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The Effect of Health Worker Support and Self-Efficacy on Self-Care Agency of Lepers in Indonesia

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Keywords

health worker support;
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leprosy;
self-care agency;
self-efficacy;

Abstract

Infectious disease is a problem that has not been resolved, whereas one of the infectious diseases is leprosy. Self-care agency is the ability needed to care for oneself or others. This study aimed to determine the support of health workers and self-efficacy that affect the self-care agency of leprosy patients. The research design used cross-sectional. This research was conducted in November 2021 in Sumenep Regency. The study population was 232 leprosy patients with a total sample of 145. The sampling technique was proportional random sampling with analysis of the effect using the Structural Equation Modeling (SEM) SmartPLS test. Health worker support had an effect on self-efficacy with a T value of 5.408 (> 1.96). Self-efficacy had an effect on self-care agency with a T value of 9,743 (> 1.96). The support of health workers didn't directly affect the self-care agency, but it had an indirect effect through self-efficacy. An interpersonal approach such as the support of health workers needs to be done to increase the self-efficacy of the patient, which aims to help patients have a self-care agency to carry out self-care and prevent the transmission of leprosy.

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Contents

1 Introduction

The Sustainable Development Goals (SDGs) have 17 goals, one of which is a healthy and prosperous life. Leprosy is a problem that has not been resolved until now. Leprosy is also called Morbus Hansen, following the name who discovered the causative agent of leprosy, namely Gerhard Henrik Armauer Hansen, on February 28, 1873. Leprosy is a granulomatous infectious disease caused by Mycobacterium *leprae*. It initially attacks the peripheral nervous system and then attacks the skin, mucosa, nerves, respiratory tract, eyes, muscles, reticuloendothelial system, bones, and testes (Amiruddin, 2019).

In 2015, the global prevalence of leprosy was 210,758, of which the most sufferers were in the Southeast Asian region, which was 156,118 patients, in the Americas region with as many as 28,806, and Africa with 20,0004 patients (Kemenkes RI, 2018). Indonesia ranks third in the world, after India and Brazil, with the highest number of new cases of leprosy (15,910 people in 2017). The prevalence of leprosy in Indonesia in 2017 was 0.70 cases/10,000, and the number of new cases found was 6.07 cases per year for every 100,000 habitats. The prevalence of leprosy in ten provinces in Indonesia is still more than 1/10,000 population. It is spread over ± 7,548 villages, covering a working area of ± 1,975 Health centers in ± 341 regencies/cities in Indonesia (Kemenkes RI, 2018).

There are 3,373 lepers in East Java Province. Sumenep Regency in 2020 is a Regency in East Java included in Nine Regencies whose prevalence is still above 1/10,000 of the population and ranks second most in East Java after Sampang (East Java Provincial Health Office, 2020).

This disease is transmitted through contact with lepromatous or borderline sufferers who have not been diagnosed and treated. The sufferers have a sufficient basilar load to support transmission. The primary source of bacteria is the mucous membranes of the upper airways (Dwijayanti et al., 2022). Nasal mucosa and wounds on human skin have long been recognized as sources of transmission of Mycobacterium leprae, and it has been shown that the upper respiratory tract of patients is the most important source of germs in the environment. According to Amiruddin (2019), the incubation period for leprosy is 2-5 years.

In their research, Romero-Montoya et al. (2017), revealed that out of 113 household contacts with leprosy patients, 16% of them were infected with leprosy. The results of this study indicate that household contact with patients is a source of leprosy transmission. Efforts are needed to actively prevent disease spread by approaching the community about the importance of healthy living (Tosepu et al., 2015). Leprosy patients can make this effort by doing good self-care (Cometto et al., 2018; Franco et al., 2002).

