

## The Relationship Between Occupational Therapy Activity and The Level Of Creativity in Schizophrenia Patients at the Liquiça Inpatient Health Center in The Municipality of Liquica (2025).

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### Abstract

**Introduction:** Someone who suffers from mental disorders, such as schizophrenic patients, experiences personality disorders, such as deviations of thoughts, perceptions and so on emotion. One method of treatment therapy in schizophrenic patients is the occupational therapy method. Occupational therapy is the cure or recovery of the individual with the analysis and use of activities that aim according to the needs of each individual.

**Research Objective:** This study was to determine the relationship between occupational therapy activity and creativity level in schizophrenic patients at the Community Health Center of Liquiça.

**Research Methodology:** This type of investigation is a quantitative investigation with a research design using a correlative descriptive design. The research sample consisted of 80 schizophrenic patients. Samples were collected based on the bed occupancy rate of patient visits after occupational therapy activity. Research instruments derived from the number of consultations after occupational therapy. Evaluation of creativity derived from the questionnaire. In the analysis of the research data using the Chi-square test, covariance, linear regression and correlation coefficient.

**Discussion Results:** It is based on the analysis of the test with statistical covariance, linear regression and Pearson's correlation coefficient between the variables (independent and dependent) the value  $r = 0.2172$  with a percentage of 4.7% or 5%, so the value it presents has a relationship between occupational therapy activity and the level of creativity cited by (Tilman CB., et al, 2025).

**Conclusion:** Between two variables (independent and dependent) there is a positive relationship between occupational therapy activity and the level of creativity.

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**Keywords:** Occupational Therapy; Activity; Creativity; Schizophrenic patients.

## Introduction

The process in today's life, it presents several areas that are: economic, cultural, technological and political area that has happened in the world also includes in our country of Timor-Leste. In these life progressions give their influence directly and indirectly to the development of human life and life will be very difficult in the diverse complexity and also increases the number of the psychosocial person because the world rarely has the change in its globalization, and the person also faces the problem like depression or burnout. According to data from the World Health Organization (WHO, 2024; cited by Tilman CB., et al, 2025), schizophrenia affects approximately 24 million worldwide, the highest rate affecting 222 people (0.45%) among adults. It is not as common as many other mental disorders. Onset is most often during late adolescence and twenties, and onset must happen earlier among males than among females. With the epidemiology studies in 2018 states that the prevalence rate of schizophrenia in Indonesia is 3% to 11%, experiencing a 10-fold increase compared to the 2014 data, with a prevalence rate of 0.3% to 1%, usually occurring in age and 18 to 45 years.(2022) (Sarwin, Arman, & Gobel, 2022)

Statistical data from the Ministry of Health of Timor-Leste (MdS-TL, 2023), reports that Timor-Leste with mental disorder, even more major problems in public health, in 2021 registered 30 cases, 2022 registered 56 cases and in 2023 registered 1040 cases. These cases were treated externally and internally at the Guido Valadares National Hospital (HNGV) in Dili, in the cases he always says increases every year, because the factors that influence more strongly than the economic, cultural and

technological factors. In this number, mental disorders often caused by disturbance, schizophrenia and depression, which result in suicide in the area that makes them angry. According to the prevalence of data from the Health Service report in the Municipality of Liquiçá for 2021, it reports that the mental disorder in Liquiçá registered is 861 cases (337 men and 484 women). Therefore, 399 cases have been found to be treated at the health facility where they were composed of 174 men and 225 women. From January to May 2022, approximately 58 cases (31 men and 27 women) were registered. The cases of 58 people had already found treatment (31 men and 27 women). In these cases, the mental disorder happens mostly to men than to women, according to the date of researching.

