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The Relationship of *Information, Motivation And Behavioral Skill* (IMB Model) Based Health Behavior to Tuberculosis Medication Compliance in Tuberculosis Patients at Putri Ayu Health Center

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Abstract

Background: Tuberculosis (TB) is still a global health problem with a high incidence rate, including in Indonesia. The success of therapy is highly dependent on the patient's adherence to treatment. The Information, Motivation, and Behavioral Skills (IMB) model describes compliance through three main components, namely information, motivation, and behavioral skills.
Objective: To determine the relationship between health behavior based on the IMB Model and medication adherence in tuberculosis patients at the Putri Ayu Health Center, Jambi City.
Methods: This study used a cross-sectional design with a quantitative approach. The sampling technique is a total sampling with a total of 48 respondents. The research instruments were in the form of IMB Model questionnaires and medication adherence. Data analysis using Gamma tests.
Results: There was a significant association between personal motivation (p=0.001), social motivation (p=0.001), and behavioral skills (p=0.001) with medication adherence, whereas the information showed no significant association (p=0.639).
Conclusions: IMB Model-based health behaviors have a meaningful relationship with medication adherence in tuberculosis patients.

Keywords: Information Motivation Behavioral Skills (IMB) Model*;* Medication Adherence; Tuberculosis

Introduction

The percentage of Tuberculosis cases continues to increase every year and the obstacle is the lack of patient compliance in undergoing treatment. According to WHO data in 2021, it was stated that about 9.9 million people died (1). Based on data from the Ministry of Health in 2022, Indonesia dropped (9.2%) Tuberculosis cases. In Jambi Province, according to data from the Jambi Provincial Health Office, in 2022 the number of Tuberculosis cases found was 5,308 cases (2). Data from the Jambi City Health Office of Tuberculosis cases in 2023 2,356 cases of Tuberculosis in Jambi City (3).

One of the factors that causes the high number of Tuberculosis cases is the failure of healing in Tuberculosis patients, namely the lack of patient compliance in undergoing

treatment. Tuberculosis treatment aims to cure patients, prevent death, and avoid drug resistance. However, the long duration of treatment, coupled with the consumption of different types of medications and the side effects that appear, often make it difficult for patients to adhere to treatment (4).

Tuberculosis is a chronic infectious disease caused by bacteria Mycobacterium tuberculosis (5). Airborne pulmonary tuberculosis (airborne diseases). Tuberculosis germs are transmitted from person to person through droplets. Clinical symptoms of Tuberculosis include coughing up phlegm that lasts more than two weeks, coughing up phlegm that sometimes mixes with blood, chest pain, shortness of breath, weight loss, loss of appetite, fever, and night sweats (6). One of the problems with this disease is regarding the treatment program. The obstacle in the treatment of Tuberculosis is the lack of compliance from Tuberculosis patients to take Anti-Tuberculosis Drugs. Patient adherence to medication is an important factor in the success of a treatment (7).

One model that can explain the factors that influence health behaviors, including adherence in tuberculosis treatment, is the Information-Motivation-Behavioral Skills (IMB) Model. This model was developed by Fisher (1992) and emphasizes that health behavior is influenced by three main components, namely adequate information, strong motivation, and effective behavioral skills. The IMB model also postulates that information and motivation can be independent or interconnected. Individuals who have extensive knowledge are not necessarily motivated to change their health behaviors, while highly motivated individuals may not have received enough information regarding correct health practices. Based on this model, information and motivation can have a direct influence on behavior change if the skills required are not too complex. Thus, information, motivation, and behavioral skills are interrelated factors in supporting adherence and success in tuberculosis treatment, and are often the focus of various health promotion interventions (8).

The Putri Ayu Health Center was chosen as the research location because it has the highest number of Tuberculosis cases and the population of patients who have undergone the most treatment. Initial interviews with people with Tuberculosis show that there is a variation in understanding, motivation, and skills in undergoing Tuberculosis treatment. Some patients are aware of the importance of taking medication regularly, but there are still obstacles such as forgetfulness, side effects of medication, and lack of support and skills in managing medication.

Therefore, this research is important to provide empirical insights related to tuberculosis treatment adherence and contribute to the development of health promotion programs that focus on improving patient information, motivation, and skills.