Orem (2001), stated that self-care is an activity to meet the needs in maintaining the life, health, and well-being of individuals, both in terms of health and illness, that the individual carries out. Self-care agency is the ability needed to care for oneself or others (Heye et al., 2002; Yusuf, 2011; Kadden & Litt, 2011). Self-care ability refers to the strength or ability to engage in behaviour to meet self-care needs or what is called self-care requisite (universal, development, and deviation) (Alligood, 2014). Self-care agency needs to be improved by individuals because implementing self-care requires learning, knowledge, motivation, and skills.

Increasing self-care agency requires an interpersonal approach, namely health workers, families (Indow et al., 2019), and social (Tosepu et al., 2015). This system is essential for patients where the support of health workers, families, and social groups is a resource to provide complete health services (Suryasa et al., 2021). Interpersonal factors with the support of health workers have an essential role in increasing leprosy patients' self-care agency to prevent leprosy transmission (Nath et al., 2015; Reibel et al., 2015; Talhari et al., 2015).

This research aimed to determine the effect of health worker support and self-efficacy on the self-care agency of lepers in Indonesia.

2 Materials and Methods

Design

This study used a cross-sectional approach that emphasizes the measurement time of only one observation at a time (Nursalam, 2013). This research was conducted in Madura, Sumenep Regency, and carried out in November 2021.

Population and Sample

The population of this study was 232 lepers in 28 working areas of the Sumenep district health center. The sampling technique used was proportional random sampling until the number of samples meets the representative sample limit (Nursalam, 2013). One hundred forty-five lepers were the population of this study.

Data collecting

Firstly, the researcher conducts a preliminary study, then carries out the research licensing process, and complies with research instruments by questionnaires about demographic data and respondents' characteristics. Data collection is done by giving a questionnaire that has been tested for validity and reliability.

Ethic aspect

This research has been approved by the Health Research Ethics Committee of the Faculty of Dentistry, Airlangga University, with certificate number: 379/HRECC.FODM/VII/2021. The respondent signed the consent form to become a respondent, the witness of the health worker (Public Health Person in Charge of Leprosy), and the researcher.

Data analysis

The measurement results of the questionnaire on the construction of health support with indicators of emotional, informational, instrumental, and assessment or appreciation were categorized into high, medium, and low. Self-care agency constructs with indicators of foundational capabilities and power components are categorized as high, medium, and low, while the indicators of abilities to perform self-care operations are categorized as capable, moderately capable, and not capable (Lukkarinen & Hentinen, 1997; Çiftçi et al., 2015). Self-efficacy constructs with high, medium, and low categories. Analysis of the effect using the Structural Equation Modeling (SEM) SmartPLS test.

3 Results and Discussions

Most respondents were aged 15 – 59 years (73.1%). Most of them (55.9%) were male. Almost half of the respondents (39.3%) did not graduate from primary school. Most of the sufferers (73.1%) have an occupation. Nearly all respondents entirely low income (91.7%) <UMR. (table 1). The distribution of pain length mainly was (62.1%) 1 – 2 years.

Table 1
Distribution of health worker support for lepers in Sumenep Regency, Madura, Indonesia in 2021

Indicator	Category						Total	
	High		Middle		Low			
	F	(%)	F	(%)	F	(%)	∑	(%)
Emotional	136	93,8	9	6,2	0	0,0	145	100
Informational	71	49,0	72	49,7	2	1,4	145	100
Instrumental	129	89,0	12	8,3	4	2,8	145	100
assessment or appreciation	0	0,0	96	66,2	49	33,8	145	100

Table 1 showed that the support of health workers with emotional indicators was almost entirely (93.3%) high, nearly half of informational indicators were (49.7%) in the middle level, almost half of instrumental indicators were (89.0%) high, and large amounts of assessment indicators (66.2%) in moderate level.

