better. Every positive question always scores 4, often 3, rarely 2, never 1. While negative questions always score 1, often 2, rarely 3, never 4. A higher score reflects better family coping. The Cronbach's alpha coefficient for the scale was 0.534.

~~FCQ merupakan koesioner untuk mengukur koping keluarga berdasarkan (Lea-Plessis et all, 2018) yang telah dimodifikasi ke dalam bahasa Indonesia. Terdapat dua komponen yaitu problem focus koping dan emosi focus koping dengan 7 pertanyaan. Saya berfikir untuk berkata dengan nada kasar atau kotor kepada penderita, Saya akan menjaga penderita dengan hati-hati, saya berbagi masalah tentang keadaan penderita kepada teman/saudara, Saya mendapat bantuan dari orang sekitar, saya berencana keluar rumah sementara ketika penderia ngamuk, saya membeyangkan membiarkan penderikta ketika kambuh, saya berfikir untuk memperbanyak doa agar kondisi penderita lebih baik. Setiap pertanyaaan positif selalu skor 4, sering 3, jarang 2, tidak pernah 1. Sedangkan pertanyaan negative selalu skor 1, sering 2, jarang 3, tidak pernah 4. A higher score reflects a better family coping. The Cronbach's alpha coefficient for the scale was 0.534.~~

Family health variables were created based on the indicators of Useful, satisfaction, and happiness. The useful Questioners are arranged based on family assignments (Susanto, T., Arisandi, D., Kumakura, R., Oda, A., Koike, M., Tsuda, A., Sugama, 2018). ~~(Freadman, 1982).~~ There are 5 questions 1) the family is able to know the patient's health problem, 2) the family is able to decide the best course of action for the patient, 3) the family is able to care for the patient well, 4) the family is able to maintain a conducive environment, 5) the family is able to use health facilities for the patient. Each positive item is scored using a 4-point scale (4= always, 3= often, 2= rarely, 1= ever). While negative questions always score 1, often 2, rarely 3, never 4. Satisfaction is measured based on the APGAR family (Takenaka & Ban, 2016). ~~(Smeikelten, 1982).~~ There are four questions, namely: 1) I feel satisfied because my family can adjust to the patient,

2) I feel satisfied because my family is discussing the best solution to solve the problems that befell the patient, 3) I am satisfied because my family shows compassionate and respond to patient emotions, such as feelings of anger, suffering, and compassion, 4) I feel satisfied with my family's way of spending time together by involving patient in overcoming problems. Every question the respondent answers is always a score of 4, often 3, rarely 2, never 1.

The happy indicator is measured based on the Happy Questionnaire (Spears, 2017), with 3 questions, namely: 1) Overall my family feels happy, 2) Compared to the family of fellow caregivers with schizophrenia, my family feels happier; 3) The caregiver family with schizophrenia feels happy. They enjoy whatever is going on and get the most out of nurturing. Every question the respondent answers always have a score of 4, often 3, rarely 2, never 1. A higher score reflects better family health. The Cronbach's alpha coefficient for the scale was 0.883.

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The happy indicator is measured based on the Happy Questionnaire with 3 questions, namely: 1) Overall my family feels happy, 2) Compared to the family of fellow caregivers with schizophrenia, my family feels happier; 3) The caregiver family with schizophrenia feels happy. They enjoy whatever is going on and get the most out of nurturing. Every question the respondent answers is always a score of 4, often 3, rarely 2, never 1. A higher score reflects better family health. The Cronbach's alpha coefficient for the scale was 0.883.

Indikator happy diukur berdasarkan Happy Questionere dengan 3 pertanyaan, yaitu: 1) Secara keseluruhan keluarga saya merasa bahagia, 2) Dibanding keluarga sesame pengasuh penderita skizofrenia, keluarga saya merasa lebih baharia; 3) Keluarga pengasuh penderita Skizofrenia merasa bahagia. Mereka menikmati apapun yang sedang terjadi dan mendapatkan hasil maksimal dari pengasuhan. Setiap pertanyaaan yang dijawab responden selalu skor 4, sering 3, jarang 2, tidak pernah 1. A higher score reflects a better family health. The Cronbach's alpha coefficient for the scale was 0.883.

Statistical Analysis

Before the statistical analysis, the data were selected based on three standard deviations above or below the average score. Missing values are excluded from the analysis. Descriptive statistics for demographic variables and correlation analysis were performed with the SPSS program (Version 22.0, IBM Corp, Armonk, NY, USA). Family coping and family health variables were performed with Structural equation models were tested with Mplus (Version 7.4, Muthen & Muthen, Los Angeles, CA, USA). The study of the structural model with a corrected level of confidence (CI) of 95% used 5000 bootstrap samples.

RESULTS

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Characteristics of Family with Schizophrenia Patients.