Methods

This study is a research using a quantitative method with a cross sectional analytical approach conducted at the Putri Ayu Health Center from July to August 2025. The study population consisted of all patients with Tuberculosis who were undergoing treatment from January-July 2025 consisting of 48 respondents taken using the Total Sampling technique. Data were collected using 2 questionnaires, namely, The Life Windows Information Motivation Behavioral skills OAT Adherence Questionnaire (LW-IMB-OAQ) to assess health behaviors and the Medication Adherence Rating Scale (MARS) to assess medication adherence. The data were analyzed univariately to describe the characteristics of the respondents and Bivariate used the Gamma correlation test to examine the relationships between variables. Data processing is carried out using statistical software. This research received ethical approval from the Ethics Committee of the Faculty of Medicine and Health Sciences, University of Jambi.

Results

Univariate Analysis

Table 1. Characteristics of respondents by gender, occupation, education and age

Not	Characteristics of respondents	Frequency	%
Gender			
1	Man	34	70,83%
2	Woman	14	29,17%
Work			
1	Merchant	19	39,58%
2	IRT	9	18,75%
3	Laborer	9	18,75%
4	Farmer	5	10,42%
5	Student	3	6,25%
6	Unemployment	2	4,17%
7	Student	1	2,08%
Education			
1	Elemntary School	20	41,67%
2	Junior High School	15	31,25%
3	Senior High School	13	27,08%
Age			
1	Early adulthood	15	31,25%

2	Late adulthood	14	29,17%
3	Early elderly time	12	25%
4	Late teens	7	14,58%
	Total	48	100%

A total of 48 respondents participated in this study, the majority of respondents were men (70.83%), while women were only 29.17%. In terms of employment, most of the respondents were traders (39.58%), followed by IRTs and laborers (18.75%), and farmers (10.42%). Judging from the level of education, the majority of respondents were educated in elementary school (41.67%), followed by junior high school (31.25%) and high school (27.08%). In terms of age, the majority were in early adulthood (31.25%) and late adulthood (29.17%).

Table 2. Factor *Information Skills* Compliance with Taking Tuberculosis Medicine at the Putri Ayu Health Center

Information skills	**Frequency**	**%**
Good	47	97,92%
Enough	1	2,08%
Total	48	100%

Most of the respondents had *information skills* in the good category (97.92%). This shows that patients already have adequate access to information related to TB disease and its treatment.

Table 3. Factor Motivation Compliance with Taking Tuberculosis Medicine at the Putri Ayu Health Center

Personal Motivation	**Frequency**	**%**
Tall	45	93,75%
Low	2	4,17%
Keep	1	2,08%
Total	48	100%

The majority of respondents have *high personal motivation* (93.75%). Good personal motivation can encourage patients to be more disciplined in taking medication, despite obstacles in terms of side effects and duration of therapy.

Table 3. Factor *Social Motivation* Compliance with Taking Tuberculosis Medicine at the Putri Ayu Health Center

Social Motivation	**Frequency**	**%**
Tall	41	85,42%
Keep	6	12,5%
Low	1	2,08%
Total	48	100%

Most of the respondents had high *social motivation* (85.42%), showing that the support of family, health workers, and the surrounding environment plays an important role in increasing TB patient compliance.

Table 5. Factor Behavioral Skills Compliance with Taking Tuberculosis Medicine at the Putri Ayu Health Center

Behavioural skills	Frequency	%
Good	43	89,58%
Enough	5	10,42%
Total	48	100%

As many as 89.58% of respondents have good behavioral skills, meaning that patients are able to manage daily behaviors to support medication adherence, such as remembering medication schedules, overcoming side effects, and maintaining a healthy lifestyle.

Table 4. Compliance Level of Taking Tuberculosis Drugs at Putri Ayu Health Center

Medication adherence	Frequency	%
Tall	42	87,5%
Keep	3	6,25%
Low	3	6,25%
Total	48	100%

The majority of respondents showed a high level of compliance (87.5%), but there were still 6.25% with low compliance. This high compliance rate shows the effectiveness of education and monitoring efforts carried out by the Health Center.

