

Original Article

# Improving Self-Efficacy and Behavior to Prevent Transmission in Pulmonary Tuberculosis Patients through Health Coaching Based on Social Cognitive Theory

Melinda Mordekai Rangkoratat<sup>1</sup>, Byba Melda Suhita<sup>2</sup>, Novita Ana Anggraini<sup>2</sup>

<sup>1</sup> Master of Nursing Program, STRADA Indonesia University, East Java, Indonesia

<sup>2</sup> Faculty of Nursing and Midwifery, STRADA Indonesia University, East Java Indonesia

ARTICLE INFO

**Article History**

Submit : Nov 3, 2024

Revised : Dec 20, 2024

Accepted : Dec 27, 2024

**Keywords:**

Social Cognitive Theory,  
Self-efficacy,  
Tuberculosis


**ABSTRACT**

**Background:** Pulmonary tuberculosis is an infectious disease that can be prevented with appropriate measures. However, many patients show low self-efficacy, leading to a lack of motivation to follow treatment and implement preventive measures. The research aim was Analyzing the Effect of Health Coaching based on Social Cognitive Theory on Self-efficacy and Transmission Prevention Behavior in Pulmonary Tuberculosis Patients.

**Methods:** This quantitative research method uses a quasi-experiment design with a pretest-posttest control group design approach. The population of all Pulmonary Tuberculosis patients in the Working Area of the Lingat Health Center, Selaru District, Tanimbar Islands Regency is 49 people. The sample size was 34 respondents. The sampling technique is purposive sampling. The study's independent variables are Health Coaching based on Social Cognitive Theory, and the dependent variables are Self-efficacy and Transmission Prevention Behavior.


**Results:** The analysis using the Wilcoxon test obtained  $p=0.000$  Self-efficacy and  $p=0.001$  Transmission Prevention Behavior, which means that there is an Effect of Health Coaching based on Social Cognitive Theory on Self-efficacy and Transmission Prevention Behavior in Pulmonary Tuberculosis Patients

**Conclusion:** Blood circulation becomes smooth because of pressure point massage which can stimulate endorphin neurotransmitters in the autonomic nerves so that the body relaxes. Pressure point massage intervention can be applied as an alternative therapy option in the management of hypertension which supports the treatment of hypertension so that blood pressure can be well controlled.

 Corresponding Author

 Affiliation

 Email

 Cite this as

: Melinda Mordekai Rangkoratat  
: Master of Nursing Program, STRADA Indonesia University, East Java, Indonesia  
: rangkoratatmelinda3@gmail.com  
: Mordekai Rangkoratat, M., Melda Suhita , B. , & Novita Ana Anggraini. (2024). Improving Self-Efficacy and Behavior to Prevent Transmission in Pulmonary Tuberculosis Patients through Health Coaching Based on Social Cognitive Theory. Journal of Applied Nursing and Health, 6(2), 75–87. <https://doi.org/10.55018/janh.v6i2.242>

**Introduction**

Non-communicable diseases continue to be a particular concern in the world of

health such as Indonesia, making these non-communicable diseases develop into serious and dangerous health problems. An



example of this is cardiovascular disease. There are many types of cardiovascular disease, one of which is frequently encountered is hypertension ([Widayati, Rachmania, & Safitri, 2024](#)).

According to data obtained from the Indonesian Ministry of Health, in 2022 hypertension is still the number one cause of death in the world. However, this disease can basically be prevented by various efforts with pharmacological and non-pharmacological therapy. Hypertension is a non-communicable disease that is experienced by many people, due to an increase in systolic blood pressure  $\geq 140$  mmHg and diastolic blood pressure  $\geq 90$  mmHg ([Y. Sari, 2017](#)). Back neck pain is one of the health problems often experienced by hypertension sufferers. Increased blood pressure in hypertension sufferers is often followed by muscle tension, especially in the neck and shoulder area and causes complaints of pain in the back of the neck area ([Fadlilah & Rahil, 2019](#)).

The data of Basic Health Research in Indonesia in 2018, it was found that hypertension was in first place as a non-communicable disease with a total of 63,309,602 sufferers (34.1%) with an increase of 8.31% from the previous 25.8% to 34.1 % ([Riskesdas, 2018](#)). The number of hypertension sufferers calculated based on age above 18 years in the East Java Province has increased by 36.32% and is ranked 6th nationally. The number of cases of hypertension sufferers in Tulungagung Regency based on the health profile of Tulungagung Regency is 21,214 cases. Based on a preliminary study carried out by researchers at the UPTD Health Center of the Akungunung Community Health Center, there were data on 73 hypertensive patients in Pakisrejo Village, Tulisgunung District, Tulungagung, with a blood pressure range of 160/90 mmHg to 179/109 mmHg in middle-aged women. After conducting

interviews with 10 hypertension sufferers in Pakisrejo Village, it was found that 70% complained of pain in the back of the neck area.

In hypertension, when blood pressure rises, the body responds by increasing tension in certain muscles, which can then cause stiffness and pain in the neck ([Puspita et al., 2023](#)). This condition can affect the patient's comfort and quality of life, as well as worsen health conditions if not treated appropriately ([Widayati & Nuari, 2020](#)). Effective treatment of back neck pain can help reduce the burden on hypertension sufferers in dealing with disturbing physical symptoms so that quality of life is maintained well ([Putri, Naziyah, & Suralaga, 2023](#); [G. M. Sari, YUSRAN, & BAHAR, 2023](#)).