The data used in this study were taken from 160 ~~caregivers~~ family of Schizophrenia patients who seek treatments in primary healthcare centers located in the North and West Ponorogo. Selected respondents were those who meet the criteria of random sampling.

The observation of the study was done in the selected primary healthcare centers. The complete characteristics of caregivers who handle Schizophrenia patients can be seen in Table 1.

Table 1: Characteristics of family member who living with schizophrenia~~caregivers who Handle Schizophrenia Patients~~ in Ponorogo, East Java, Indonesia.

Characteristics	Frequency	Percentage
Gender		
Men	81	50.6%
Women	79	49.4%
Age (based on central bureau of statistics republic of indonesia):		
Productive (18-54)	102	63.8 %
Not productive (55-80)	58	36.2%
Status:		
Married	139	86.8 %
Single	10	6.3 %
Widower/widow	11	6.9 %
Education		
High (Senior High School)	76	74.5 %
Low (Elementary School, Jonior High School)	84	52.5 %
Job		
Private	47	29.4 %
Farmer	90	56.2 %
Others	23	14.4 %
Family members (amount)		
≤ 3	73	45.6 %
>3	87	54.4 %
Salary (regional minimum wage in Ponorogo Indonesia)		
< IDR 1,500,000,-)	132	82.5 %
≥IDR 1,500,000	28	17.5%

Table 1 shows that the majority of caregivers ~~are~~ are 81 men (50.6%) and 79 women (49.4%). Their average age was 49 (SD = 14.2). Furthermore, ~~there were~~ 139 ~~married~~ respondents are married (86.6%) and 10 single respondents (6.3%). Regarding education level, 102 respondents have completed basic education (24.4%), 39 respondents have achieved secondary education (48.68%), and 3 respondents have completed tertiary education (1.9%). ~~men (50.6%), at the age of 18-54 (63.8%). Most of them were married (86.8%) and graduated from high education (74.5%).~~ They worked as farmers (56.2%) with >3 family members (54.4%) and salary < IDR 1,500,000 (82.5%). ~~Participants were 81 men (50.6%) and 79 women (49.4%). Their average age was 49 (SD = 14.2). Furthermore, there were 139 married respondents (86.6%) and 10 single respondents (6.3%). Regarding education~~

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~~level, 102 respondents have completed basic education (24.4%), 39 respondents have achieved secondary education (48.68%), and 3 respondents have completed tertiary education (1.9%).~~
~~Caregiver burden was positive correlation with age of caregiver, employment of caregiver and level of education (Sugeng Mashudi, Ah. yusuf, Rika Subarniati T, Kusnanto 2019).~~

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Characteristics of Schizophrenia Patients

Table 2: Characteristics of Schizophrenia patients

Characteristics	Frequency	Percentage
Gender		
Men	95	59.6%
Women	65	40.4%
Age:		
Productive (17-45)	131	81.9%
Not productive (46-71)	29	18.1%
Relationship with caregiver:		
Son/Daughter	63	39.4 %
Parent	14	8.8 %
Others (Siblings)	83	51.8 %

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Table 2 explains that the majority of Schizophrenia patients are men (59.6%) in the age of 17-45 (81.9%), and siblings of the caregivers (51.8%). The majority of Schizophrenics in productive age tend to behave in smoking, even though the effects of nicotine contained in cigarettes affect oocyte maturity (Dwirahayu & Mashudi, 2016).

Table 3: Loading factors and T-statistical value.

Variables	Sub-variables	Loading (λ)	T-Statistics	T-table
Coping Mechanisms	Problem-focused Coping	0.915		
	Emotion-focused Coping	0.710	14.393	1.96
Family Health	~~Efficiency~~Useful	0.912		
	Satisfaction	0.914		
	Happiness	0.873		

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Table 3 illustrates that coping mechanisms done by the family are dominantly problem-focused coping (λ =0.915), whereas family health is determined by the satisfaction level in treating Schizophrenia patients (λ =0.914). Coping mechanisms have an effect on family health (α=0.05; t-statistics = 14.393).

DISCUSSION

Family Coping significantly impact family health. This is based on the T-test in the structural model analysis, where T-statistics (13.966) is greater than T-critical (1.96). The effect value of coping mechanisms on family health is 0.682. This means that if family coping ~~are~~ is given one-unit value, it will increase family health by 0.682 times.

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Family health is measured from the aspects of useful, satisfaction, and happiness. Useful shown by the family may include knowing health problems experienced by patients, choosing the best action to treat patients, maintaining a conducive environment, and utilizing health facilities for patients. Useful indicator (0.912) has the second-highest value in determining family health. Useful throughout the treatment process can be seen when a family could identify patients' health problems, decide the best decision for them, take care of them well, keep a conducive environment, and take advantages of health facilities for the family.