Bivariate Analysis

Table 5. Relationship *Information Skills* Against Compliance with Taking Tuberculosis Drugs

	Score Information Skills	Medication Adherence Score	r	P value
Mean	9,73	8,77	0,07	0,639
Deviation hours	0,84	2,19		
Minimum	5	0		
Maximum	10	10		
95% confidence interval from Average	9,48 - 9,97	8,14 - 9,41		
Average ± Std.	9.73 ± 0.84	8.77 ± 2.19		

Bivariate analysis showed that there was no significant relationship between *information skills* and medication adherence (p = 0.639). This means that even if the respondents have good knowledge, it does not necessarily guarantee compliance. Other factors such as personal motivation and social support may be more dominant in influencing compliance behavior

Table 6. Relationship *Personal Motivation* Against Compliance with Taking Tuberculosis Drugs

	Motivational Skills Score	**Medication Adherence Score**	**r**	**P value**
Mean	24,38	8,77	0,7	<.001
Deviation hours	4,33	2,19		
Minimum	3	0		
Maximum	29	10		
95% confidence interval from Average	23,12 - 25,63	8,14 - 9,41		
Average ± Std.	24.38 ± 4.33	8.77 ± 2.19		

Based on table 8, there was a significant and strong relationship between personal motivation and compliance (r = 0.7; p < 0.001). This shows that the higher the patient's personal motivation, the higher the compliance in undergoing therapy.

Table 7. Relationship *Social Motivation* Against Compliance with Taking Tuberculosis Drugs

	Social Motivation Score	**Medication Adherence Score**	**r**	**P value**
Mean	11,58	8,77	0,73	<.001
Deviation hours	1,94	2,19		
Minimum	3	0		
Maximum	15	10		
95% confidence interval from Average	11,02 - 12,15	8,14 - 9,41		
Average ± Std.	11.58 ± 1.94	8.77 ± 2.19		

The results showed a significant relationship between *social motivation* and compliance (r = 0.73; p < 0.001). Social support, both from families and health workers, has proven to be very instrumental in increasing patient compliance.

Table 8. Relationship *Behavioral Skills* Against Compliance with Taking Tuberculosis Drugs

	Behavioral Skills Score	Medication Adherence Score	r	P value
Mean	23,42	8,77	0,74	<.001
Deviation hours	4,65	2,19		
Minimum	6	0		
Maximum	29	10		
95% confidence interval from Average	22,07 - 24,77	8,14 - 9,41		
Average ± Std.	23.42 ± 4.65	8.77 ± 2.19		

Based on table 10, there was a significant relationship between *behavioral skills* and compliance ($r = 0.74$; $p < 0.001$). This confirms that behavioral skills such as the ability to remember medication schedules, side effect management, and coping strategies have a profound effect on patient compliance.

Discussion

In this study, the data were obtained through the worker's characteristics. The table distribution is explained below as follows.

Respondent Characteristics

The results of the study found that the majority of those affected by TB at the Putri Ayu Health Center were men (70.83%). In terms of jobs obtained at the Putri Ayu Health Center, it is as a trader (39.58%). The level of education in TB patients at the Putri Ayu Health Center was found that many patients had their education up to elementary school (41.67%). TB patients at the Putri Ayu Health Center were found to be in vulnerable early adulthood (31.25%).

The Relationship of *Information Skills Factors* to Compliance with Tuberculosis Medication Compliance at Putri Ayu Health Center

The majority of respondents in this study showed that they had good information and knowledge about their diseases (97.92%). Although most of the respondents at the Putri Ayu Health Center already have a good level of information about tuberculosis treatment, there are still 2.08% of respondents with information scores in the adequate category. This shows that there are still a small number of patients who do not fully understand important

information related to treatment, especially about the side effects of the drugs taken, the mechanism of action of the drug, and the importance of knowing to repeat the medication from the beginning if you miss taking the medication. Lack of understanding in these aspects can have an impact on the patient's suboptimal compliance in undergoing therapy, because patients who do not know the consequences and correct procedures tend to be more at risk of drug withdrawal or non-compliance in the long term.

In line with the research of Susilawati et al(9), although knowledge is important, patient adherence is more influenced by other factors such as family support, access to services, economic conditions, and social stigma. Once basic information needs are met, non-information factors become more dominant. In the perspective of the IMB (Information, Motivation, and Behavioral Skills) Model, information is only one of the three pillars that shape behavior; Without motivation and skills, knowledge alone is not enough to drive compliance. This is reinforced by the research of Marta et al.(10), which suggests that a deep understanding of disease and treatment is more strongly related to compliance than just general knowledge, so the quality of information is more important than its quantity.

