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[Home](#)

[About](#) ▾

[Submissions](#)

[Current Issue](#)

[Archives](#)

[Announcements](#)

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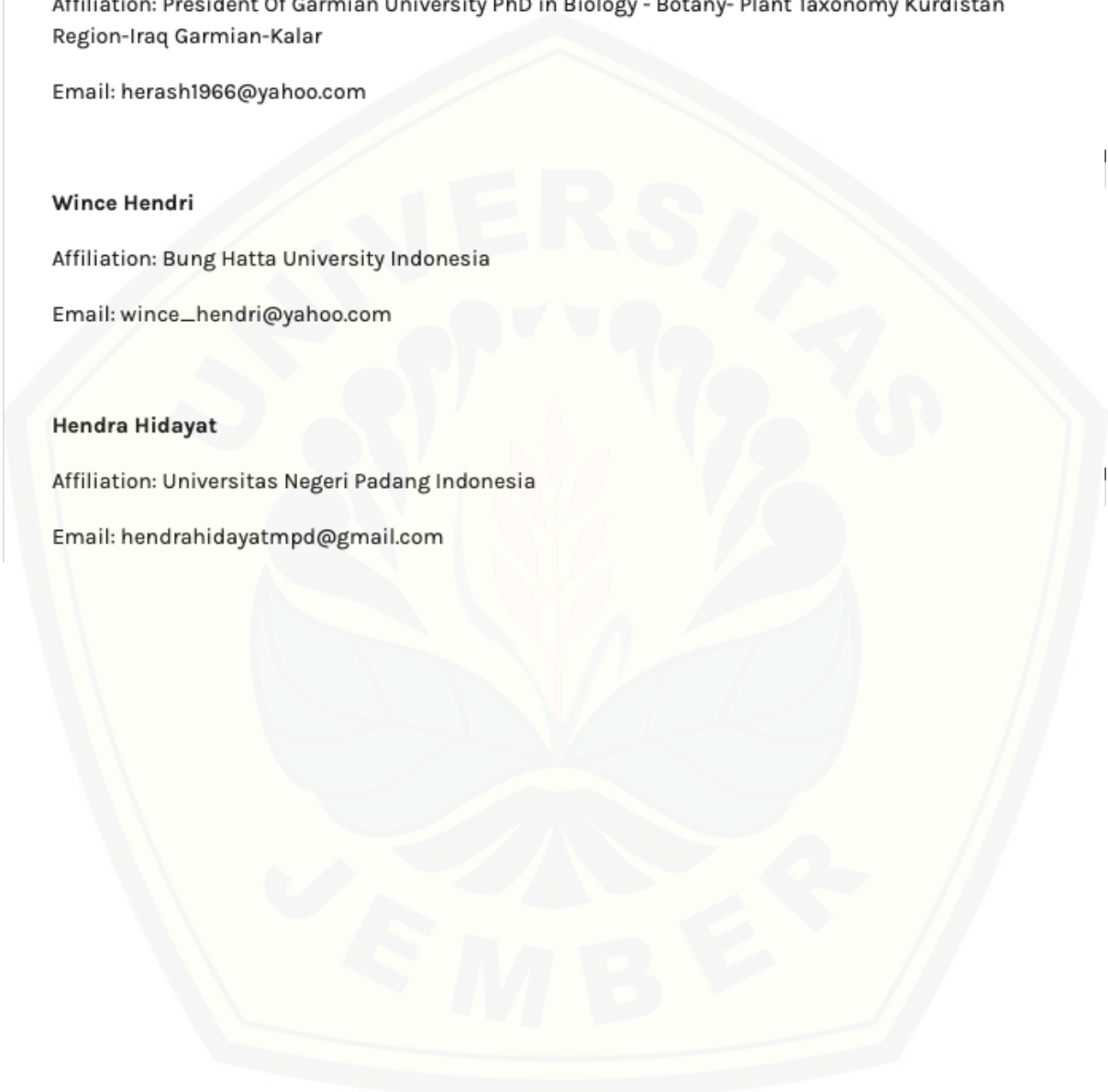
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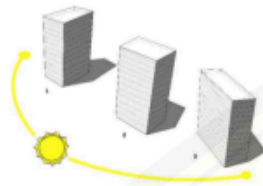


Pragmatic critical realism and Mixed methods in Inter-disciplinary Research— Management and Information systems

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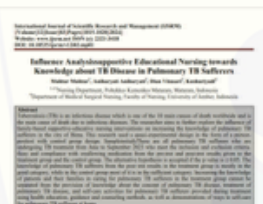
Optimizing Residential Building Orientation for Sustainable Daylighting in the Tropics: A Case Study in Lagos, Nigeria