The National Strategic Plan for the Health Sector (PENSS) 2011-2030, had a good strategy to solve the problems of the health sector and to improve the social economy of the country and also improve national peace and stability. The national health system represents the interdependent elements that has been collaborated with health to give the best to communities facing various problems such as the psychosocial environment. Occupational therapy is characterized as the health profession that promotes the development, treatment and rehabilitation of individuals or groups in need of physical, psychological and/or social care, in order to expand their performance and social participation, through instruments that involve specific activities to help people achieve their maximum level of function and independence. The occupational therapeutic process can be developed both individually and in a group and/or occupational way and it is necessary to consider the patient's degree of commitment and

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motivation, as well as their predominant symptoms and the time of evolution of the disease, in addition to their ability to adapt, way of relating, ability to express themselves verbally, among other elements to have the idea of which therapeutic process would be more appropriate to the needs of the subject, such as, also, concerning its limitations. (Salineiro, Arruda, & Alves, 2002)(Bona & Souza, 2020)

The Community Mental Health project develops in the Community Health Center of Liquiçá, aims at the implementation of a Community Mental Health network articulated with basic family health actions in the municipality, with the inclusion of mental health promotion actions, thus envisioning the implementation of new models for the prevention of the individual's psychic suffering, of the family and the community. The therapeutic relationship is a relationship of more than two people (patients/family and friends) who performed an interaction of personality perception of inactivation to help solve problems and achieve goals (Tilman CB, et al., 2025). Based on a preliminary study at the Community Health Center of Liquiçá, on July 4, 2024, the number of people with mental disorders were caused by the economic, cultural, technological, and political with the primary data are 97 patients with men 47 patients and women 50 patients and the secondary data are 108 patients with men 67 patients and women 41 patients. Therefore, the primary and secondary data that participated in occupational therapy, and this number of patients doing occupational therapy differs, because some patients stay at home because they do it in patients at home and other patients doing it in the Mental Health Center. Occupational therapy at the Community Health Center of Liquiçá applied to schizophrenia can help in diagnosis, therapy, evaluation

and rehabilitation. It can be done by observing the patient while doing an activity, by interacting with the group, and by evaluating the results of their work. Through this activity, human beings can interact with their environment, learn, experience a skill or knowledge, satisfy a physical and emotional need, express feelings and develop their talents, the patient will be taught to solve the problem in the patient's way taught to discuss with friends after complementing an activity, with the activity, it is expected that the patient will be able to communicate better to express himself in his suffering and expect that there will be better living conditions cited by (Tilman CB., et al, 2025). (Barros, 2010) (2022)

### **Research Objectives:**

**General Objectives/ Aims:** To determine "a relationship between occupational therapy activity and the level of creativity in schizophrenia patients at the Liquiçá Inpatient Health Center, 2024.

### **Specific Objectives:**

1. To determine the performance of occupational therapy in schizophrenic patients.
2. Discover creativity in schizophrenic patients.
3. To determine the relationship between occupational therapy activity and the level of creativity in schizophrenic patients.

### **Theoretical Framework**

The term schizophrenia derives from the Greek *schizo* (divide) and *phrenon* (mind) which means unfolded, divided mind, that is, a fragmentation of mental functions, where the subject finds himself with a disassociated thought referring to reality. Schizophrenia causes distorted and bizarre thoughts, perceptions, emotions, movements, and behavior. Schizophrenia is a complex psychiatric

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disorder that influences virtually every aspect of functioning, from psychological well-being to social adaptation to health and self-sufficiency. Schizophrenia is a serious chronic mental illness that causes changes in perception, thoughts and behaviors and is characterized by positive, negative and cognitive symptoms. (Bona & Souza, 2020) (Videbeck, 2020)(Antony & Barlow, 2020) (Vasconcelos, 2015)

The signs and symptoms of schizophrenia are usually grouped into three main types. (Antony & Barlow, 2020)

- a. Positive symptoms refer to sensory experiences, thoughts, and behaviors present in people with schizophrenia, but typically absent in individuals without psychiatric illness.
- b. Negative symptoms are defined by the absence or decrease of behaviors and emotions that are normally present in people without a psychiatric disorder.
- c. Cognitive symptoms refer to deficiencies in the ability to attend.

### Classification of schizophrenia

1. Paranoid schizophrenia: characterized by grandiose and persecutory delusions and hallucinations (feeling of being a victim or being spied on) and, occasionally, excessive religiosity (delusional religious focus) or hostile and aggressive behavior.
2. Disorganized schizophrenia: characterized by Hypo modulated or inappropriate affect, incoherence, loose associations, and extremely disorganized behavior.
3. Catatonic schizophrenia: characterized by marked psychomotor disturbance, absence of movement, or excessive motor activity. Motor immobility may manifest as catalepsy (waxy

flexibility) or stupor. Excessive motor activity seems to have no purpose and is not influenced by external stimuli. Other factors include extreme negativism, mutism, quirks of voluntary movements, echolalia, and ecopraxia.