One of non-pharmacological method that can be applied to treat back neck pain is pressure point massage therapy. This technique involves applying pressure to certain points on the body which is believed to be associated with reducing pain and muscle tension ([Lukman et al., 2020](#)). Pressure point massage works by stimulating the nerves and soft tissue around the pressure points, which then sends signals to the brain to release endorphins. Endorphins are known as natural pain-relieving hormones in the body and are believed to reduce the perception of pain in individuals ([Pramiyanti, Putra, & Wulandari, 2024](#)).

Pressure point massage is performed by pressing certain points on the body to help relieve pain, increase circulation, and reduce tension. In hypertensive sufferers with back neck pain, this mechanism can help reduce pain through: Muscle Relaxation and Reducing Tension, Endorphin stimulation and Pain Reduction, Increasing Blood Circulation, reducing the activity of the sympathetic nervous system (which controls the stress response) and increasing the activity of the

parasympathetic system (which controlling relaxation, and decreasing Cortisol Production ([Ni'am, Khoiriyah, & Samiasih, 2022](#)).

Several studies show that pressure point massage has a significant effect in reducing pain intensity and increasing relaxation in various patient groups, including hypertension sufferers. In addition, this therapy also has the potential to reduce blood pressure through muscle and nervous system relaxation mechanisms, which can help in overall hypertension management ([Rahayu et al., 2023](#)). However, scientific evidence regarding the effectiveness of this technique in hypertension sufferers, especially those with complaints of back neck pain, still requires further study to understand how much impact it has on reducing pain intensity and whether there are certain potential risks or contraindications.

The aim of this study was to analyze the effect of pressure point massage on the level of back and neck pain in patients with hypertension. Hopefully the results of this study can be used as a reference regarding non-pharmacological interventions in the safe and effective treatment of neck and back pain, as well as being an additional alternative in the comprehensive management of hypertension.

## Methods

### Study Design

This quantitative research method uses a quasi-experiment design with a pretest-posttest control group design approach.

### Sample/Participants

The population of all Pulmonary Tuberculosis patients in the Working Area of the Lingat Health Center, Selaru District, Tanimbar Islands Regency is 49 people. Respondent inclusion criteria: cooperative

patients, willing to be respondents; all pulmonary tuberculosis patients undergoing treatment; patients with Glasgow coma scale: E4, V5, M6; Adult tuberculosis age (18 – 55 years).

The sample size was 34 respondents.

### Instrument

Variabe Independent research is Health Coaching based on Social Cognitive Theory, and the dependent variable is *Self-efficacy* and Transmission Prevention Behavior. The research instrument used the *Self-efficacy* and Transmission Prevention Behavior questionnaire.

### Intervention

Health Coaching based on Social Cognitive Theory is a patient-centered health coaching process based on behavior change theory, requiring patients to set their own goals.

### Data Collection

This research was carried out in the Working Area of the Lingat Health Center, Selaru District, Tanimbar Islands Regency. The study will be carried out in October 2024. The steps in collecting data in this research are as follows: protocol passed the Ethics Review by the Research Ethics Committee; after that, the researcher coordinated with the Tanimbar Islands Regency Bakesbangpol, then to the Tanimbar Islands Regency Health Office, then to the research site, namely the Lingat Health Center related to technical research. The researcher discussed selecting clients according to the inclusion criteria with the nurse. Afterward, the researcher met with the client to introduce themselves and explain the procedures and benefits of providing Health Coaching based on Social Cognitive Theory. Patients who have been described and are willing to participate in the study will sign an Informed Consent.

Respondents were given Health Coaching based on Social Cognitive Theory for 6 meetings for 1 month, and each meeting was 60 minutes. Each respondent was measured for Self-efficacy and Transmission Prevention Behavior before and after the intervention was given.

**Data Analysis**

To answer the hypothesis in this study, the Wilcoxon Signed Rank Test and Mann Withney.

**Ethical consideration**

This research uses ethical principles: informed, anonymity, confidentiality, beneficence, non-maleficence, veracity, and justice. Protokol passed the Ethics Review by the Research Ethics Committee of STRADA Indonesia University number 1631/EC/KEPK/I/10/2024.

**Results**

Table 1. Data on the distribution of age, gender, education, and occupation of respondents, length of medication