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Medical Sciences and Pharmacy



Influence analysis supportive educational nursing towards knowledge about TB disease in pulmonary TB sufferers

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[Current Issue](#)
[Archive](#)
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Influence Analysis supportive Educational Nursing towards Knowledge about TB Disease in Pulmonary TB Sufferers

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Abstract

Tuberculosis (TB) is an infectious disease which is one of the 10 main causes of death worldwide and is the main cause of death due to infectious diseases. The researcher aims to further explore the influence of family-based supportive-educative nursing interventions on increasing the knowledge of pulmonary TB sufferers in the city of Bima. This research used a quasi-experimental design in the form of a pretest-posttest with control group design. Sample study These are all pulmonary TB sufferers who are undergoing TB treatment from June to September 2023 who meet the inclusion and exclusion criteria. ficay and compliance with swallowing medication from the pre-test and post-test results given to the treatment group and the control group. The alternative hypothesis is accepted if the p value is ≤ 0.05 . The knowledge of pulmonary TB sufferers from the post test results in the treatment group is mostly in the good category, while in the control group most of it is in the sufficient category. Increasing the knowledge of patients and their families in caring for pulmonary TB sufferers in the treatment group cannot be separated from the provision of knowledge about the concept of pulmonary TB disease, treatment of pulmonary TB disease, and self-care activities for pulmonary TB sufferers provided during treatment using health education, guidance and counseling methods. as well as demonstrations of ways to self-care for pulmonary TB sufferers at home.

Keywords: supportive educational nursing, knowledge, pulmonary TB, sufferers

Introduction

Tuberculosis (TB) is an infectious disease which is one of the 10 main causes of death worldwide and is the main cause of death due to infectious diseases(1). The Covid-19 pandemic has caused an increase in the number of deaths due to TB globally by around 0.2–0.4 million in 2020(2), during the pandemic the number of TB sufferers detected and treated decreased by around 25–30%. The number of sufferers diagnosed with TB reported in the period January to June 2020 compared to the same 6 month period in 2019(2).

Indonesia is ranked second after India as the largest contributor to TB cases in the world with the number of cases amounting to 8.5% of the total global TB cases.(2). In 2019, the Case Detection Rate (CDR) of tuberculosis cases was reported to be 64.5%, which is a relative increase compared to the previous 10 years, meanwhile in NTB the CDR rate for new TB cases reached 41% with a successful treatment rate for TB patients of 94.0%. in 2019(3). However, based on the results of basic health research in 2018, in NTB only 54.9% of TB patients took medication regularly on the grounds that they could not tolerate the side effects, the treatment period seemed long, they did not seek treatment regularly and they felt healthy.(4).

Pandemic Covid-19 causing TB control efforts to experience setbacks due to diversion of resources and loss of focus on the health system so that TB control is not prioritized, in addition to tracking problems due to restrictions on mobility throughout the pandemic, as well as the lack of public understanding about TB(2). Decreased TB control during the pandemic will lead to a decrease in the quality of care received by TB patients, in addition, TB patients often have comorbidities and lung damage that make them vulnerable to more severe Covid-19. Symptoms of TB and Covid-19 can be similar, for example cough and fever, this can not only create confusion in diagnosis, but can worsen the stigmatization of TB patients in society considering the fear of Covid-19(5).

Lack of adherence to treatment is a major obstacle to efficient TB control(6), so innovative strategies are needed to improve access and adherence to treatment(7).Nurses as part of the health workforce play an important role in changing behaviorsufferers and families so that there is independence in care activities. Dorothea E. Orem (1971)introduces the supportive-educative nursing method which consists of 3 techniques, namely support, guidance, and teaching which will make an important contribution to self-care agency, increasing knowledge, and self-efficacy in carrying out independent care(8).

The results of previous research show that supportive educational interventions can improve self-care in hypertensive patients in the aspects of weight management, eating low salt, physical activity, stress management, limiting alcohol, limiting smoking, and the use of therapy.(9). Apart from that, the educational supportive nursing program intervention has a significant influence on increasing mothers' knowledge and attitudes in feeding stunted toddlers.(10). Informational support through health education is important to increase self-efficacy and treatment compliance for TB sufferers(11). Other research says that a multicomponent intervention based on the Health Action Process Approach (HAPA) significantly improves self-management abilities in TB sufferers(12).

The researcher aims to further explore the influence of family-based supportive-educative nursing interventions on increasing the knowledge of pulmonary TB sufferers in the city of Bima.