4. Undifferentiated schizophrenia: characterized by mixed (or other) schizophrenic symptoms, along with disturbance of thought, affect, and behavior.
5. Residual schizophrenia: characterized by at least one previous, though not current, episode; social withdrawal; flat affect; and derailment of associations.

The Occupational Therapist is a professional who has his work focused on the field of human activity, contemplating essential actions related to self-care, leisure, education and work (Barros, 2010).

Occupational therapy is characterized as the health profession that promotes the development, treatment and rehabilitation of individuals or groups in need of physical, psychological and/or social care, in order to expand their performance and social participation, through instruments that involve specific activities to help people achieve their maximum level of function and independence. Occupational Therapy is defined as the therapeutic use of occupations of daily life with people, groups or populations with the aim of reinforcing or enabling participation.(Salineiro, Arruda, & Alves, 2002) (Gomes, Teixeira, & Ribeiro, 2021)

In some contexts, the occupational therapist initially conducts a screening to determine the need for a thorough occupational therapy evaluation, this process may include:

1. Review of the client's history (e.g. medical, health, social or academic records),
2. Consultation with an interprofessional team or

- 
- the team that referred you, and
3. Use of standardized or structured screening instruments.

Occupational therapy process is the provision of patient-centered occupational therapy services. The three parts of the process include:

1. Evaluation: The evaluation process is focused on determining what the customer wants and needs to do; determine what the customer can do and has done; and identify enabling factors and barriers to health, well-being and participation.
2. Intervention to achieve (treatment) and the intervention process consists of services provided by occupational therapists in collaboration with patients to facilitate engagement in occupation related to health, wellness, and achievement of established goals consistent with the various service delivery models. In the second process, namely for intervention to achieve in three phases in the following:

- Treatment plan formation (intervention plan) A plan that is built on the basis of the results of the assessment process and describes the occupational therapy approach and the type of intervention selected for by the patient.
- Implementation of planned therapy in the mental health treatment guide.

As a process of ability to influence the relationship between job performance or activities to support participation.

- Review the therapy given and then evaluate it An ongoing process to evaluate and review previous intervention plans, the effectiveness of their implementation, and the degree of progress toward the final goal.

- Outcomes and outcomes emerge from the Occupational Therapy process and describe the goals that patients can achieve through the Occupational Therapy intervention.

The activities foreseen in occupational therapy can be in the form of crafts, drawing, painting, dance, music, theater, recreation, health promotion, activities of daily living (ADL). These activities are therapeutic in nature and prepare patients for the community or referred for rehabilitation. This activity is carried out individually or in a group. The role of occupational therapy and occupational therapy is extremely important in the patient's recovery, as it works with the individual's functionality, works on daily activities such as combing hair, brushing teeth, eating, wearing clothes, as well as physiotherapy with the existing activity movement mentioned by (Tilman CB., 2025). (Bona & Souza, 2020)

### Research Methodology

This type of research is quantitative research with a Correlative Descriptive research method, namely a research project that aims to find a relationship between two variables. While the research method used is Cross Sectional, that is, the research that aims to study the relationship, as well as the influence between the independent variable and the dependent variable, where all variables are observed only at the same time. Researcher in taking this sample used a Stratified random sampling technique with total sample consisted of 80 schizophrenic patients. We used to collect with the questionnaire and the data collection source in this study includes primary data and secondary data. Analyzing the data uses the Statistical Package for the Social Sciences (SPSS) computer program version 24.

## Discussion Results

Table 4.1. Frequency distribution of the Sample Gender.

Sex.	Frequency (n)	Percentage (%)
F	43	54
M	37	46
Total	80	100

Based on data collection, the total sample of 80 respondents was composed of 43 or (54%) female people and 37 or (46%) male people.

Table 4.2 Frequency distribution of sample age.