Characteristic Data	Intervention		Control		Homogeneity Test
	Frequency	%	Frequency	%	
<b>Age</b>					
18-35 years old	10	58,8	9	52,9	0,612
36-50 years old	6	35,3	6	35,3	
> 50 years	1	5,9	2	11,8	
<b>Total</b>	<b>17</b>	<b>100</b>	<b>17</b>	<b>100</b>	
<b>Gender</b>					
Man	7	41,2	8	47,1	0,739
Woman	10	58,8	9	52,9	
<b>Total</b>	<b>17</b>	<b>100</b>	<b>17</b>	<b>100</b>	
<b>Education</b>					
No School	-	-	-	-	0,824
Primary school	6	35,3	5	29,4	
Junior High School	7	41,2	8	47,1	
Senior High School	4	23,5	4	23,5	
College	-	-	-	-	
<b>Total</b>	<b>17</b>	<b>100</b>	<b>17</b>	<b>100</b>	
<b>Work</b>					
Working	7	41,2	5	29,4	0,488
Not working	10	58,8	12	70,6	
<b>Total</b>	<b>17</b>	<b>100</b>	<b>17</b>	<b>100</b>	
<b>Length of Taking Medication</b>					
≤ 2 months	5	29,4	6	35,3	0,724
> 2 months	12	70,6	11	64,7	
<b>Total</b>	<b>17</b>	<b>100</b>	<b>17</b>	<b>100</b>	

Table 2. Distribution of data analysis of self-efficacy in Pulmonary Tuberculosis Patients before and after being given Health Coaching based on Social Cognitive Theory in the intervention and control groups



Self-efficacy	Intervention		Control	
	Frequency	%	Frequency	%
<b>Self-efficacy (Pretest)</b>				
Very Weak	1	5,9	2	11,8
Weak	5	29,4	6	35,3
Quite strong	8	47,1	7	41,2
Strong	2	11,8	1	5,9
Very Strong	1	5,9	1	5,9
<b>Total</b>	<b>17</b>	<b>100</b>	<b>17</b>	<b>100</b>
<b>Self-efficacy (Posttest)</b>				
Very Weak	-	-	-	-
Weak	-	-	6	35,3
Quite strong	3	17,6	7	41,2
Strong	8	47,1	3	17,6
Very Strong	6	35,3	1	5,9
<b>Total</b>	<b>17</b>	<b>100</b>	<b>17</b>	<b>100</b>
Wilcoxon	p=0,000		p=0,034	
Mann Withney (Pretest)	p=0,441			
Mann Withney (Posttest)	p=0,000			

Table 3 Distribution of data analysis of special Transmission Prevention Behaviors in Pulmonary Tuberculosis Patients before and after being given Health Coaching based on Social Cognitive Theory in the intervention and control groups

Behavior to Prevent Transmission	Intervention		Control	
	Frequency	%	Frequency	%
<b>Behavior to Prevent Transmission (Pretest)</b>				
Less	10	58,8	7	41,2
Enough	6	35,3	8	47,1
Good	1	5,9	2	11,8
<b>Total</b>	<b>17</b>	<b>100</b>	<b>17</b>	<b>100</b>
<b>Behavior to Prevent Transmission (Posttest)</b>				
Less	-	-	6	35,3
Enough	6	35,3	7	41,2
Good	11	64,7	4	23,5
<b>Total</b>	<b>17</b>	<b>100</b>	<b>17</b>	<b>100</b>
Wilcoxon	p=0,001		p=0,180	
Mann Withney (Pretest)	p=0,291			
Mann Withney (Posttest)	p=0,004			

## Discussion

### Differences in Self-efficacy of Pulmonary Tuberculosis Patients Before and After Health Coaching Based on Social Cognitive Theory

Based on table 2. shows that Self-efficacy in the intervention group increased where almost half of the respondents had strong Self-efficacy, namely as many as (47.1%) of respondents after being given

Health Coaching based on Social Cognitive Theory. In contrast, there was no significant change in Health Coaching based on Social Cognitive Theory in the control group. The influence of Health Coaching based on Social Cognitive Theory can be seen from the results of the Wilcoxon Rank Test between the Self-efficacy of the intervention group during the pre-test and post-test, which is  $p = 0.000$  where the  $\alpha < 0.05$ .



The above aligns with research ([Tülüce & Kutlutürkan, 2018](#); [Wahyudin et al., 2021](#); [Fairil et al., 2024](#)), which states that Health Coaching increases self-efficacy in Pulmonary Tuberculosis Patients. In addition, research (Islam et al., 2023, Using the social cognitive theory approach, shows that a person with pulmonary tuberculosis can increase self-efficacy. The results of this study demonstrate the importance of combining and assessing some of the conceptual structures of behavioral theories when planning primary care health promotion practices.

Pulmonary tuberculosis is one of the global health problems with a high rate of transmission, especially in developing countries. Pulmonary tuberculosis requires long and rigorous treatment and treatment, which is often a challenge for patients to adhere to treatment to the end ([Nofriati et al., 2023](#)). One of the key factors that affect the success of therapy is the patient's *self-efficacy* or confidence to undergo treatment and follow health instructions properly. Low self-efficacy can lead to non-adherence to treatment, increasing the risk of drug resistance, complications, and the spread of the disease ([Noranisa et al., 2023](#)).

The Social Cognitive Theory (SCT) developed by Albert Bandura emphasizes that the dynamic interaction between personal factors, the environment, and behavior influences human behavior. One of the key elements in this theory is *self-efficacy*, which is the belief that individuals can perform the necessary actions to achieve a specific goal. In health, high self-efficacy positively correlates with the patient's ability to comply with the care and medication provided (Islam et al., 2023).

