

The Analysis of Influences of Family Stress Factors with ABCX Theory on Family with Leprosy in Jombang Regency, East Java, Indonesia

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ABSTRACT

Leprosy have psychosocial effects for the patient and his family. They get negative stigma and then discrimination from social interaction. Family members who suffer from leprosy are their own stressors for families, these events may be closely related to the family's ability to manage stress. Family resources can be a buffer of the impact of stressor events on family stress levels. The aim of this study is to analyze the factors associated with family stress using model theory ABCX.

The purpose of this research was to analyze family spiritual factor with family resilience theory approach in overcoming family stigma. This current research used a cross-sectional design. This current research used a cross-sectional design. The research population were 174 leprosy families in 21 endemic Leprosy Puskesmas (local clinics) in Jombang Regency, East Java. The samples were 120 families, taken using Multi Stage Random Sampling technique. The Hypothesis test used Chi Square test with p-value <0,05.

The results found that there were 62 (51,7%) had moderate and 28 (23,3%) high family stress, while test hypotheses obtained from The individual factors and Environmental factors influences on family stigma (P = 0.000). Individual factors include stigma individual, self-concept, Quality of life, activity daily living and disability level of leprosy patient influences on family stress (P = 0.001). Family factors include family support, economic status, knowledge and family perception towards leprosy affects the family stress (P=0.000). Environmental factors include social stigma, stigma by healthcare providers and healthcare providers' attention influences on family stress (P=0.000). Family stigma influences on family stress (P=0.000).

The conclusion that the individual, and environmental factors influence the occurrence of family stigma and family stress. The researchers suggest that intervention in an attempt to overcome the family stress attention on individuals, families, environment and the family stigma.

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I. INTRODUCTION

The stigma effect of the community on the family raises the stigma of the family resulting in loss of family support to leprosy patients, concealment to exile and discontinuation of leprosy patients after leprosy and disability. This will aggravate the process of early discovery of leprosy patients, self-stigma in leprosy patients, disability and decrease the quality of life of patients and all family members [1]. Results of research conducted by researchers in 2017 on 39 families of leprosy patients in six endemic Leprosy Puskesmas in Jombang regency of East Java obtained 29 (74.4%) family stigma [2].

Family members who suffer from leprosy are their own stressors for families, these events may be closely related to the family's ability to manage stress. The strengthening of family resilience

through the passage of family functions involves three major components, namely: strengthening the family belief systems, strengthening the structure and function of the family as a unit or system (organization patterns), strengthening communication patterns and family power system within solve problems (communication / problem-solving) [3] - [7].

Family resources can be a buffer of the impact of stressor events on family stress levels. McCubbin and Petterson (1985); McCubbin (2013) resources are defined as the characteristics, characteristics, or abilities (a) individual members of the family (b) family systems (c) communities that can be used to meet the causes of stress. Individuals or personal resources include finance (economic well-being), education (problem solving, information), health (physical and emotional) and self-esteem (psychological resources). This study aims to analyze the factors associated with family stress using model theory ABCX.

II. METHOD

This study used a cross-sectional design, the study was conducted from November to January 2018. The study population was leprosy patients in 21 endemic Leprosy in Puskesmas in Jombang Regency of East Java numbered 174 families of leprosy patients and had been diagnosed with leprosy and recorded in the data registration Puskesmas. The sample was 120 families, sampling method used Multi Stage Random Sampling. Hypothesis test used Chi Square test with p-value <0,05. Method of data retrieval used questionnaires by each family that has been used as research respondents. Each family is represented by a family member who cares directly for leprosy in the family. Assessment topics include: 1). Family factor, 2). Individual factor, 3). Environmental factor, 4). Family Stigma and 5). Family stress.

Family factor data collection is the family's answer about knowledge, family coping, family support and socio-economic. Individual factor collection is the answer of family and lepers about disability, long suffering, self-concept, self-stigma, quality of life and ability in daily activities. Environmental factor includes family perceptions of officer stigma, community stigma and the activeness of health workers perceived by families and dives. The family stigma is the answer about labeling and discrimination by the family. Family stress is the family's answer about the physical and psychological tension of the family during the care of the lepers.

Measuring instruments about stigma of the family is based on the concept of stigma [8], the concept of stigma and social stigma components [9], [10], and the concept of family stigma [1] and modified with the Explanatory Model Interview Census (EMIC) instrument stigma scale for community [11] - [14]. The stress family instrument used a modified questionnaire of Symptom Rating Test according to Kellner & Sheffield (1973). Analysis of univariate data used frequency distribution, bivariate analysis used Chi Square test (if statistically qualified), if not qualified then used Fisher's Exact Test with p- value <0.05.

III. RESULTS AND DISCUSSION

A. *The influence of patient factors, family factors, and environmental factors on family stigma*

Influence of individual factor, family factor and environmental factor to family stigma after statistic test got result p-value of individual factor $p = 0,001$, family factor $p = 0,000$, environmental factor $p = 0,000$ so it can be concluded that all three variables have influence toward family stigma. The result of sub variable analysis of each factor to the family stigma of all sub variables get p-value = 0.000 except in the sub variables of a socioeconomic family which get p-value = $0,074 > \alpha (0,05)$, so that bias is concluded only socioeconomic variable has no effect on family stigma.