The Relationship of *Personal Motivation Factors* to Compliance with Tuberculosis Medication Compliance at the Putri Ayu Health Center

The majority of respondents in this study had a high level of self-motivation (93.75%). Although the majority of patients at the Putri Ayu Health Center have a high level of personal motivation, there are still a small number of patients with moderate (2.08%) and low (4.17%) scores. This indicates that there are patients who experience motivational barriers, especially related to worries about drug side effects, frustration because they have to undergo treatment for a long time, and worries about social stigma if the status of the disease is known. This condition reflects that psychological and social aspects are still factors that are quite influential on the patient's motivation in maintaining medication adherence. Patients with low motivation scores have the potential to be at higher risk of non-compliance, as fear, anxiety, and stigma can weaken their resolve to complete therapy.

Early Research et al.(11), found that patients who had positive motivation were much more compliant in undergoing treatment than those who were motivated low. This shows that even though patients know the importance of taking medication, adherence can only

be achieved when accompanied by strong internal motivation to heal Jun Edy Research(12), also supports this, where self-motivation has been shown to be a major factor in medication adherence in MDR TB patients. In this group of patients, the treatment was longer and the side effects of the medication were more severe, but the highly motivated patients were still able to complete the therapy. Furthermore, Putri et al(13), also found that motivation had a significant influence on TB patient adherence, although family support factors were also an element that strengthened patients' determination to comply

The Relationship of *Social Motivation Factors* to Compliance with Taking Tuberculosis Drugs at the Putri Ayu Health Center

The majority of respondents in this study had a high level of social motivation (85.42%). Although most of the patients at the Putri Ayu Health Center have high social motivation scores, there are still 12.5% of patients in the medium category and 2.08% in the low category. This shows that not all patients feel comfortable telling their close friends about their illness or getting social support from the surrounding environment. Low patient openness can be caused by shyness, fear of negative judgment, and concern about stigma from society. This lack of social support has the potential to reduce the patient's motivation to undergo treatment, as the success of tuberculosis therapy is not only determined by individual factors, but also requires moral encouragement and emotional support from those closest to them.

These findings are in line with the research of Warjiman et al.(14), which found that social motivation from the family had a significant influence on OAT adherence in TB patients. Family support helps patients maintain their personal motivation, because there are people close to them who always accompany them in the treatment process. A Survey by Wu et al.(15), also reinforces these findings by stating that PMO's support, which usually comes from family or close relatives, plays an important role in ensuring patients remain disciplined. This shows that social motivation is not only complementary, but rather an external factor that greatly determines the success of TB patients' compliance.

The Relationship of Behavioral *Skills Factors* to Compliance with Taking Tuberculosis Drugs at the Putri Ayu Health Center

The majority of respondents in this study had a high level of behavioral skills (89.58%). Although most of the patients at the Putri Ayu Health Center have good

behavioral skills, there are still 10.4% of patients with the sufficient category. This shows that a small percentage of patients do not fully have the practical ability to manage Tuberculosis treatment, both in dealing with drug side effects, maintaining continuity of drug acquisition, seeking information related to diseases and treatments, and in maintaining adherence to taking drugs according to the direction of health workers. In the perspective of the *Information–Motivation–Behavioral Skills* (IMB) model, behavioral skills are an important component that bridges information and motivation into real action. This means that even if the patient has good knowledge and is sufficiently motivated, without adequate behavioral skills, adherence to taking medication can be compromised.

This finding is in line with the research of Masyita et al.(16), found that patients' skills in remembering schedules and managing side effects were significantly related to TB treatment adherence. Research by Ratna et al(17), also confirms that patients who have practical strategies to overcome obstacles are more consistent in completing therapy than patients without strategies. Meanwhile, the study of Abdul et al.(18), showing that practical skills training, such as the use of alarms or medication records, is able to improve patient adherence in undergoing TB treatment.

Compliance Level of Taking Tuberculosis Drugs at Putri Ayu Health Center

The level of adherence to taking medication at the Putri Ayu Health Center is fairly high (87.5%). Although the majority of patients at the Putri Ayu Health Center showed adherence to taking drugs in the high category, there were still 6.25% of patients in the medium category and 6.25% in the low category. This shows that a small number of patients still have behaviors that are at risk of lowering compliance, such as being careless in taking medication, stopping treatment when they feel that their body condition has improved, stopping taking medication because they feel that their body condition is getting worse, and the appearance of subjective complaints such as feeling strange, tired, or sluggish after taking medication. These factors reflect the existence of challenges both psychologically and physically that can affect the patient's consistency in undergoing long-term therapy. If left untreated, this group of patients with moderate and low adherence is at risk of treatment failure, drug resistance, and even disease recurrence.