Some of the primary sources that affect self-efficacy according to Social Cognitive Theory (SCT): when an individual successfully performs a task, it increases self-confidence to succeed again in the

future; observing others who have successfully faced similar situations can provide inspiration and confidence for the individual; support and encouragement from the social environment, such as health workers or family members, can increase patient self-confidence; How a person responds to stress or challenges also affects self-efficacy. If people can manage their emotions well, their self-efficacy tends to be higher. In patients with pulmonary tuberculosis, interventions that can facilitate increased self-efficacy will make a significant contribution to the success of long-term therapy research ([Tülüce & Kutlutürkan, 2018](#); [Wahyudin et al., 2021](#); [Fairil et al., 2024](#)).

Health Coaching based on Social Cognitive Theory is a health intervention approach that aims to motivate and support patients in changing their behavior to achieve optimal health outcomes. When *health coaching* is carried out based on the principles of Social Cognitive Theory, it can be very effective in increasing the self-efficacy of pulmonary tuberculosis patients.

Some *essential* components of Social Cognitive Theory-based health coaching ([Sukartini et al., 2020](#)) include the person-centered Approach: Each patient has different conditions and challenges in dealing with tuberculosis. Therefore, *health coaching* based on Social Cognitive Theory emphasizes a personalized approach, where the coach helps patients set realistic goals according to their condition and provides individualized support; education and Modeling (Vicarious Learning): in *health coaching*, education about the disease and the importance of adhering to treatment is key. Using other people's experiences as models (e.g., tuberculosis patients who have recovered after treatment adherence) can reinforce patients' confidence that they can recover if they follow a treatment program. **Social Support:** health coaches provide

social and emotional support to patients. They provide a continuous positive boost, which is one of the essential elements in increasing *self-efficacy*. **Emotional regulation:** Tuberculosis patients often feel anxious or depressed during the treatment process. In *health coaching*, coaches help patients to recognize, understand, and manage their emotional response to illness. This helps reduce anxiety and increase their confidence in facing treatment challenges ([Supriatun & Insani, 2021](#)).

Implementing *health coaching* based on **Social Cognitive Theory** can be done through face-to-face and telemedicine consultation sessions. Each session focuses on improving *self-efficacy* through disease understanding, treatment, and emotional management. A patient-centered, collaborative, and motivating approach allows patients to set achievable goals for medication and other health behaviors, such as maintaining nutrition and personal hygiene ([Koa, 2019](#)).

According to the researchers, *Health coaching* based on Social Cognitive Theory offers a comprehensive approach to improving self-efficacy in pulmonary tuberculosis patients. By strengthening self-confidence through personal support, education, modeling, and emotional management, this intervention is expected to improve patient's adherence to tuberculosis treatment, ultimately increasing the rate of recovery and preventing the spread of the disease. In the context of public health, this strategy can be adopted as one of the interventions to address the challenges of treatment adherence in tuberculosis patients, especially in areas with high rates of tuberculosis. Integrating these social, psychological, and behavioral aspects is crucial in promoting better health outcomes for patients with pulmonary tuberculosis.

### **Differences in Behavior to Prevent Transmission of Pulmonary Tuberculosis Patients Before and After Being Given Health Coaching Based on Social Cognitive Theory**

Table 3 shows that the transmission prevention behavior in the intervention group increased most (64.7%) of respondents after being given health coaching based on social cognitive theory. Meanwhile, in the control group, almost half of the respondents (41.2%) were in the sufficient category. The influence of Health Coaching based on Social Cognitive Theory can be seen from the results of the Wilcoxon Rank Test between the knowledge of the intervention group during the pre-test and the post-test, which is  $p = 0.001$  where the  $\alpha < 0.05$ .

The above is in line with ([Supriatun & Insani, 2021](#) [Fairil et al., 2024](#)), which state that the Health Coaching intervention improves behavior to prevent the transmission of pulmonary tuberculosis. Bandura ([Shamizadeh et al., 2019](#)) states that belief is a person's confidence to demonstrate the behavior demanded in a specific situation. In addition, research (Islam et al., 2023) noted that the Social Cognitive Theory approach could improve disease prevention behavior.

Pulmonary tuberculosis is an infectious disease caused by *Mycobacterium tuberculosis*, mainly attacking the lungs, and is transmitted through droplets that come out when coughing, sneezing, or talking. Given its high rate of transmission, pulmonary tuberculosis is not only a problem for infected individuals but also public health. Transmission prevention strategies are essential to break the chain of transmission, which depends on patient behavior in adhering to prevention protocols. However, many patients have difficulty implementing these preventive behaviors consistently. One way to increase

compliance and awareness in preventing transmission is to use *health coaching* based on *Social Cognitive Theory* (SCT).

Social Cognitive Theory, developed by Albert Bandura, emphasizes that the interaction between personal factors, the environment, and the behavior itself influences individual behavior. One of the key elements in social cognitive theory is self-efficacy, which is the belief that individuals can perform the necessary actions to achieve a specific goal. In the context of preventing transmission of pulmonary tuberculosis, *high self-efficacy* can contribute to increased adherence to preventive behaviors such as using masks correctly when interacting with others, **Cover your mouth when coughing or sneezing** with a tissue or upper arm, isolate yourself during periods of active infection to prevent spreading to others; adhere to anti-tuberculosis (OAT) treatment to reduce the risk of long-term transmission. Bandura in ([Shamizadeh et al., 2019](#)).