As many as 64.4% of families are satisfied caring for family members who have schizophrenia. Satisfaction is shown the family stated that family satisfaction with schizophrenia patient care may be obtained by adapting with patients, discussing the best solution to overcome problems that befall patients, showing affections and responses, such as anger, suffering, and love, and spending time together with patients. The satisfaction indicator (0.914) possesses the highest value in determining family health. Satisfaction throughout the treatment process can be found when a family can adopt, choose the best solution for problems, show affection, respond positively to patients, and spend some time together with patients. Family satisfaction in treating Schizophrenia patients can not be separated from the impact of coping mechanisms (problem-focused coping and emotion-focused coping) done by the family.

Happiness is shown the family could enjoy the moment of treating patients ~~[A1]~~ with schizophrenia compared to other caregivers with schizophrenia patients. Also, they could enjoy everything and obtain optimal treatment for schizophrenia patients. The happiness indicator (0.873) shows the smallest value in determining family health. The decline of happiness in treating Schizophrenia patients can be seen when family feel less happy compared to other families with Schizophrenia patients and cannot enjoy everything and obtain optimal caregiving. It is related to stress factors, such as the economy, abusive behaviour, and stigma that befalls the family. Despite the fact that parents reported being depressed as a result of prejudice, the effects of discrimination have no relationship to their depressive symptoms (Cecilia Ayo´ n & Bermudez-Parsai, 2010).

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~~Family health is measured from the aspects of efficiencyuseful, satisfaction, and happiness. Useful shown by Some roles of the family may include knowing health problems experienced by patients, choosing the best action to treat patients, maintaining a conducive environment, and utilizing health facilities for patients. Useful indicator (0.912) has the second-highest value in determining family health. Useful throughout the treatment process can be seen when a family could identify patients' health problems, decide the best decision for them, take care of them well, keep a conducive environment, and take advantages of health facilities for the family.~~

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~~Efficiency indicator (0.912) has the second highest value in determining family health. Efficiency throughout the treatment process can be seen when a family could identify patients' health problems, decide the best decision for them, take care of them well, keep a conducive environment, and take advantages of health facilities for them.~~

~~Satisfaction indicator (0.914) possesses the highest value in determining family health. Satisfaction throughout the treatment process can be found when a family can adapt, choose the best solution for problems, show affection, respond positively to patients, and spend some time together with patients. Family satisfaction in treating Schizophrenia patients can not be separated from the impact of coping mechanisms (problem focused coping and emotion focused coping) done by the family.~~

~~Happiness indicator (0.873) shows the smallest value in determining family health. The decline of happiness in treating Schizophrenia patients can be seen when family feel less happy compared to other families with Schizophrenia patients and cannot enjoy everything and obtain optimal caregiving. It is related to stress factors, such as economy, abusive behavior, and stigma that befalls the family.~~

Being healthy is defined as an ability to adapt physically, mentally, and socially as a single unit free from illness and disability (WHO, 1948). The characteristics of being healthy according to WHO involve the ability to reflect an individual as a person in internal and external contexts and to involve creativity and productivity. King (1981) stated that being healthy is a form of efficiency, satisfaction, productivity, and happiness (Alligood, 2017). In this study, family health refers to healthy family (King, 1981). However, the productivity indicator in this study is invalid and unreliable because the submitted questions only focus on attendance, while the respondents of the study are farmers who were unable to attend regularly.

The essential finding of this study is that family coping affect family health. Family Health Theory written by Doornbos in 2002 shows that coping mechanisms affect family health, whereas this study, in addition to the existing theory, finds family health indicator was measured not only based on family satisfaction, but also family efficiency and happiness. Coping mechanisms chosen by families in facing stress will impact family health (Martínez-montilla et al., 2017). Caregiver burden was positive correlation with age of caregiver, employment of caregiver and level of education (Mashudi et al., 2019). ~~(Sugeng Mashudi, Ah. yusuf, Rika Subarniati T, Kusnanto, 2019).~~

Family coping was related to increased family health in those with impaired attentional function (Morimoto H, Furuta N, Kono M, 2019). Coping was linked to increased psychological pressure in people who had poor attention management (Tada, 2017). Family coping and family health benefit from compassionate counseling (Buckley LA, Maayan N, Soares-Weiser K, 2017). Antonovsky's sense of coherence influences coping, resulting in increased family happiness (Gassmann et al., 2013). Stress may come from chronical diseases, such as mental disorders (Schizophrenia), addictions, accidents, disabilities, and economic problems. On the other hand, family coping used by families in treating Schizophrenia patients are problem-focused coping and emotion-focused coping. Stress tin a family with Schizophrenia patients can transform the family's life balance. That is why every family need to have great coping strategies. Caregivers with patients who have mental disorders also need to identify the main stress factor in their family. The best coping strategy is also needed so that family health can improve. Based on the theoretical and empirical studies, it can be inferred that family coping affect family health.