Age	Female		Male		Total	
	$f_F$	(%)	$f_M$	(%)	$f_a$	(%)
19 - 27	3	3,8	10	12,5	13	16,3
28- 36	6	7,5	8	10	14	17,5
37- 45	11	13,8	2	2,5	13	16,3
46- 54	12	15	5	6,3	17	21,3
55- 63	3	3,8	5	6,3	8	10
64- 72	4	5	4	5,0	8	10
73- 81	1	1,3	3	3,8	4	5
82- 90	3	3,8	0	0	3	3,8
<b>Total</b>	<b>43</b>	<b>54</b>	<b>37</b>	<b>46</b>	<b>80</b>	<b>100</b>

It is noted in the data collection of the respondents starts with 19 to 90 years of age in the majority that collects with 17 (21.3%) people aged between 46 and 54, with the 28-36 age 14 (17.5) people and 19 -27/37-45 age with 13 (16.3%) people.

Table 4.3 Type of variable, scale, total number of question respondents.

Variable Type	Independent Variable	Independent Variable
Total	80	80
Total questions	15	7
Symbol	X (TO)	Y (NC)
Scale	Ordinal	Ordinal
	4,3,2,1	4,3,2,1

Based on this table 4.3, each two variables have 22 questions with independent variable 15 questions and dependent variable 7 questions uses with ordinal scale and Likert scale.

Table 4.4 Count of the possible values obtained from the questionnaires.

Counting of values or scores		
Scale	X (TO)	Y (NC)
4	60 (=4x15)	28 (=4x7)
3	45 (=3x15)	21(=3x7)
2	30 (=2x15)	14 (=2x7)
1	15 (=1x15)	7(=1x7)
Value: Scale from 1 to 4	Value: Scale from 15 to 60	Value: Scale from 7 to 28

It can be seen from this table 4, the values of the school (1 to 4) have obtained different maximum and minimum values in the variable X (it is from 15 to 60) and variable Y (it is from 7 to 28), I need to level (transform the values) of X and Y, in the research application mechanism.

Table 4.5 Counting of conversion values.

Scale	To (X)	NC	Convert	NF (X)	NF(Y)
4	60	28		<b>10 (=60/6)</b>	<b>10 (=28/2.8)</b>
3	45	21		<b>7.5 (=45/6)</b>	<b>7.5 (=21/2.8)</b>
2	30	14		<b>5 (=30/6)</b>	<b>5 (=14/2.8)</b>
1	15	7	<b>2.5 (=15/6)</b>	<b>2.5 (=7/2.8)</b>	

Table 4.6 Summary of Count Values Before and After Conversion

Aspects	Symbol	Example	Observation					
			Total	Average	Variance	Standard deviation	Max	Min
Responder	$R_i ; i = 1, 2, \dots, R_{02}$	$R_{01} ; \dots ; R_{02}$	27	34,0	26,8	5,1	4,4	2,4
Before	$X_i$	31; 33; ...; 41.	27	34,0	26,8	5,1	4,4	2,4
	$Y_i$	15; 14; ...; 11.	10	12,7	1,9	1,4	1,6	1,0
Converted	$X_i$	5; 6; ...; 5.	46	5,8	0,7	0,8	7,0	4,0
	$Y_i$	5; 5; ...; 4.	36	4,6	0,3	0,5	6,0	4,0
			Covariance (X, Y) = $S_{xy} = 0.1025$					



Table 4.7 Frequency Distribution of Variables X and Y.

Score (Score Values)	Frequencies (People)	
	FX	Fm
V1=4	3	38
V2=5	32	40
V3=6	27	2
V4=7	18	0
<b>Total</b>	$\Sigma(F_x) = 80$	$\Sigma(F_y) = 80$

Table 4.8 The normality test of variable X (Occupational therapy)

Bound		Area		Frequency		$\frac{(O_i - E_i)}{E_i}$	$\left(\frac{(O_i - E_i)}{E_i}\right)^2$
Xi	Zi = $\frac{(X_i - \bar{X})}{S_x}$	Curve Limit	Intervale	Expectation (Hey)	Note (Hi)		
3,5	-2,88	0,498					
			0,0496	3,968	3	-0,2439516	0,0595124
4,5	-1,63	0,4484					
			0,3004	24,032	32	0,3315579	0,1099307
5,5	-0,38	0,148					
			0,4586	36,688	27	-0,2640645	0,0697301
6,5	0,88	0,3106					
			0,1728	13,824	18	0,3020833	0,0912543
7,5	2,13	0,4834					
<b>Total</b>					$\Sigma(F_x) = 80$	$X^2_{Calculate} =$	0,330427469