In the framework of Social Cognitive Theory, this transmission prevention behavior is influenced by several factors, namely the level of patient understanding of pulmonary tuberculosis and self-confidence in managing the disease; support from family, health workers, and the surrounding environment in encouraging preventive behavior; Past experiences related to infectious diseases or adherence to medication that may affect current beliefs and behaviors ([Sazali et al., 2023](#)).

*Health coaching* adalah pendekatan intervensi yang berfokus pada pendampingan pasien dalam mengubah perilaku kesehatan mereka melalui proses kolaboratif yang berpusat pada pasien ([Hanif et al., 2020](#)). Jika *health coaching* dilakukan berdasarkan prinsip-prinsip Social Cognitive Theory, ini dapat meningkatkan *self-efficacy* dan membantu pasien untuk lebih konsisten dalam

menjalankan perilaku pencegahan penularan tuberculosis paru.

An essential component in *health coaching* based on Social Cognitive Theory for the prevention of pulmonary tuberculosis transmission ([Nofriati et al., 2023](#); [Supriatun & Insani, 2021](#)) includes **Education and Awareness-raising:** Comprehensive education about pulmonary tuberculosis and how it is transmitted is an integral part of *health coaching*. Patients need to understand how their behavior can affect the spread of the disease. In this case, modeling good preventive behavior by health workers or other patients who have successfully undergone treatment can be a practical example (vicarious learning). **Mastery Experiences:** patients are trained and encouraged to practice preventive behaviors such as wearing masks or covering their mouths when coughing. Success in doing this can increase patients' confidence that they can effectively prevent the transmission of pulmonary tuberculosis. **Social Support and Persuasion:** Health coaches play an important role in encouraging and motivating patients to continue practicing preventive behaviors despite facing obstacles or discomfort. Support from family and community is also an external factor that strengthens the patient's self-confidence. **Stress and Emotional Management:** some patients may feel embarrassed, isolated, or depressed as a result of their illness. *Health coaching* helps patients manage these emotional responses, as negative emotions can demotivate them to adhere to preventive behaviors. By reducing anxiety and improving self-control, patients are more likely to consistently perform the correct preventive behaviors ([Sukartini et al., 2020](#)).

Implementing *health coaching* based on *Social Cognitive Theory* can be done



through an individual or group approach, where patients are involved in structured training sessions, either face-to-face or through digital platforms (telemedicine). The coaching process requires goal-setting, discussions about obstacles faced in complying with preventive behaviors, and strategies to overcome these obstacles. In each session, the health coach works with patients to improve their understanding of preventing transmission and strengthen their motivation to care for themselves and others ([Nastiti et al., 2024](#)).

Some aspects focused on in coaching sessions include identifying high-risk situations for transmission, such as interactions in crowded environments or lack of ventilation; practicing the correct use of masks and how to do good cough etiquette; and **regular monitoring and evaluation** to ensure compliance with prevention protocols. Each session is focused on empowering patients through adequate emotional support and information and strengthening patients' self-efficacy so that they are confident in carrying out effective prevention measures. *Health coaching* based on Social Cognitive Theory can effectively improve transmission prevention behavior in pulmonary tuberculosis patients ([Nastiti et al., 2024](#)).

According to the researchers, by strengthening *self-efficacy*, providing social and emotional support, and educating patients about the importance of preventive behaviors, this intervention helps tuberculosis patients consistently carry out prevention measures for transmission. These interventions help protect individual health and significantly break the chain of pulmonary tuberculosis spread in the community. Thus, *health coaching* based on *Social Cognitive Theory* can be integrated as part of the pulmonary tuberculosis control program in health facilities, which can

indirectly help reduce the burden of this infectious disease at the local and global levels.

### **The Effect of Health Coaching Based on Social Cognitive Theory on Self-efficacy and Transmission Prevention Behavior in Pulmonary Tuberculosis Patients**

The Mann-Whitney Self-efficacy test results during the post-test in both groups were 0.000 where  $\alpha < 0.05$ . This suggests that the intervention group and the control group have a significant influence on the self-efficacy of pulmonary tuberculosis patients. The Mann-Whitney test of Transmission Prevention Behavior results during the post-test in both groups were 0.004 where  $\alpha < 0.05$ . This significantly influenced the Transmission Prevention Behavior of pulmonary tuberculosis patients between the intervention group and the control group.

Pulmonary tuberculosis is an infectious disease that requires long-term treatment and preventive behavior to avoid spreading. Adherence to medication and implementing infection prevention behaviors, such as using masks and maintaining hygiene, is often challenging for patients ([Wahyudin et al., 2021](#)). To overcome this problem, *health coaching* based on *Social Cognitive Theory* (SCT) can be an effective solution ([Adiutama & Fauziah, 2022](#)).

**Social Cognitive Theory (SCT)**, developed by Albert Bandura, emphasizes the interaction between personal, environmental, and behavioral factors. A key component of **Social Cognitive Theory (SCT)** is *self-efficacy*, an individual's belief in their ability to carry out specific actions. In pulmonary tuberculosis, *self-efficacy* is vital in improving treatment adherence and transmission prevention behaviors ([Bandura, 1998](#)).

