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Influence of functional health literacy on adherence to antidepressant treatment

Influência do letramento funcional em saúde na adesão ao tratamento com antidepressivos

Influencia de la alfabetización funcional en salud en la adherencia al tratamiento con antidepresivos

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ABSTRACT

Objective: To verify the influence of patients' level of functional health literacy on adherence to antidepressant treatment.
Method: Cross-sectional study, carried out in pharmacies of the Municipal Health Department of Marília-SP, in 2020/2021. The functional literacy questionnaire verified the numerical and interpretative skills of patients, in the face of texts related to the health area. The adherence to the treatment was verified using the Morisky therapeutic adherence scale, and the data were analyzed by Anova-one-way and Kruskal-Wallis tests.
Results: A total of 150 patients participated in the study, most of them showed failures in adherence and an inadequate level of functional health literacy. However, there was no correlation between functional health literacy and treatment adherence.
Conclusion: Although no correlation was found between the variables, there is a need for greater investments in terms of adherence to the treatment, with strategies that consider the level of functional health literacy in these patients.
Keywords: Health literacy. Antidepressive agents. Medication adherence.

RESUMO

Objetivo: Verificar a influência do nível de letramento funcional em saúde dos pacientes na adesão ao tratamento com antidepressivos.
Método: Estudo transversal, realizado nas farmácias da Secretaria Municipal de Saúde de Marília-SP, em 2020/2021. O questionário de letramento funcional verificou as habilidades numéricas e de interpretação dos pacientes, diante de textos relacionados à área de saúde. A adesão ao tratamento foi verificada pela escala de adesão terapêutica de Morisky, e os dados foram analisados por Anova-one-way e teste de Kruskal-Wallis.
Resultados: Participaram do estudo 150 pacientes, cuja maioria apresentou falhas na adesão e nível inadequado de letramento funcional em saúde, entretanto, não houve correlação entre letramento funcional em saúde e adesão ao tratamento.
Conclusão: Embora não tenha sido encontrada correlação entre as variáveis, há a necessidade de maiores investimentos em relação à adesão ao tratamento, com estratégias que considerem o nível de letramento funcional em saúde, nestes pacientes.
Palavras-chave: Letramento em saúde. Antidepressivos. Adesão à medicação.

RESUMEN

Objetivo: Verificar la influencia del nivel de alfabetización funcional en salud de pacientes en la adherencia al tratamiento con antidepresivos.
Método: Estudio transversal, realizado en farmacias de la Secretaría Municipal de Salud de Marília-SP, en 2020/2021. El cuestionario de alfabetización funcional verificó las habilidades numéricas de los pacientes y su capacidad para interpretar textos relacionados con la salud. La adherencia al tratamiento se verificó mediante la escala de adherencia terapéutica de Morisky. Los datos se analizaron mediante ANOVA-one-way y test de Kruskal-Wallis.
Resultados: 150 pacientes participaron en el estudio, la mayoría de los cuales presentaban fallos de adherencia y un nivel inadecuado de alfabetización funcional. Sin embargo, no hubo correlación entre alfabetización funcional sanitaria y adherencia al tratamiento.
Conclusión: Aunque no se encontró correlación entre las variables, es necesario invertir más en la adherencia al tratamiento, con estrategias que consideren el nivel de alfabetización funcional en salud de estos pacientes.
Palabras clave: Alfabetización en salud. Antidepresivos. Cumplimiento de la medicación.

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INTRODUCTION

Depression is a generally chronic and highly prevalent disease that can promote disability and decreased quality of life. It is a global public health problem, which in recent years, in more severe cases, has led patients to death, mainly as a result of suicide. Data reveal that approximately 300 million people suffer from this disease[1].

Depression represents a mental health problem of great impact on the public health system, being classified as the second disease to cause more economic and social losses. In 2017, care for patients with depression corresponded to 23.9% of the demand for Primary Health Care. It is worth mentioning that access to treatment can still come up into the difficulty of finding health professionals prepared to provide care to these patients[2].

Regarding the symptomatology, generally, depressed patients present changes in sleep, appetite and weight, feeling of guilt, tiredness, self-devaluation, hopelessness, anxiety, sadness, anhedonia, psychomotor retardation or agitation and decreased libido[1]. One of the treatment options for patients with depression is the pharmacological one, however a large part of the drugs are not used in the way they were prescribed, resulting, therefore, in treatment failure. Thus, despite the benefits of these drugs for patients with depression, with improved mood status, it is important that the patient is better oriented, since adherence to treatment still represents a challenge[3].

Adherence to treatment is defined as the rigor with which the patient follows the recommendations received from health professionals about the treatment, which in pharmacological therapy involves the correct following of the guidance regarding the dosage, time, and frequency of medication use[4].

In cases of antidepressants treatment, adherence to the use of medications plays a fundamental role in achieving therapeutic success, since the improvement of the clinical condition takes some time to occur and, on the other hand, side effects can manifest immediately. In this context, failures in adherence can lead to episodes of depressive crises, an increase in the number of hospitalizations and even contribute to an increase in suicide cases[5].

Among the factors that can influence patient adherence to drug treatment, it is highlighted lack of access to medication, forgetfulness, side effects, lack of follow-up of the health team, polypharmacy, which occurs mainly in elderly patients, and lack of understanding about the drug and its use[6].

The verification of the degree of understanding of patients regarding the information provided by health professionals is an important step for the planning of educational actions, and the identification of Functional Health Literacy may provide important information to support the elaboration of health actions that lead to greater adherence to medication by patients[7].

Literacy refers to the process of learning the skills of reading and writing. Functional literacy, in turn, has a broader concept and involves the individual's ability to apply the knowledge acquired in literacy, in different areas[8].