Table 1. Influence of patient factors, family factors, and environmental factors on family stigma

Variable	<i>Family stigma</i>
	<i>p</i>
Individual factors	
a. Level of disability	0.001
b. Self-concept patients	0,000
c. Self- stigma	0,000
d. Duration (time)	0.000
e. Quality of life	0.000
f. Activity daily living (ADL)	0.007
Family factors	
a. Families coping mechanism	0,000
b. Family support	0.001
c. Family Knowledge	0.007
d. Family socioeconomic	0.074
Environmental factors	
a. Stigma at health provider	0.000
b. Community / society stigma	0,007
c. Health provider attention	0,000

The inability of the family in performing the treatment function in leprosy patients is influenced by leprosy factors, including: how long family members suffer from leprosy, leprosy type, disability level, reaction rate and the ability of a patient in doing daily activities (ADL). This will determine how much the burden must be borne by the family and what resources should be prepared in assisting lepers. Factors of knowledge, perceptions of leprosy disease, family structure, and function are internal family factors that will affect family confidence in caring for sick family members and how strong families received patients or family stigma. The stigma factor of health workers and community stigma is an external factor of the family that will affect the occurrence of family stigma in leprosy patients.

The fact that the social environment is the most likely factor or contributing factor after clinical manifestations of stigma-causing diseases, the environment in question can be the family environment, the community environment and the health service environment and health policymakers. Family knowledge related to leprosy include: definition of disease, causes, mode of transmission, signs and symptoms, prevention and handling. Family stereotypes and awareness of disease or health problems will pose to the emergence of stigma, treatment, and health behaviors. [15] - [22].

Stigma in lepers is not only obtained from the patient's environment, but stigma can also arise from self-sufferers, some factors causing internal stigma of self is knowledge and perception of patient to disease, cause, and effect of leprosy, and stigma of society or social group especially is stigma of family or people nearest from patient. The effects of this internal stigma are psychological disorders such as self-concept disorder, fear, and mental disorders and decreased interest in meditation and activity with social groups [13], [21] - [27].

B. *The influence of patient factors, family factors, environmental factors, family stigma against family stress.*

Table 2. Influence of patient factor, family factor, environmental factor, family stigma to family stress

Variable	<i>Family stress</i>
	<i>p</i>
Individual factors	
a. Level of disability	0,006
b. Self-concept patients	0,000
c. Self-stigma	0,000
d. Duration (time)	0,002
e. Quality of life	0,000
f. Activity daily living (ADL)	0,007
Family factors	
a. Families coping mechanism	0,000
b. Family support	0,000
c. Family knowledge	0,000
d. Family socioeconomic	0,000
Environmental factors	
a. Stigma at health provider	0,000
b. Community Stigma	0,007
c. Health provider attention	0,000
Family stigma	
a. Labeling	0,000
b. Discrimination	0,000
c. Sparation	0,000

Influence of individual factors, family factors, environmental factor and family stigma to family stress after statistic test got result p-value of individual factor $p = 0,000$, family factor $p = 0,000$, environmental factor $p = 0,000$, family stigma $p = 0,00$ so it can be concluded all four variables have an effect on the occurrence of family stress. The result of sub variables analysis of each factor to the family stigma of all subvariables get p-value = 0.000 except on sub variables of disability of patient ($p = 0,006$), long suffering of leprosy ($p = 0,002$), ability of doing daily activity ($p = 0,007$), and community stigma ($p = 0,007$) but p-value $< \alpha (0,05)$, so that bias concluded factor of individual factor, family factor, environmental factor, family stigma influenced to family stress.

Lack of knowledge or information about leprosy, then the patient is difficult to be accepted in the midst of society, away from the family of the patient, fear and get rid of it and alienate the patient from the family for fear of infection [28]. The results of a literature review in India on the description of individuals suffering from leprosy, the presence of stigma and *disability* in society (Ronald B, 2005). This situation illustrates that the family still has a stigma in the family members who are leprosy, so it can cause the family less fully assist the leprosy healing process in family members. Families are still less sociable with sufferers in everyday life for fear of contracting, this condition can increase the burden on lepers. The family is an *entry point* in the provision of health services in the community, to determine the risk of interference due to lifestyle and environmental influences. The potential and involvement of families become even greater when one family member needs ongoing assistance because the health problem is chronic, as in leprosy [29]. Healthcare for family members, to be able to care for family members who are sick and for other family members to avoid contracting the disease, and the interdependence between family members as a system, and improve family relationships with the environment. Family coping responses

include external and internal coping strategies. The internal coping resources consist of the ability of the fused family to be cohesive and integrated. Family integration requires control of the subsystem through unity bonds. The most successful families facing their problems are the families most often well integrated where family members have a strong responsibility for their group and collective goals. Another coping source is the role flexibility of being able to modify family roles when needed [29].

Coping strategy is divided into three patterns of implementation / controlling, namely: Pattern I is called family integration (maintaining family integrity), cooperation and optimism in facing the situation, Pattern II is maintaining social support, self-confidence and sense of psychological stability and Pattern III namely understanding the medical situation healthcare) through communication with the family and consultation with health workers. (H I. McCubbin and Thompson, 1987 in Friedman, 2003). McCubbin and Petterson (1985) resources are defined as the characteristics, characteristics, or abilities of (a) individual family members (b) family systems (c) communities that can be used to meet the events of the causes of stress. Individuals or personal resources include finance (economic well-being), education (problem solving, information), health (physical and emotional) and *self-esteem* (psychological resources). Family finances and facilities are a resource, in helping to adapt to family stress conditions or at least to reduce the incidence of family stress. Stress levels ultimately depend on the definition of the family of stressful events and the adequacy of family resources to meet the changing demands associated with the causes of stress [30].

IV. CONCLUSION

The occurrence of family stigma is strongly influenced by individual, family and environmental factors. These three factors and family stigma have an effect on family stress. The better, family knows some factors of family stigma and family stress, so could expect to be able to identify internal and external resources in the care of family members who suffer from leprosy.

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