**Health coaching based on Social Cognitive Theory (SCT)** focuses on improving *self-efficacy* through several mechanisms: **mastery experiences**, where patients successfully practice treatment and preventive measures gradually, increasing their self-confidence; **modeling (vicarious learning)**, allowing patients to learn from others who have successfully managed their pulmonary tuberculosis, providing inspiration and confidence that similar behaviors can be applied; **social support**, through motivation and verbal persuasion from health coaches, helps overcome barriers and maintain a patient commitment to treatment; **Stress management**, with coaches helping patients manage pulmonary tuberculosis-related anxiety, strengthening their ability to undergo treatment ([Long et al., 2019](#)).

Regarding preventive behavior, *health coaching* also increases awareness and implementation of transmission prevention practices, such as using masks and maintaining hygiene. Proper education, positive behavior reinforcement, and ongoing support from coaches make patients more able and motivated to consistently maintain preventive behaviors ([Eom & Lee, 2017](#)). *Health coaching* based on *Social Cognitive Theory* (SCT) significantly improves *self-efficacy* and infection prevention behavior. With increased *self-efficacy*, patients are more compliant in treatment and preventive behaviors, which ultimately helps reduce the spread of pulmonary tuberculosis in the community and improve the patient's quality of life. This approach provides an integrated and sustainable solution for controlling pulmonary tuberculosis.

## Conclusion

This study concludes that **Health Coaching based on Social Cognitive Theory (SCT)** effectively improves **self-**

**efficacy and transmission prevention behavior** among pulmonary tuberculosis patients. The improvement is evident from statistical tests showing significant changes in the intervention group compared to the control group. This intervention has proven to help patients build confidence in undergoing treatment and consistently implementing preventive measures, positively impacting tuberculosis control at both individual and community levels. Future research is recommended to explore the integration of SCT-based Health Coaching with technology-driven approaches, such as telemedicine, to reach patients in remote areas. Additionally, further studies could investigate the long-term effects of this intervention on treatment adherence, patient quality of life, and the potential reduction in the global tuberculosis burden.

## Authors Contributions

The authors contributed collaboratively to the design, implementation, and analysis of this study, focusing on the impact of Health Coaching based on Social Cognitive Theory (SCT) on pulmonary tuberculosis patients. Their efforts demonstrated the intervention's effectiveness in improving self-efficacy and transmission prevention behaviors, as evidenced by significant outcomes in the intervention group.

## Conflicts of Interest

In this research, there is no conflict of interest.

## Acknowledgment

We, the authors, would like to thank various parties who helped the smooth conduct of this research, especially the respondent's Pulmonary Tuberculosis Patients in the Working Area of the Lingat

Health Center, Selaru District, Tanimbar Islands Regency.

## References

- Adiutama, N. M., & Fauziah, W. (2022). Behavioral Counseling of Theory of Planned Behavior-Based to Increase Tuberculosis Patients` Obedience in Medication Nutrition, and Prevention of Transmission: Randomized Control Trial. *Journal Of Nursing Practice*, 6(1), 84–92. <https://doi.org/10.30994/jnp.v6i1.207>
- Bandura, A. (1998). Health Promotion from the Perspective of Social Cognitive Theory. *Psychology and Health*, 1998, 623–649. <https://doi.org/10.1080/08870449808407422>
- Cholig, I., Sukartini, T., & Makhfudli, M. (2020). The Effect of Psychological and Health Education Approaches Based on Self-Efficacy on Compliance with Tuberculosis Patient: A Systematic Review. *Nurse and Health: Jurnal Keperawatan*, 9(2), 111–123. <https://doi.org/10.36720/nhjk.v9i2.175>
- Dilas, D., Flores, R., Morales-García, W. C., Calizaya-Milla, Y. E., Morales-García, M., Sairitupa-Sanchez, L., & Saintila, J. (2023). Social Support, Quality of Care, and Patient Adherence to Tuberculosis Treatment in Peru: The Mediating Role of Nurse Health Education. *Patient Preference and Adherence*, Volume 17, 175–186. <https://doi.org/10.2147/PPA.S391930>
- Eom, S. O., & Lee, I. (2017). The Effect of Health Coaching Programs on Self-Efficacy, Health Behaviors, and Quality of Life in Hypertensive People Living in Poverty. *J Korean Acad Nurs*, 47(3), 380–391.
- Fairil, M. C. A., Haskas, Y., & Sriwahyuni. (2024). Pengaruh Individual Coaching terhadap Self Efficacy Pencegahan Penularan dan Kepatuhan Minum Obat pada Penderita Tuberkolosis di Puskesmas Tamalanrea. *JIMPK: Jurnal Ilmiah Mahasiswa & Penelitian Keperawatan*, 4.
- Hanif, D. Z., Amin, M., Wahyudi, A. S., & Nursalam, N. (2020). The Effect of Health Coaching-based Health Belief Model on Preventing the Pulmonary Tuberculosis Transmission at Puskesmas Karang Taliwang and Ampenan West Nusa Tenggara. *International Journal of Nursing and Health Services (IJNHS)*, 3(4). <https://doi.org/10.35654/ijnhs.v3i4.253>
- Hasanah, U., Makhfudli, M., L Ni'mah, Efendi, F., & Aurizki, G. E. (2019). Peer Group Support on the Treatment Adherence of Pulmonary Tuberculosis Patients. *IOP Conference Series: Earth and Environmental Science*, 246(1), 012033. <https://doi.org/10.1088/1755-1315/246/1/012033>
- Karno, Y. M., & Pattimura, N. A. (2022). Sikap yang Berhubungan dengan Upaya Pencegahan Penularan TB Paru Kontak Serumah di Wilayah Kerja Puskesmas Pabentengan Kabupaten Gowa. *Pasapua Health Journal*.
- Kemendes RI. (2023). *Program Penanggulangan Tuberculosis Kementerian Kesehatan RI*. Direktorat Jendral Pencegahan dan Pengendalian Penyakit.
- Koa, F. M. (2019). *Pengaruh Individual Coaching terhadap Efikasi Diri, Perilaku Pencegahan Penularan dan Kepatuhan Minum Obat pada Pasien TB* [Tesis]. Universitas Airlangga.
- Long, H., Howells, K., Peters, S., & Blakemore, A. (2019). Does health