Table 2
Distribution of self care agency for lepers in Sumenep Regency in 2021

No	Indicator	Category						Total	
		High		Middle		Low			
		f	(%)	F	(%)	F	(%)	∑	(%)
1	*Foundational Capabilities*	87	60,0	43	29,7	15	10,3	145	100
2	*Power Components*	94	64,8	39	26,9	12	8,3	145	100
		Capable		Moderately Capable		Not Capable			
3	*Capabilities To Perform Self-Care Operations*	60	41,4	58	40,0	27	18,6	145	100

Table 2 shows that the self-care agency indicator of foundational capabilities is mostly (60.0%) at a high level, the power components indicator is mostly (64.8%) at a high level, and almost half of the capabilities to perform self-care operations indicator is (41.4%) at a high level. Almost half of the total patients have self-efficacy (49.0%) in the middle level (table 3)

Table 3
Distribution of Self-Efficacy of Lepers in Sumenep Regency in 2021

No.	Category	Frequency	Percentage (%)
1	High	49	33,8
2	Middle	71	49,0
3	Low	25	17,2
	Total	145	100

This study used SEM analysis to determine the effect of health worker support and self-efficacy on the self-care agency of sufferers in Sumenep Regency, Madura Indonesia. Based on the results of the convergent validity test output, one indicator had a factor loading value below 0.5, namely the assessment or appreciation category in the health worker support construct that has been removed from the model (Figure 1). The Average Variance Extracted (AVE) test results show that all constructs were rated > 0.5. It indicates the indicator was able to explain the factors and the reliability test of all constructs obtained a composite reliability value > 0.6 which means the construct described is reliable (table 4).

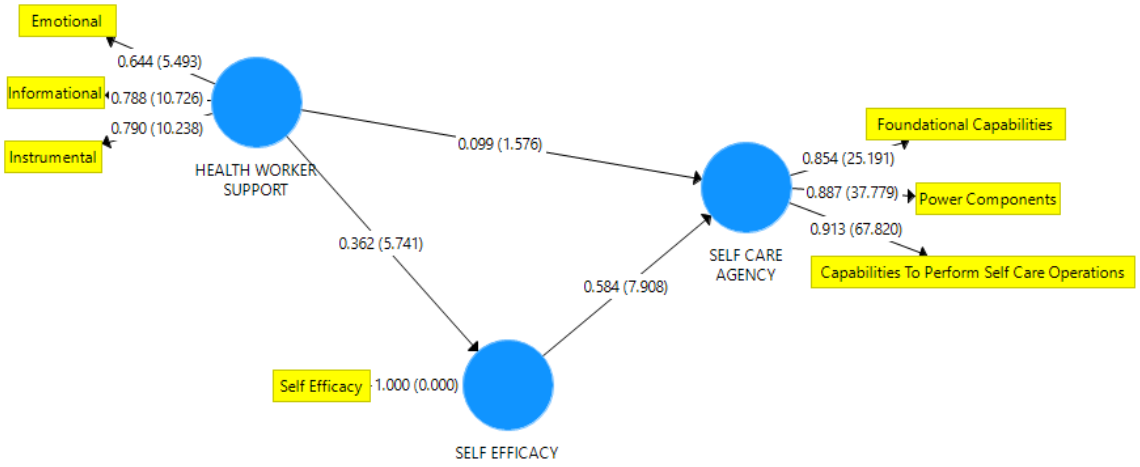

Figure 1. Analysis *factor of loading* model fit

Table 4
The score of *Average Variance Extracted* (AVE) and *Composite Reliability*

	Composite Reliability	AVE
Health worker support	0.786	0.553
Self care agency	0.915	0.783
Self efficacy	1.000	1.000