Family coping strategies include observation, counseling, education and cooperation. (PPNI, 2017). An emotional reaction needs to be defined by the nurse (Caqueo-urízar et al., 2017), Prognosis strain (Fusar-Poli et al., 2020), decision-making (Mandarelli et al., 2018) Expectations of family and family (Knight et al., 2018). Applying the family coping strategy may improve the capacity of the family to clarify experienced health issues, family practices to better resolve health problems, and

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minimize risk factors. The implementation of family coping that can have an impact on reducing the symptoms of disease in family members.

CONCLUSIONS

This research ~~reinforces~~ strengthen the family health theory, and ~~,~~the c~~C~~oping mechanisms ~~done~~ carried out by families (problem-focused coping and emotion-focused coping) affect family health. In addition to ~~Apart from~~ family satisfaction, the family health can also be measured in term of useful ~~from the aspects of Efficiency~~ and h~~H~~appiness. This addition research in needed to find out if ~~Further studies are necessary to be conducted to find out whether or not~~ patients and treatment factors contribute to family health.

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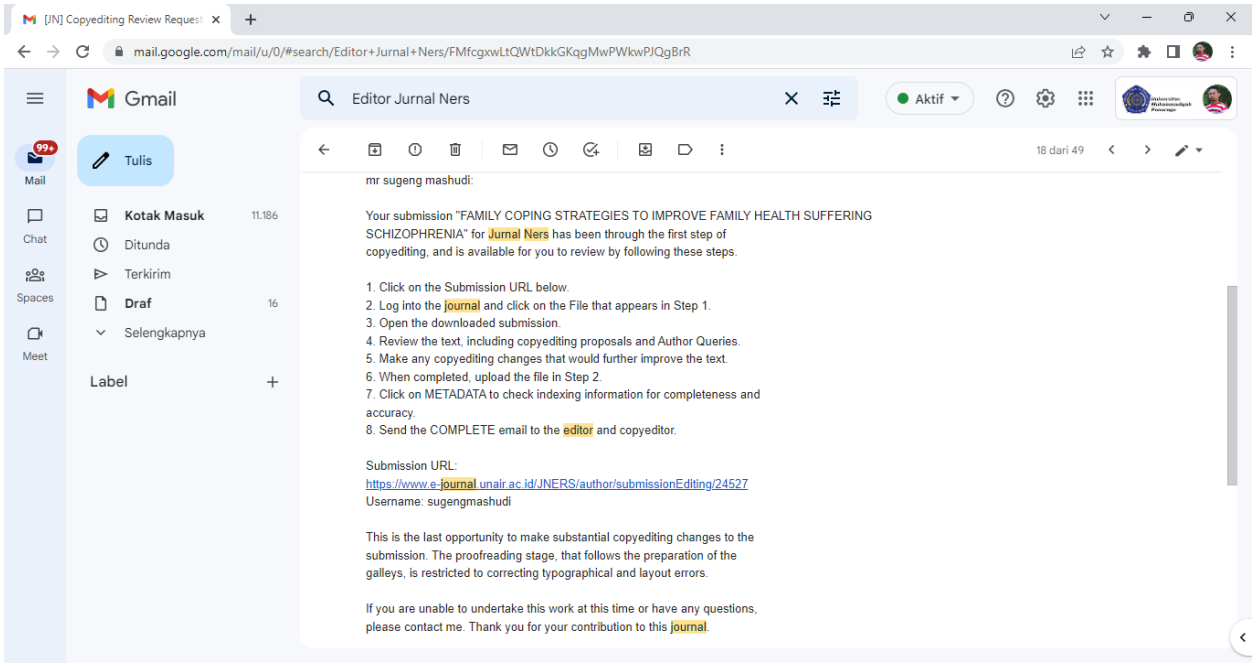