- coaching improve health-related quality of life and reduce hospital admissions in people with chronic obstructive pulmonary disease? A systematic review and meta-analysis. *British Journal of Health Psychology*, 24(3), 515–546. <https://doi.org/10.1111/bjhp.12366>
- Munawaroh, I., Kurniawati, N. D., Purwaningsih, P., Romantika, D. D., & Karingga, D. D. (2022). Increasing Self Efficacy Behavior Prevention of Transmission and Compliance with Tuberculosis Medication through Health Promotion: A Systematic Review. *Prisma Sains: Jurnal Pengkajian Ilmu Dan Pembelajaran Matematika Dan IPA IKIP Mataram*, 10(3). <https://doi.org/10.33394/jps.v10i3.5321>
- Nastiti, A. D., Kusuma, E., Puspitasari, R. A. H., & Handayani, D. (2024). The Influence of Health Coaching Colling on the Intention to Use Healthy Latrines Coastal Communities. *Jurnal Keperawatan*. <http://journal.stikeskendal.ac.id/index.php/Keperawatan>
- Ni'mah, L., Hasanah, U., & Makhfudli. (2018). Peer Group Support Meningkatkan Kepatuhan Pengobatan Pada Pasien Tuberculosis Paru Di Wilayah Kerja Puskesmas Klampis Bangkalan. *Journal of Health Science (Jurnal Ilmu Kesehatan)*.
- Nofriati, A. S. U., Mardiana, M., & Irawati, I. (2023). How Does Health Coaching Improve Self-Efficacy of Patients with Chronic Respiratory Disease? Scoping Review i. *Jurnal Promotif Preventif*, 6(1), 66–74. <http://journal.unpacti.ac.id/index.php/JPP>
- Noranisa, Alini, & Puteri, A. D. (2023). Hubungan Efikasi Diri dengan Kualitas Hidup Pasien TB Paru di Wilayah Kerja Puskesmas Tambang. *SEHAT: Jurnal Kesehatan Terpadu*.
- Sa'diyah, E. I., & Indarjo, S. (2021). Perilaku Pencegahan Penularan Tuberculosis pada Keluarga Penderita Tuberculosis. *The Indonesian Journal of Public Health*.
- Sazali, M. F., Rahim, S. S. S. A., Mohammad, A. H., Kadir, F., Payus, A. O., Avoi, R., Jeffree, M. S., Omar, A., Ibrahim, M. Y., Atil, A., Tuah, N. M., Dapari, R., Lansing, M. G., Rahim, A. A. A., & Azhar, Z. I. (2023). Improving Tuberculosis Medication Adherence: The Potential of Integrating Digital Technology and Health Belief Model. In *Tuberculosis and Respiratory Diseases* (Vol. 86, Issue 2, pp. 82–93). Korean National Tuberculosis Association. <https://doi.org/10.4046/trd.2022.0148>
- Shamizadeh, T., Jahangiry, L., Sarbakhsh, P., & Ponnet, K. (2019). Social cognitive theory-based intervention to promote physical activity among prediabetic rural people: A cluster randomized controlled trial. *Trials*, 20(1). <https://doi.org/10.1186/s13063-019-3220-z>
- Smeltzer, S. C., & Bare, B. G. (2019). *Keperawatan Medikal- Bedah Brunner and Suddarth's*. EGC.
- Sukartini, T., Pratiwi, N. I., & Koa, M. F. (2020). Individual Coaching on Self-Efficacy, Control and Medication Adherence in Patients with Tuberculosis. *International Journal of Psychosocial Rehabilitation*, 24, 2020. <https://doi.org/10.37200/IJPR/V24I7/PR270730>
- Supriatun, E., & Insani, U. (2021a). Health Coaching Implementation on Improving Tuberculosis Prevention Behaviors in Tegal Regency. *Jurnal Kesehatan Komunitas*, 7(1), 97–105.