Research Methods

This research used a quasi-experimental design in the form of a pretest-posttest with control group design. SampleinstudyThese are all pulmonary TB sufferers who are undergoing TB treatment from June to September 2023 who meet the inclusion and exclusion criteria. Samplingusesimple random sampling technique, where respondents who met the inclusion and exclusion criteria were sampled. The samples that have been determined are then divided into two groups, namely the treatment group and the control group. The sample size in this study was calculatedusing the sample size formula for two paired groups using the Slovin source and obtainedthe sample size was 64 people.

Providing treatment in the form of Supportive Educative Nursing, namely providing intervention to the treatment group by conducting home visits toprovide an explanation about pulmonary TB, symptoms and transmission of TB, prevention of recurrence, procedures for taking medication, skills for coughing effectively, and how to prepare a place for phlegm disposal, which is carried out in 4 meetings within 4 - 5 weeks or according to agreement with the respondent. The control group will receive health education as is usually provided by health workers when seeking treatment at the health center or home visits. Researchers conducted a post test on the treatment group and control group 1 week after the final stage of treatment was given. The collected data is then analyzed.

The Wilcoxon sign rank test was used to see differences in knowledge, self-efficacy and compliance with taking medication from the pre-test and post-test results given to the treatment group and the control group. The alternative hypothesis is accepted if the p value is ≤ 0.05 .

Research Result

Table 1. Knowledge level of pulmonary TB sufferers

| Level of education | Treatment Group | | Control Group | | Total | |
|--------------------|-----------------|-------|---------------|-------|-------|-------|
| | f | % | f | % | Σ | % |
| elementary school | 12 | 37.50 | 11 | 34.38 | 23 | 35.94 |
| JUNIOR HIGH SCHOOL | 6 | 18.75 | 5 | 15.63 | 11 | 17,19 |
| SENIOR HIGH SCHOOL | 13 | 40.63 | 12 | 37.50 | 25 | 39.06 |
| Bachelor | 1 | 3.13 | 4 | 12.50 | 5 | 7.81 |
| Total | 32 | 100 | 32 | 100 | 64 | 100 |

Based on table 1, it is known that the age of pulmonary TB sufferers is mostly between 36 - 55 years, namely 56.25% for the treatment group and 59.38% for the control group. Most of the respondents were male, namely 59.38% for the treatment group and 56.26% for the control group. The majority of respondents' education levels were high school graduates in both groups. The majority of respondents' job types were working as farmers/fishermen in the treatment and control groups. Most of the respondents in the treatment group and control group were married. The duration of the treatment program in both groups was mostly 2 – 4 months.

Table 2. Influence analysis supportive educational nursing towards knowledge about TB disease in pulmonary TB sufferers

| Knowledge about pulmonary TB disease | Treatment Group | | | | Control Group | | | |
|--|-----------------|-------|-----------|-------|---------------|-------|-----------|-------|
| | Pre Test | | Post Test | | Pre Test | | Post Test | |
| | f | % | f | % | f | % | f | % |
| Good | 6 | 18.75 | 17 | 53.13 | 3 | 9.38 | 7 | 21.88 |
| Enough | 9 | 28.13 | 14 | 43.75 | 13 | 40.63 | 13 | 40.63 |
| Not enough | 17 | 53.13 | 1 | 3.13 | 16 | 50.00 | 12 | 37.50 |
| Amount | 32 | 100.0 | 32 | 100.0 | 32 | 100.0 | 32 | 100.0 |
| Wilcoxon Signed Rank Test (pre-post in groups) | p=0.000 | | | | p=0.194 | | | |

The results of the study showed that the knowledge of pulmonary TB sufferers from the post test results in the treatment group was mostly in the good category (53.13%), while in the control group most of it was in the sufficient category (40.63%). The results of the Wilcoxon Signed Rank Test to see the differences in the pre-test and post-test results of each group, in the treatment group showed a difference in knowledge about pulmonary TB with a value of $p=0.000$ ($p<0.05$), while the control group did not show any difference with a value of $p=0.194$ ($p>0.05$). The results of the Mann-Whitney Test to see whether there were differences in post test results between the treatment group and the control group showed a value of $p=0.000$ ($p<0.05$), which means there was a significant difference between the post test results in the treatment group and the control group.