Although the adherence rate of TB treatment is relatively high, long-term treatment often causes saturation and decreased patient motivation. The length of therapy as well as

the side effects of the medication can cause patients to stop taking OAT prematurely. Who's Who & Who's Who(19) shows that this condition lowers the patient's morale so that social support and intensive monitoring from health workers are needed. Adherence at the beginning of treatment does not always guarantee adherence to the end, so the patient's motivation and skills need to be maintained on an ongoing basis. Forms of non-adherence such as skipping doses, stopping when symptoms improve, or absent control can decrease the effectiveness of therapy and trigger MDR-TB. Pitri et al(20), confirming that low motivation increases the risk of non-compliance, so it is important for healthcare workers to understand the causes and design more effective interventions.

The Relationship of *Information, Motivation And Behavioral Skills* (IMB Model) Based Health Behavior to Tuberculosis Drug Compliance in Tuberculosis Patients at Putri Ayu Health Center

The results showed that TB patients at the Putri Ayu Health Center with adequate information, strong motivation, and good behavior skills tended to be more obedient to undergo OAT therapy. A good knowledge of the disease and treatment helps patients understand the importance of discipline in therapy, in line with the research of Vena et al.(21), which states that knowledge is significantly related to motivation and obedience

Motivation, both personal and social, also plays an important role. Patients with high recovery drive and family or health worker support are more consistent in undergoing long-term treatment. This is in line with the findings of Uki Susana et al(22), and Nike Puspita et al(23), which shows that positive motivation increases compliance. Family support has proven to be an important factor, as explained by Winfrida et al.(24), that emotional support and family mentoring improve patient compliance.

In addition, behavioral skills *(behavioral skills)* such as the ability to manage medication schedules, manage side effects, and maintain communication with health workers also improve compliance. Research by Hafizil et al(25), also shows that self-efficacy or self-confidence plays a big role in helping patients cope with long-term treatment challenges. Thus, the success of TB therapy relies heavily on the synergy between the patient's information, motivation, and behavioral skills.

Conclusion

Based on the results of the research, several key findings were obtained. Most of the respondents were male (70.83%), working as traders (39.58%), having completed primary school education (41.67%), and were in the category of early adulthood (31.25%). Data analysis showed that information skills did not have a significant relationship with medication adherence (p = 0.639). This suggests that the patient's level of knowledge about the disease and its treatment is not sufficient to warrant adherence behavior in the absence of support from other factors. In contrast, personal motivation and social motivation showed a significant relationship with medication adherence (p = 0.001). Patients who have a strong internal motivation and receive social support from their families and health workers tend to be more obedient in undergoing treatment. In addition, the behavioral skills factor was also significantly related to medication adherence (p = 0.001), where patients who had the ability to manage time, cope with medication side effects, and actively communicate with health workers showed higher levels of adherence. These findings show that motivation and behavioral skills are more dominant factors in influencing medication adherence than information factors. Overall, this study confirms that health behaviors based on the IMB model have an important role in improving compliance with tuberculosis treatment. Therefore, health interventions should not only focus on providing information, but also be directed at strengthening the motivation and behavioral skills of patients to achieve optimal therapeutic success.

References

1. World Health Organization. Global Tuberculosis Report. Who is Geneva. Geneva: 2021
2. Darwis R, Rosmita A, Fery K, Amalia D, Nini N, Heriyantomi, et al. Health Profile of Jambi Province in 2022. Health Profile of Jambi Province in 2022. 2023;01:297.
3. Jambi City Health Office. Jambi City Tuberculosis Case Data. 2023
4. Amalia D. Compliance Level of Taking Anti-Tuberculosis Drugs in Outpatient Adult Pulmonary TB Patients at the Dinoyo Health Center. 2020
5. Natalia Yobeanto Tls. Resistance Pattern of Mycobacterium Tuberculosis Germs to First-Line Anti-Tuberculosis Drugs. 2022; 9(5):356–63.
6. Agustina I, Santoso W, Dewi Cpld. Overview of the Implementation of Prevention of Pulmonary Tb Transmission in Patients with Pulmonary Tb at the Kupang Jetis