The criterion of the test is as follows:

$$\begin{cases} H_o & : Se X^2_{calculate} \leq X^2_{table}; \text{ the sequency normal data} \\ H_a & e X^2_{calculate} > X^2_{table}; \text{ the non sequencies normal data} \end{cases}$$

To obtain  $X^2_{table}$  ; determines the level of significance ( $\alpha$ ; degree of freedom gl = for is total class (in this case, therefore, gl = 4-1=3. Query in the Chi-Square table (see  $\alpha = 5\%c - 1; cc = 4$ . appendix 9. Table Chi Square) will get. Like this. It concludes that the data of variable X follow the normal distribution (Accepted).  $X^2_{table} = 7,8147 X^2_{calculate} = 0,3304 \leq X^2_{table} = 7,8147 H_o$

Table 4.9 The normality test of variable Y (Level of Creativity)

Bound		Area		Frequency		$\frac{(O_i - E_i)}{E_i}$	$\left(\frac{(O_i - E_i)}{E_i}\right)^2$
Yi	Zi = $\frac{(Y_i - \bar{Y})}{S_y}$	Curve Boundary	Intervale	Expectation (Hey)	Observation (Hi)		
3,5	-2,00	0,4772					
			0,4772	38,176	38	-0,00461023	2.12542 (E-05)
4,5	0,00	0	0				
			0,4772	38,176	40	0,047778709	0,002282805
5,5	2,00	0,4772					
			0,0228	1,824	2	0,096491228	0,009310557
6,5	4,00	0,5					
<b>Total</b>					$\Sigma(F_y) = 80$	$X^2_{Calculate} =$	0,011614616

The criterion of the test is as follows:

$$\begin{cases} H_0 & : Se X_{calculate}^2 \leq X_{table}^2 ; \text{the sequency a normal data} \\ H_a & e X_{calculate}^2 > X_{table}^2 ; \text{the non sequency of normally data} \end{cases}$$

To obtain  $X_{table}^2$  ; determines the level of significance ( ; degree of freedom gl = for is total class (in this case, therefore, gl = 3-1=2). Query in the Chi-Square table (see appendix 9. Chi Square Table) will

$\alpha = 5\%c - 1; cc = 3. X_{table}^2 = 5,9915. X_{calculate}^2 = 0.0116 \leq X_{table}^2 = 5,9915$  like this. It concludes that the data of variable Y follow the normal distribution (Accepted).  $H_0$

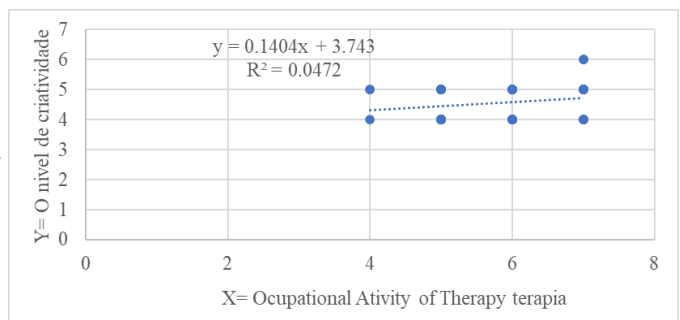
The next analysis will be to answer the question "is there a relationship between the variables we have (in this case X and Y)?" For this, the covariance of two variables, the linear regression of X and Y, and Pearson's correlation coefficient ( ) will be summarized in the following table.  $R^2$

Table 4.10 The relationship between the variables (X and Y)

Type of relationship analysis between variables (X and Y)		
Covariance = Coef. (X, Y)	Linear regression $\hat{Y} = a + bX$	Coef. Parsons correlation $r = \frac{S_{xy}}{S_x \cdot S_y}$
0.1025 > 0, this means there is a positive relationship between variables.	$y = 0.1404x + 3.743$ b= 0.1472 > 0, this means that there is a positive relationship between the variables of X and Y.	$r = 0.2172 = 0.2172. > 0$ $r^2 = =0.0472$ $(0,2172)^2$ It means there is a right correlation of 4.72% between the variables of X

The relationship between variables of (X and Y), with the covariance value 0.1025 > 0, the coefficient b= 0.14040 of the linear regression equation and Parsons' correlation coefficient r = 0.2172 > 0, all this means that there is a positive relationship between the variables of (X and Y). The relationship between the variables is more detailed in linear regression.