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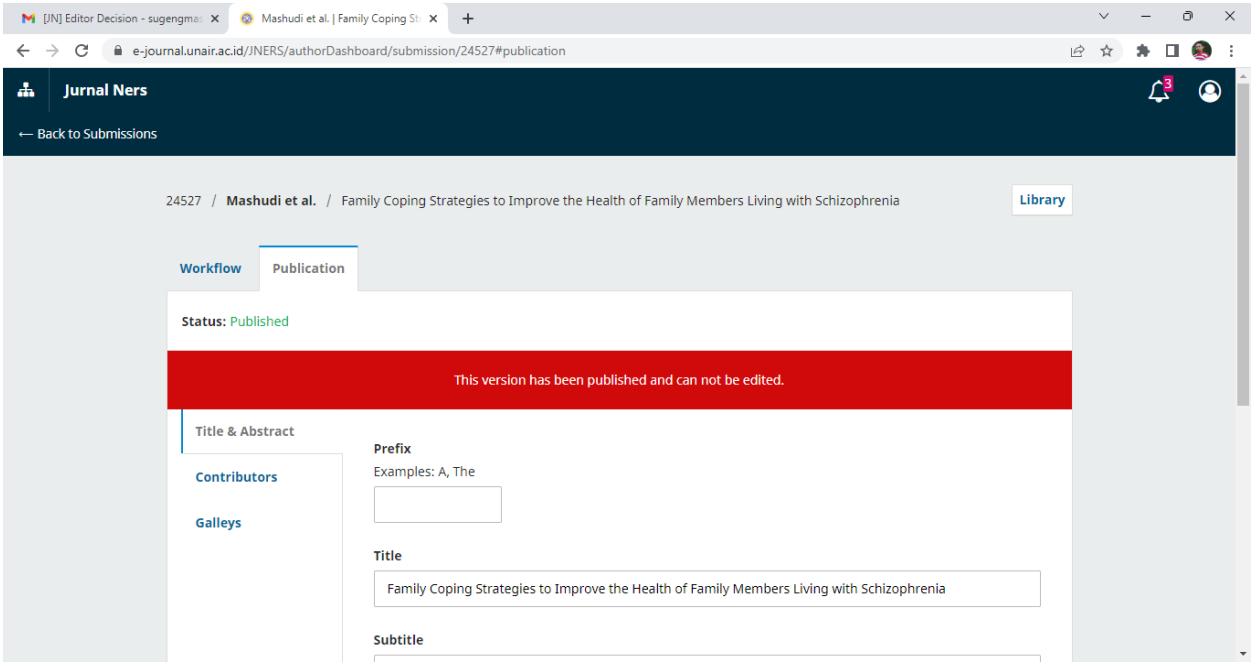

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Original Research

Family Coping Strategies to Improve the Health of Family Members Living with Schizophrenia

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ABSTRACT

Introduction: Schizophrenia is a serious mental illness that affects the thinking, emotions, relationships, and decision-making. One of the positive effects of treating schizophrenia in patients is family health. The family welfare management strategies provide help for coping, care preparation, organizing meetings, and mentoring. This study focuses on family coping strategies for improving the health of members living with schizophrenia.

Methods: A cross-sectional design was used by choosing 160 respondents randomly. The inclusion criteria were family members accompanying control schizophrenia patients to the Public Health Center, with a minimum age of 18. The independent variable was family coping, which consist of two sub-variables (problem-focused coping mechanism and emotion-focused coping mechanism), while the dependent variable was family health, which consists of three sub-variables (efficient, satisfaction, and happiness). The SMART PLS (2.0 Version) was used to prove the impact of the variables.

Results: The results indicated that family coping had a significant impact on the health of the family. The hypothesis was taken from the value of the T-test on the structural model analysis, which shows T- statistics (13.966) > T-critical (1.96). The impact of family coping on the health is equal to 0.682 (OR). This means that if family coping is given one-unit value, it will increase the family health by 0.682 times.

Conclusion: The implementation of the family coping strategy will improve the capacity of the family to clarify health issues encountered, resolve family behaviors effectively and minimize risk factors. Furthermore, the coping mechanisms chosen by families in facing stress will have an impact on the reduction of illness symptoms in the members with schizophrenia.

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INTRODUCTION

Family caregivers are an important aspect of caring for people with serious mental illnesses, but the needs of those who do it are often not met (Yesufu-Udechuku et al., 2015). Furthermore, the family caregivers who support patients with psychosis frequently have poorer health (Sin et al., 2021). Treating a schizophrenic patient is a source of stress for the family, and there may be external or internal criticism before it affects the family (Byba Melda Suhita, Prima Dewi Kusumawati, & Heri Saputro, 2020). Caring for a patient with mental illness creates a wide range of issues that place a significant burden on family caregivers (Ebrahimi et al., 2018). The data obtained from the Institute for Health Metrics and Evaluation (IHME) show that schizophrenic disorders affect about 1.5 million individuals (0.3%) (OECD/European Union, 2018); 1% of the population in the United Kingdom are also experiencing mental disorders (Smith, 2015). The 2018 RISKESDAS (Basic Health Research) data in Indonesia show an escalation of proportion in the number of households with mental disorders by 7 per mil from 1.7 per mil. Specifically, the East Java Province shows that only 2.2 per mil households experienced mental disorders in 2013 but increased to 5 per mil in 2018 (Riskesdas, 2018). Generally, similar incident rate also occurred

in Ponorogo, with about 1,321 out of 600m336 residents in productive ages experiencing mental disorders (Nasriati, 2017). However, a higher prevalence rate was found in Paringan Village and Dukuh Mirah, where the prevalence rate of mental disorders in Paringan Village was at 11.2 per mil (Mashudi & Widiyahseno, 2016). Decreased family health has effects on patients and relatives.