- <https://doi.org/10.25311/keskom.v017.iss1.870>
- Supriatun, E., & Insani, U. (2021b). Intervensi Health Coaching dalam Meningkatkan Pengetahuan dan Sikap Pencegahan Penularan Tuberkulosis. *Jurnal Keperawatan Silampari*, 4(2), 383–396. <https://doi.org/10.31539/jks.v4i2.1942>
- Tülüce, D., & Kutlutürkan, S. (2018). The effect of health coaching on treatment adherence, self-efficacy, and quality of life in patients with chronic obstructive pulmonary disease. *International Journal of Nursing Practice*, 24(4). <https://doi.org/10.1111/ijn.12661>
- Wahyudin, D., Supriyatna, N., & Mulyono, S. (2021). Pengaruh Health Coaching pada Self Help Group terhadap Self Efikasi dan Kepatuhan Program Pengobatan Pasien TB Paru di Kota Sukabumi. *Jurnal Penelitian Kesehatan SUARA FORIKES*. <https://doi.org/DOI:http://dx.doi.org/10.33846/sf12nk214>
- Widiharti, Sari, D. J. E., Suminar, E., Rahmah, A. L., Rizkiyah, C. K., & Mayreela, D. (2022). Pemberian Edukasi Perilaku Pencegahan Penularan TBC dengan Pendekatan Health Belief Model. *MARTABE*. <https://doi.org/10.31604/jpm.v5i8.2872-2876>
- Fadlilah, S., & Rahil, N. H. (2019). Faktor-Faktor Yang Berhubungan Dengan Perilaku Pencegahan Cidera Muskuloskeletal Pada Pemain Futsal. *Jurnal Keperawatan BSI*, 7(1), 66–75.
- Lukman, L., Putra, S. A., Habiburrahma, E., Wicaturatmashudi, S., Sulistini, R., & Agustin, I. (2020). Pijat Refleksi Berpengaruh Terhadap Tekanan Darah Pada Pasien Hipertensi Di Klinik Atgf 8 Palembang. *Jurnal Bahana Kesehatan Masyarakat (Bahana of Journal Public Health)*, 4(1), 5–9. <https://doi.org/10.35910/jbkm.v4i1.238>
- Ni'am, M. A., Khoiriyah, K., & Samiasih, A. (2022). Penerapan Akupresur terhadap Penurunan Tekanan Darah pada Pasien Penderita Hipertensi Di Desa Bermi Kabupaten Demak. *Holistic Nursing Care Approach*, 2(2), 65. <https://doi.org/10.26714/hnca.v2i2.10287>
- Pramiyanti, N. P. O., Putra, P. W. K., & Wulandari, N. P. D. (2024). Pengaruh Akupresur terhadap Nyeri Kepala dan Tekanan Darah pada Penderita Hipertensi di Rumah Sakit Ari Canti Gianyar. *Bali Health Published Journal*, 6(1), 53–71. <https://doi.org/10.47859/bhpj.v6i1.480>
- Puspita, T., Widadi, S. Y., Wahyudin, W., Alfiyansah, R., Rilla, E. V., Daniati, E., & Permana, G. G. S. (2023). Pain of Hypertension Patients in Community Setting: Under Working Area of Wanaraja Public Health Centre. *Contagion: Scientific Periodical Journal of Public Health and Coastal Health*, 5(3), 875. <https://doi.org/10.30829/contagion.v5i3.15897>
- Putri, S. A., Naziyah, N., & Suralaga, C. (2023). Efektivitas Kompres Hangat pada Lansia terhadap Penurunan Nyeri Gout Arthritis di Posbindu Kemuning Baktijaya Depok.

Malahayati Nursing Journal, 5(7),  
2267–2279.  
<https://doi.org/10.33024/mnj.v5i7.9047>

Rahayu, S., Sucipto, A., Syahleman, R.,  
Program, ), Keperawatan, S., Tinggi, S.,  
... Medika, B. C. (2023). Penerapan  
Terapi Akupresur Mandiri Sebagai  
Upaya Penurunan Tekanan Darah  
Pada Penderita Hipertensi.  
Communnity Development Journal,  
4(4), 9025–9030.

Riskesdas, 2018. (2018). Laporan Riskesdas  
2018 Kementerian Kesehatan Republik  
Indonesia.

Sari, G. M., YUSRAN, S., & BAHAR, H. (2023).  
Gambaran Kualitas Hidup Penderita  
Hipertensi Pada Usia Muda Di Wilayah  
Kerja Puskesmas Kabawo Kabupaten  
Muna Tahun 2022. Jurnal Wawasan  
Promosi Kesehatan, 4(1), 65–75.  
<https://doi.org/10.37887/jwins.v4i1.43209>

Sari, Y. (2017). Berdamai Dengan  
Hipertensi. Jakarta: Bumi Medika.

Widayati, D., & Nuari, N. A. (2020). Kreasiki  
Gymnastics in Reducing the Stress  
Level of Diabetes Mellitus Patients.  
Jurnal Info Kesehatan, 18(1), 18–27.  
<https://doi.org/10.31965/infokes.vol18.iss1.295>

Widayati, D., Rachmania, D., & Safitri, N.  
(2024). Increasing the Comfort of  
Hypertension Sufferers Through  
Effleurage Back Massage. Journal of  
Applied Nursing and Health, 6(1),  
193–202.  
<https://doi.org/10.55018/janh.v6i1.194>