Figure 4.1. Relationship between variables X and Y with linear regression.



### Conclusion

Based on the results of the research and discussion in the previous chapter that the researcher takes the form; Patients with schizophrenia actively participate with the activity of occupational therapy and change of thinking to create a good in the family and in society, so patients with mental disorder always have a good relationship with families and society in the Liquiçá Administrative Post of the Municipality of Liquiçá Timor-Leste cited by (Tilman CB., et al, 2025).

### References:

1. Antony, M. M., & Barlow, D. H. (2020). Handbook of Assessment and Treatment Planning for Psychological Disorders (3rd ed.). London-New York: The Guilford Press.



2. Azizah, L. M., Imran, Z., & Amar, A. (2016). Buku ajar keperawatan kesehatan jiwa teori dan aplikasi praktik klinik. Yogyakarta, Yogyakarta: Indomedia Pustaka.
3. Barros, M. M. (2015). Occupational therapy at the Psychosocial Care Center-CAPS of Sobral, Ceará. *Keto Magazine*, 62.
4. Bona, A. C., & Souza, R. C. (2020). Contribution of art therapy in the treatment of people with esuizophrenia spectrum disorder from the perspective of psychology. *Psychology-Shark*, 1-30.
5. Gomes, M. D., Teixeira, L., & Ribeiro, J. (2021). *Framing the Practice of Occupational Therapy: Domain & Process* (4th ed.).
6. Kondriati, N. (2014). Pengaruhi dukung sosial terhadap respon stress psikologi pada pasien hipertensi di Yogyakarta, indonesia dan kode, Jepang. Skripsi. Yogyakarta: Program Studi Ilmu Keperawatan Fakultas Kedokteran Universitas Gadjah Mada.
7. Matt, G. E., & Dean, A. (2013). Social support from friends and psychological distress among elderly persons: Moderator effects of age. *Journal of health and social behavior*, 34 (3), 187-200.
8. Pereira, M. A. (2017). Psychosocial rehabilitation in mental health care: strategies under construction. *Latin American Nursing School*, 15 (4), pp. 658-664.
9. Salineiro, A. L., Arruda, J. B., & Alves, A. M. (2002). The Contribution of occupational therapy and hipuotherapy in the rehabilitation of schizophrenia in the initial phase. *Multitemas* (25), 76-92.
10. Sarwin, M., Arman, A., & Gobel, F. A. (2022). Faktor Risiko Kejadian Skizofrenia di Wilayah Kerja Puskesmas Malangke Barat Kec. Malangke Barat kab. Luwu Utara tahun 2022. *Journal of Muslim Community Health*, 4 (2), 183-192.
11. Tilman, C. B., Gaio, E. G., Noronha, H., Araújo, A. N., Guterres, A. P., & Deus, E. d. (2022). The Therapeutic Relationship Nurse/ Client/Family In Nursing Care In a Surgery Service. *American Journal of Medical and Clinical Research & Reviews*, 1 (1), 1-9 official site publications <https://www.ajmcrr.com>
12. Tilman, C.B., Ximenes, J. D., de Carvalho, J. G., Fernandes M. C., Belo, O. S., Pinto, J. (2022). Dengue Fever Based on Epidemiological Situation: Current Outbreak in Timor-Leste on January 2020 Until February 2022. *Nursing & Primary Care*. 2022; 6 (5), 1-5, official site publications <https://www.scivision.pub.com>
13. Vasconcelos, G. S. (2015). Reversal of schizophrenia-like behavioral symptoms and ketamine-induced neurochemical changes by the administration of alpha-lipoic acid alone and combined with clozapine in mice. Master's Dissertation in Pharmacology, Federal University of Ceará, Pharmacology, Faculty of Medicine, Fortaleza.
14. Videbeck, S. L. (2020). *Psychiatric-Mental Health Nursing* (8th ed.). New York: Wolter
15. Villar, V. C., Martins, M., & Rabello, E. T. (2023). Quality of care and patient safety: the role of patients and families. *Saúde em Debate*, 46 (135), 1174-1186.
16. WHO. (2022). Schizophrenia. Retrieved on September 22, 2022, from <https://www.who.int/news-room/fact-sheets/detail/schizophrenia>