Various causes of decreased family health of people with schizophrenia include those from within and outside the family. The complexity of the health service system (Gear et al., 2018). and the complexity of the treatment program (Murugappan et al., 2020), are factors that cause poor family health that comes from factors outside the family. Decision-making conflicts (Hamann & Heres, 2019), economic difficulties (Marazziti et al., 2020), and family conflicts (Plessis, Golay, Wilquin, Favrod, & Rexhaj, 2018), are external factors in decreasing family health.

Various ways are used to improve family health, including family coping support (Rayes et al., 2021). care planning support (Nyman et al., 2020), coordinated family discussions (Storm et al., 2020), and family mentoring (Andersen et al., 2020). Based on the family health theory, family coping support is very effective in improving family health (Doornbos, 2002). Furthermore, coping is described as the method of balancing external or internal demands that are perceived to be taxing or exceeding the person's resources, it may be problem-focused or emotion-focused (Grover, Pradyumna, & Chakrabarti, 2015). Choosing the best coping strategy increases mental health (O'Hara et al., 2019). Increases in problem-focused coping were associated with higher levels of wellbeing (De Vibe et al., 2018). There is little research examining family coping in the context of family health.

If an unhealthy caregiver is not treated immediately, it can affect people with schizophrenia. Emotions of family caregivers that often increase will have an impact on increasing the recurrence of schizophrenics (Pardede, Sirait, Riandi, Emanuel, & Ruslan, 2016). Therefore, the optimal caregiver health will support the rehabilitation of people with schizophrenia. Schizophrenics receiving occupational therapy are more appreciated by their families (Sugeng Mashudi et al., 2020).

Studies on the positive outcomes of treating schizophrenia in Indonesia are still rare and one of the positive outcomes of schizophrenia in patients is family health, which is influenced by coping mechanisms (Doornbos, 2007). Study conducted by Çuhadar, Savaş, Ünal, and Gökpınar (2015) strengthens the previous studies, which reported that coping mechanism affects family health. The studies regarding stress and coping mechanisms in family with schizophrenic members show that there is an effect of stress on coping mechanisms (Geriani et al., 2015). Family coping consists of problem-focused coping and emotion-focused coping. Furthermore, it is a cognitive assessment and behavior to manage internal and external needs that exceed ability (Lazarus & Folkman, 1984). The study carried out by Crowe and Lyness (2014) shows that family coping affects family health. A better family coping will increase the level of family health. This study focuses on family coping strategies to improve the family health people living with schizophrenia.

MATERIALS AND METHODS

This study was conducted in Ponorogo Regency, East Java, Indonesia, with a sample of 160 respondents and a cross-sectional design. The data were collected through questionnaires, and the validity and reliability was tested. The respondents were selected by using a random sampling technique from five primary healthcare centers in the North and West Ponorogo. The inclusion criteria included: 1) family members accompanying control schizophrenia patients to the Public Health Center, 2) at least 18 years old. The exclusion criteria included: 1) caregiver suffering from psychiatric or physical disorders that may interfere with patient care and cooperation during data collection, 2) there is more than one schizophrenic patient in the family. Families with schizophrenia that visit the health center according to the inclusion and exclusion criteria that have an odd number are targeted as research respondents. After completing the informed consent of the schizophrenic family of people that filled out the questionnaire prepared by the researcher, after the questionnaire was filled in and submitted to the researcher, the completeness of the answers was checked, if the answers were complete, then as a sign of anchovies, the researcher gave a gift to respondents.

Gender, age, marital status, education, number of family members, occupation, and income are all demographic variables. Family coping variables were compiled based on the Family Coping Questionnaire (FCQ). FCQ is a questionnaire to measure family coping based on Plessis et al. (2018), which has been modified into Indonesian. There are two components, namely the problem of focus coping and emotional focus coping with seven questions. I speak in a harsh or dirty tone to the patient; I will take care of the patient carefully; I share problems about the sufferer's condition with friends/relatives; I get help from people around me; I leave the house temporarily when the patient gets angry; I think of letting the patient suffer a relapse; I think to pray more in such a way that the patient's condition is better. In positive questions, always scores 4, often 3, rarely 2, and never 1, while in negative questions always scores 1, often 2, rarely 3, and never 4. A higher score reflects better family coping. The Cronbach's alpha coefficient for the scale was 0.534.