Discussion

The results of the study showed that the knowledge of pulmonary TB sufferers from the post test results in the treatment group was mostly in the good category, while in the control group most of it was in the sufficient category. Researchers' observations during research activities showed that there was an increase in knowledge of sufferers and their families in terms of understanding pulmonary TB, how pulmonary TB is transmitted, measures to prevent transmission, as well as self-care measures that can be carried out by families such as helping to prepare phlegm disposal pots for TB sufferers, helping Drying mattresses, pillows and blankets for TB sufferers in the sun, preparing nutritious food for TB sufferers, and providing direct care to sufferers such as applying warm compresses when sufferers have a fever. Another change shown by the family is the involvement of the family in the patient's treatment, namely by reminding the patient to always swallow medication regularly. The findings of this research are in accordance with the results of previous research conducted which stated that good knowledge about TB, apart from education from officers, of course, the experience of treatment undergone by sufferers is a very important learning medium for sufferers.(13).

Increasing the knowledge of patients and their families in caring for pulmonary TB sufferers in the treatment group cannot be separated from the provision of knowledge about the concept of pulmonary TB disease, treatment of pulmonary TB disease, and self-care activities for pulmonary TB sufferers provided during treatment using health education, guidance and counseling methods. as well as demonstrations of ways to self-care for pulmonary TB sufferers at home. Knowledge change is basically a learning process, and the

learning process will be more effective if the stimulus provided is in accordance with individual needs, carried out intensively and periodically or continuously (14–18). In this study, empowerment of families and pulmonary TB sufferers was carried out through 6 (six) home visits to the treatment group.

Providing treatment using the supportive educational nursing method aims to increase knowledge, understanding and health awareness for the family. Knowledge and awareness about ways to maintain and improve health is the beginning of health empowerment. This ability is obtained through a learning process. Learning itself is a process that begins with the transfer of knowledge from learning sources to learning subjects. In this case, the family's ability to maintain and improve the health of its members is obtained through a learning process from health workers who provide health information to the family. The knowledge that the family already has about pulmonary TB disease, how it is transmitted, prevented, cared for, cured and its complications will give rise to the will or desire (self efficacy) to take health action in the form of healthy living behavior (self care activity) (19,20).

Through supportive educational nursing activities which consist of guidance, teaching and support, contact between clients with chronic illnesses and staff is more intensive, every problem faced by clients can be corrected and helped to resolve them, ultimately clients will be willing, based on awareness and full of understanding. will change his behavior(21). Apart from that, the implementation of nursing according to the family centered nursing theory is stated to overcome health problems in the family and is aimed at five family health tasks in order to stimulate the family's awareness or acceptance of their health problems, decide on the appropriate method of care, give the family the ability and confidence in caring sick family members, as well as helping families find out how to make the environment healthy, and motivating families to take advantage of available health, this can be done through home visits.

According to Lawrence Green's theory (1980) in Notoatmodjo(2007), to be able to realize knowledge and healthy living behavior is supported by factors including: (1) Predisposing factors, namely factors that facilitate or predispose the occurrence of family behavior, including family knowledge and attitudes towards health, traditions and family beliefs regarding matters related to health, the value system adopted by the family and society, educational level and socio-economic level of the family. (2) Enabling factors are factors that enable or facilitate family behavior or actions, including the availability of facilities and infrastructure or public health service facilities. To be able to behave healthily, families need supporting facilities and infrastructure, for example community health centers, supporting community health centers, hospitals, medical practices, care clinics and others. (3) Reinforcing factors are factors that encourage or strengthen family behavior, including attitudes and behavior of community leaders (toma), religious leaders (toga), attitudes and behavior of health workers including nurses, law and order. laws, regulations from both the central and regional levels related to health.

In this study, predisposing factors that can influence family knowledge and actions in caring for pulmonary TB sufferers, such as age, level of education and type of work, have been controlled from the start, where these factors in the treatment group and control group are comparable, so that The factor most likely to cause an increase in knowledge of pulmonary TB sufferers in the treatment group is the family's knowledge and attitude towards health which changed as a result of the treatment (family empowerment) given. Enabling factors for the formation of knowledge of pulmonary TB sufferers in this study include the respondent's residence which is not too far from the community health center (the furthest distance between the treatment group's residence from the community health center is + 2 km), the existence of other health facilities such as pustu and private doctors' practices that are spread across Almost all sub-districts in the Paruga health center area really support the formation of knowledge of pulmonary TB sufferers. Another factor that is also influential is the existence of health cadres spread across all existing sub-districts, which is a strengthening factor for the formation of knowledge among sufferers about pulmonary TB disease (22–25).

Conclusion

The knowledge of pulmonary TB sufferers from the post test results in the treatment group was mostly in the good category, while in the control group most of it was in the sufficient category. Increasing the knowledge of patients and their families in caring for pulmonary TB sufferers in the treatment group cannot be separated from the provision of knowledge about the concept of pulmonary TB disease, treatment of pulmonary TB disease, and self-care activities for pulmonary TB sufferers provided during treatment using

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