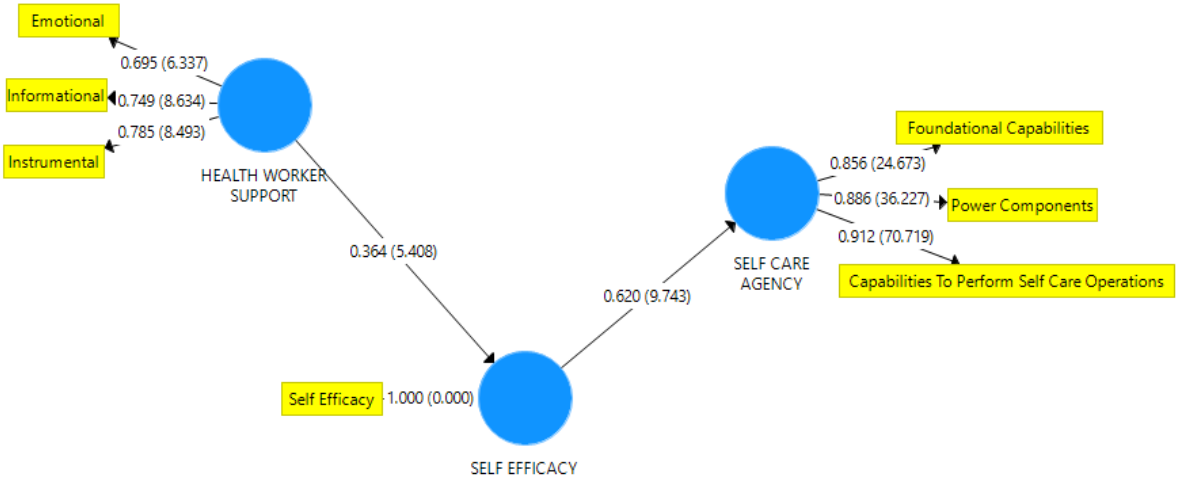

Figure 2. Analysis of *T value* model fit

Pender (2011), health promotion model (HPM) explains that Interpersonal influences influence health behavior, and the primary sources are families, groups, and health workers. Three interpersonal influences influence health behavior: norms, social support, and role models.

In their research, Indow et al. (2019), revealed the need for a health worker approach to support and motivate sufferers to do self-care well. The support of health workers is the support that is not only physically constructive but also psychologically to improve the sufferer's self-care agency (Abeje et al., 2016).

Mohite et al. (2013), stated that research that most patients are satisfied with the services provided by health workers in the form of drugs given, health education, follow-up services and also motivation. With this, the patient's self-efficacy can increase.

According to Bandura (1997), self-efficacy is an individual's belief about their ability to mobilize the motivation, cognitive resources, and necessary actions for a goal. According to Bandura (1997), people process, weigh and integrate various sources of information about their abilities, and they regulate behavior according to their abilities.

Self-care agency is a person's ability to take care of himself (self-care) (Alligood, 2014). The "conditioning factor influences this ability". Conditioning factors consist of age, gender, stage of development, health status, and interpersonal (sociocultural, health care system, and family system) (Aini, 2018). It is a perception related to the behavior, beliefs, and attitudes of others that make individuals participate and be able to behave in particular health. Support in the form of instrumental and emotional that is given by others to individuals to improve their health behavior (Pender, 2011). Health workers can play a key role in increasing patient control activities (Vouking et al., 2014) and actively pursuing a targeted case-finding approach (Van'T Noordende et al., 2021).

HPM states that interpersonal factors influence health behavior both directly and indirectly through encouragement to commit to an action plan (Pender, 2011). The action plan that is carried out is expected to be multi-professional or not only focus on treatment but also supervise and support self-care. leprosy patients (dos Santos & Ignotti, 2020). Interpersonal factors, especially health workers, are a source to support, increase self-efficacy, and motivate patients to perform good health or self-care behaviors to prevent the process of leprosy transmission.

4 Conclusion

Health workers have an indirect effect on self-care agency through self-efficacy. Self-efficacy has a direct effect on self-care agency. Interpersonal approaches such as support from health workers need to be carried out to increase their self-efficacy to help sufferers have a self-care agency in carrying out self-care to eradicate and prevent the transmission of leprosy, which is a public health problem.

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