Family health variables were created based on the indicators of useful, satisfaction, and happiness. The useful questionnaires are arranged based on family assignments (Susanto, Arisandi, Kumakura, Oda, Koike, Tsuda, & Sugama, 2018). There are five

questions: 1) the family is able to know the patient's health problem; 2) the family is able to decide the best course of action for the patient; 3) the family is able to care for the patient well; 4) the family is able to maintain a conducive environment; 5) the family is able to use health facilities for the patient. Each positive item is scored using a 4-point scale (4= always, 3= often, 2= rarely, 1= ever), while for negative questions always scores 1, often 2, rarely 3, and never 4. Satisfaction is measured based on the APGAR family (Takenaka & Ban, 2016). There are four questions, namely: 1) I feel satisfied because my family can adjust to the patient; 2) I feel satisfied because my family is discussing the best solution to solve the problems that befell the patient; 3) I am satisfied because my family shows compassion and responds to patient emotions, such as feelings of anger, suffering, and compassion; 4) I feel satisfied with my family's way of spending time together by involving patient in overcoming problems. The respondents' answers are scored always 4, often 3, rarely 2, and never 1.

The happy indicator is measured based on the Happy Questionnaire (Spears, 2017), with three questions, namely: 1) overall my family feels happy; 2) compared to the family of fellow caregivers with schizophrenia, my family feels happier; 3) the caregiver family with schizophrenia feels happy. They enjoy whatever is going on and get the most out of nurturing. The respondents' answers are scored always 4, often 3, rarely 2, and never 1. A higher score reflects better family health. The Cronbach's alpha coefficient for the scale was 0.883.

Before the statistical analysis, the data were selected based on three standard deviations above or below the average score. Missing values are excluded from the analysis. Descriptive statistics for demographic variables were performed with the SPSS program (Version 22.0, IBM Corp, Armonk, NY, USA). Family coping and family health variables were performed with structural equation models and tested with Mplus (Version 7.4, Muthen & Muthen, Los Angeles, CA, USA). The study of the structural model with a corrected level of confidence (CI) of 95% used 5000 bootstrap samples.

RESULTS

The data used in this study were taken from 160 families of schizophrenia patients who seek treatments in primary healthcare centers located in the North and West Ponorogo. Selected respondents were those who met the criteria of random sampling.

The observation of the study was done in the selected primary healthcare centers. The complete characteristics of caregivers who handle schizophrenia patients can be seen in Table 1.

Table 1 shows that the majority of caregivers are 81 men (50.6%) and 79 women (49.4%). Their average age was 49 (SD = 14.2). Furthermore, 139 respondents are married (86.6%) and 10 single respondents (6.3%). Regarding education level, 102 respondents have completed basic education (24.4%), 39 respondents have achieved secondary education (48.68%), and three respondents have completed tertiary education (1.9%). They worked as farmers (56.2%) with >3 family members (54.4%) and salary less than IDR 1,500,000 (82.5%).

Table 2 explains that the majority of schizophrenia patients are men (59.6%) in the age of 17-45 (81.9%), and siblings of the caregivers (51.8%). The majority of schizophrenics in productive age tend to behave in smoking, even though the effects of nicotine contained in cigarettes affect oocyte maturity (Dwirahayu & Mashudi, 2016).

Table 3 illustrates those coping mechanisms done by the family are dominantly problem-focused coping ($\lambda = 0.915$), whereas family health is determined by the satisfaction level in treating schizophrenia patients ($\lambda = 0.914$). Coping mechanisms have an effect on family health ($\alpha = 0.05$; t-statistics = 14.393).

Table 1. Characteristics of Family Members Living with Schizophrenia in Ponorogo, East Java, Indonesia.

Characteristics	n	%
Gender		
Men	81	50.6
Women	79	49.4
Age (based on central bureau of statistics Republic of Indonesia):		
Productive (18-54)	102	63.8
Not productive (55-80)	58	36.2
Status:		
Married	139	86.8
Single	10	6.3
Widower/widow	11	6.9
Education		
High (Senior High School)	76	74.5
Low (Elementary School, Junior High School)	84	52.5
Job		
Private	47	29.4
Farmer	90	56.2
Others	23	14.4
Family members (number)		
≤ 3	73	45.6
>3	87	54.4
Salary (regional minimum wage in Ponorogo, Indonesia)		
< IDR 1,500,000,-	132	82.5
≥IDR 1,500,000	28	17.5

Table 2: Characteristics of Schizophrenia Patients

Characteristics	n	%
Gender		
Men	95	59.6
Women	65	40.4
Age		
Productive (17-45)	131	81.9
Not productive (46-71)	29	18.1
Relationship with caregiver:		
Son/Daughter	63	39.4
Parent	14	8.8
Others (Siblings)	83	51.8

Table 3: Loading Factors and T-statistical Value.

Variables	Loading (λ)	T-Statistics	T-table
Coping Mechanisms			
Problem-focused Coping	0.915		
Emotion-focused Coping	0.710	14.393	1.96
Family Health			
Useful	0.912		
Satisfaction	0.914		
Happiness	0.873		

DISCUSSION

Family coping significantly impacts family health. This is based on the T-test in the structural model analysis, where T-statistics (13.966) is greater than T-critical (1.96). The effect value of coping mechanisms on family health is 0.682. This means that if family coping is given one-unit value, it will increase family health by 0.682 times.