Health Center, Mojokerto Regency. 2022

7. Amran, R., Abdulkadir, W., & Madania M. Compliance Level of Anti-Tuberculosis Drug Use in Patients at the Tombulilato Health Center, Bone Bolango Regency. Indonesian J Pharm Educ. 2021
8. Manurung N. Information Motivation Behavior (Imb) in Improving Compliance of TB Patients: A Systematic Review. Elisabeth Heal J. 2021; 6(2):132–6.
9. Susilawati Nm, Therik Ba. Factors Influencing the Incidence of Pulmonary TB in Naibonat Village, Kupang Regency in 2022. J about heal reseaarch. 2022; 5(1):62–6.
10. Halim M, Nofrika V, Widiyanto R, Puspitasari D. The Relationship between Knowledge Level and Compliance with Anti-Tuberculosis Drugs (Oats) in Pulmonary TB Patients. Maj Farm. 2023; 19(1):24.
11. Nopianti D, Frans Y, Yulianti Y. The Relationship between Family Support and Motivation and Medication Compliance in Tuberculosis Patients in the Working Area of the Cikembar Health Center, Sukabumi Regency. J Heal Res Sci. 2022; 2(02):67–75.
12. Slap Jess. The relationship between knowledge and motivation and medication adherence in pulmonary tuberculosis patients at Malahayati Hospital Medan. J Indonesian Heal Sci Journal. 2024; 9(1):17–27.
13. Fadhilah N. Key Factors That Affect Self-Efficacy in Completing Tuberculosis Treatment. J Nurs Heal. 2025; 3(1):1–14.
14. Warjiman W, Berniati B, er Unja E. The Relationship of Family Support to Medication Compliance of Pulmonary Tuberculosis Patients at the Sungai Bilu Health Center. J Insa Asylum Nursing. 2022; 7(2):163–8.
15. Wijayanti W, Pamangin Lom, Wopari B. The Relationship of Family Support as a Drug Swallowing Supervisor (PMO) with Medication Compliance of Tuberculosis Patients. J Heal Sci Gorontalo J Heal Sci Community. 2023; 7(2):240–51.
16. Haerianti M, Nur Fadilah, Junaedi Y, Indrawati. The Relationship of Self-Efficacy and Family Support to Medication Compliance of Pulmonary Tb Patients in the Working Area of the Totoli Health Center, Majene Regency. J Heal Educ Lit. 2022; 4(2):86–93.
17. Minggarwati R, Juniarti N, Haroen H. Intervention in tuberculosis patients to

improve compliance and self-management. 2021; 6:167–86.

18. Rahem A, Impian Sukorini A, Priyandani Y, Sulistyarini A, Hermansyah A, Setiya Budiatin A, et al. The Effect of Tuberculosis Response Training and Medication Assistance on the Knowledge of Village Health Cadres in Bluto District. J Insa Farm Indonesia. 2024; 7(3).
19. Who's Who, Who's Who, Who's Who, Who's T Factors that affect medication adherence in people with pulmonary tuberculosis. Comphi J Community Med Public Heal Indonesia J. 2024; 4(2):166–73.
20. Yulita P, Ekawati D, Priyatno Ad, Gustina E. Analysis of Compliance with Pulmonary Anti-Tuberculosis Drugs in Tuberculosis Patients in Empat Lawang Regency. 2025; 8(1).
21. Mellyana V, Nurinda E, Fauzi R. The Relationship of Knowledge to the Compliance Level of Pulmonary Tuberculosis Patients at the Binangun Cilacap Health Center. Inpharnmed J (Indonesian Pharm Nat Med Journal). 2021; 5(2):1.
22. Samory Us, Yunalia Em, Suharto Ips, Nurseskasatmata S. Factors related to patient adherence to pulmonary tuberculosis treatment at the Urei-Faisei Health Center (Urfas). Sci, J., 2022; 2(1):37–45.
23. Alwi Np, Fitri A, Ambarita R. The Relationship of Motivation with Compliance with Taking Anti-Tuberculosis Drugs (Oats) in Tuberculosis Patients. J Abdurrab Nursing. 2021; 5(1):63–6.
24. Letmau W, Pora Dy, Sadipun et al. The Relationship between Family Support and Compliance with Pulmonary Tuberculosis Paisen Medication Compliance at Kalabahi Hospital, Alor Regency. J Nursing and Health Masy. 2023; 10(1):1–9.
25. Arzit H, Asmiyanti, Erianti S. The Relationship of Self Efficacy with Medication Adherence in Pulmonary TB Patients. J Med Hutama. 2021; 2(02):429–38.