Family health is measured from the aspects of useful, satisfaction, and happiness. Useful shown by the family may include knowing health problems experienced by patients, choosing the best action to treat patients, maintaining a conducive environment, and utilizing health facilities for patients. Useful indicator (0.912) has the second-highest value in determining family health. Useful throughout the treatment process can be seen when a family could identify patients' health problems, decide the best decision for them, take care of them well, keep a conducive environment, and take advantages of health facilities for the family.

As many as 64.4% of families are satisfied in caring for family members who have schizophrenia. Satisfaction is shown as the family stated that family satisfaction with schizophrenia patient care may be obtained by adapting with patients, discussing the best solution to overcome problems that befall patients, showing affections and responses, such as anger, suffering, and love, and spending time together with patients. The satisfaction indicator (0.914) possesses the highest value in determining family health. Satisfaction throughout the treatment process can be found when a family can adapt, choose the best solution for problems, show affection, respond positively to patients, and spend some time together with patients. Family satisfaction in treating schizophrenia patients cannot be separated from the impact of coping mechanisms (problem-focused coping and emotion-focused coping) done by the family.

Happiness is shown as the family could enjoy the moment of treating patients with schizophrenia compared to other caregivers with schizophrenia patients. Also, they could enjoy everything and obtain optimal treatment for schizophrenia patients. The happiness indicator (0.873) shows the smallest value in determining family health. The decline of happiness in treating schizophrenia patients can be seen when family feels less happy compared to other families with schizophrenia patients and cannot enjoy everything and obtain optimal caregiving. It is related to stress factors, such as the economy, abusive behavior, and stigma that befalls the family. Despite the fact that parents reported being depressed as a result of prejudice, the effects of discrimination have no relationship to their depressive symptoms (Cecilia Ayo´n & Bermudez-Parsai, 2010).

Authors should explore the family health of the respondents, how the culture or finding explain efficiency, satisfaction and happiness, before comparing it with other research; authors could define the real condition in the study setting and finding

Being healthy is defined as an ability to adapt physically, mentally, and socially as a single unit free from illness and disability (WHO, 1948). The characteristics of being healthy according to WHO involve the ability to reflect an individual as a person in internal and external contexts and to involve creativity and productivity. King (1981) stated that being healthy is a form of efficiency, satisfaction, productivity, and happiness (Alligood, 2017). In this study, family health refers to a healthy family (King, 1981). However, the productivity indicator in this study is invalid and unreliable because the submitted questions only focus on attendance, while the respondents of the study are farmers who were unable to attend regularly.

The essential finding of this study is that family coping affects family health. Family Health Theory by Doornbos (2002) shows that coping mechanisms affect family health, whereas this study, in addition to the existing theory, finds family health indicator was measured not only based on family satisfaction, but also family efficiency and happiness. Coping mechanisms chosen by families in facing stress will impact family health (Martínez-Montilla et al., 2017). Caregiver burden had positive correlation with age of caregiver, employment of caregiver and level of education (S Mashudi et al., 2019).

Family coping was related to increased family health in those with impaired attentional function (Morimoto, Furuta, & Kono, 2019). Coping was linked to increased psychological pressure in people who had poor attention management (Tada, 2017). Family coping and family health benefit from compassionate counseling (Buckley, Maayan, & Soares-Weiser, 2017). Antonovsky's sense of coherence influences coping, resulting in increased family happiness (Gassmann et al., 2013). Stress may come from

chronic diseases, such as mental disorders (schizophrenia), addictions, accidents, disabilities, and economic problems. On the other hand, family coping used by families in treating schizophrenia patients are problem-focused coping and emotion-focused coping. Stress in a family with schizophrenia patients can transform the family's life balance. That is why every family needs to have good coping strategies. Caregivers with patients who have mental disorders also need to identify the main stress factor in their family. The best coping strategy is also needed so that family health can improve. Based on the theoretical and empirical studies, it can be inferred that family coping affects family health.

Family coping strategies include observation, counseling, education and cooperation. (PPNI, 2017). An emotional reaction needs to be defined by the nurse (Caqueo-Urízar et al., 2017), Prognosis strain (Fusar-Poli et al., 2020), decision-making (Mandarelli et al., 2018) and expectations of family and family (Knight et al., 2018). Applying the family coping strategy may improve the capacity of the family to clarify experienced health issues, family practices to better resolve health problems, and minimize risk factors. The implementation of family coping can have an impact on reducing the symptoms of disease in family members.

CONCLUSION

This research strengthens the family health theory, and the coping mechanisms carried out by families (problem-focused coping and emotion-focused coping) affect family health. In addition to family satisfaction, the family health can also be measured in terms of useful and happiness. Additional research in needed to find out if patients and treatment factors contribute to family health.

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