In the health area, the term represents a patient's cognitive ability to understand, evaluate and apply health information[8]. This logic includes the understanding on medical prescriptions, medication labels, appointment cards and health instructions to be followed at home. Understanding this information is necessary for the patient to understand the guidance provided by the physician as well as by the health team, providing the correct follow-up of their care plan[9]. It is important to emphasize that the ability to read is not necessarily associated with good functional health literacy, since the individual can have a good education level, but be unable to understand medical instructions related to their health[7].

In order to identify the potential of patients in understanding health-related information, it was developed the "*Teste de Letramento Funcional em Saúde em adultos*" in Portuguese for the Test of Functional Health Literacy in Adults – TOFHLA, consisted of written and numerical excerpts with information from the health area[9].

Because the TOFHLA takes up to 22 minutes to be applied to each patient, a version with a reduced number of questions was developed, but with the same structure and purpose, called "The Short TOFHLA" (S-TOFHLA), reducing the time of application for a maximum of 12 minutes[9].

The literature is limited in relation to the influence of the patient's FHL level and their adherence to antidepressant treatment. This theme was verified in a North American study, which showed an association between limited FHL of patients and greater discontinuity in the use of these medications, especially at the beginning of treatment. It is important to highlight that, in this study, adherence to treatment was verified only by taking the medication from the pharmacy, which does not guarantee the use of them by the patient[10].

The hypothesis of this study is that low adherence to antidepressant treatment is associated with inadequate levels of patients' functional health literacy, and that greater adherence occurs in patients with adequate levels of functional health literacy. In this context, the objective of the present study was to verify the influence of patients' level of functional health literacy on adherence to antidepressant treatment.

METHOD

This is an observational study with a quantitative approach and data collection in a prospective and cross-sectional way, using validated questionnaires on Functional Health Literacy and adherence to drug treatment[9,11].

The study was carried out in the pharmacies of the Municipal Health Department in Marília-SP, which provide prescriptions from public and private institutions. Each unit performs, on average, 600 dispensations of medicines per day.

Considering an error margin type I (α) de 5%, of 5%, a power of study of 80% and four degrees of freedom, for an average effect size (0.30), it was estimated a minimum sample size of 133 participants. Data collection was performed with 50 patients from each pharmacy, with a minimum age of 18 years, who had been undergoing pharmacotherapeutic treatment with antidepressant drugs for at least one month, reaching a final sample of 150 participants.

The patients were invited to participate in the study while waiting for the drug to be handed at municipal pharmacies. The data collection was carried out in a waiting room, a remote and silent place, exclusively by the main researcher of this study. The patient was invited to sit on a chair, one and a half meters away from the researcher, who provided the guidance for self-completion of the FHL questionnaire, and then the researcher spoked aloud the questions from the questionnaire on adherence to treatment. Patients who were illiterate, those who refused to participate in the study and those unable to self-administer the medication were excluded. The patient was also instructed that he/she could refuse to participate in the study and that he/she could request its exclusion at any time.

The questionnaire used to assess functional literacy was the Portuguese version of "The Short Test of Functional Health Literacy in Adults" (S-TOFHLA), which consists of two stages: reading comprehension and interpretation of numerical situations.

The reading comprehension stage consists of sentences with information related to health and guidance to perform tests in which one or two words are omitted, totaling 36 gaps. The patient was instructed to fill in these gaps, selecting between four possible options, since only one word was correct, the others were out of context or with grammatical errors[9].

The numerical stage consists of four cards with information about appointment scheduling, test results and medication prescription, to which the patient responded orally[9].

The overall FHL level refers to the sum of performance in the reading and numerical comprehension stages. For each correct answer in the comprehension test, 2 points were assigned, reaching a maximum score of 72 points (FHL interpretation). Regarding the numerical test, for each correct answer, 7 points were assigned, reaching 28 points (numerical FHL). Therefore, the sum of the two stages can reach 100 points (overall FHL). According to the score, the patient's FHL can be stratified into three levels: inadequate (score from zero to 53), limited (score from 54 to 66) and adequate (score from 67 to 100)[9].

To verify the patients' adherence to treatment, it was used the eight-item Morisky Medication Adherence Scale (MMAS-8)[11], adapted to the context of antidepressant medication. The MMAS-8 represents one of the most used scales to check adherence to pharmacological treatment. It currently consists of eight items, the first seven of which are dichotomous, with yes or no answers, and the last question has a "Likert" type scale, with five points, in which the patient can choose one of the following options: "never", "almost never", "sometimes", "often" and "always"[11].

The degree of patient adherence to treatment is defined by the sum of points obtained. In questions 1 to 7, one point is assigned for each negative answer. In question 8, only one point is assigned for the answers "never" and "almost never". The higher the score, the greater the degree of patient adherence[11].

Patients with score eight are considered highly adherent to treatment. Adherence was considered median for those with a score between seven and six and low adherence for those with a score lower than six[11].

The distribution of the sample data was verified by the Kolmogorov-Smirnov normality test, and the homogeneity of variances, by the Levene test. Data with normal distribution were analyzed using the Anova-one-way test, and the Sidak post-test was used to identify the difference between the groups. Non-parametric data, in turn, were analyzed using the Kruskal-Wallis test. Quantitative variables were described by mean and standard deviation (SD). The correlation between ordinal quantitative and qualitative variables was analyzed using Spearman's nonparametric test. For all analyses, it was adopted a significance level of 5% (p-value≤0.05), and all data were analyzed using the software SPSS version 24.0 for Windows®.

The study was approved by the Ethics Committee in Research Involving Human Beings (REC) of the Faculty of Medicine of Marília (*Faculdade de Medicina de Marília* – FAMEMA), under Opinion no.4,168,050 and Certificate of Presentation for Ethical Appreciation (CAAE) No. 26391919,0,0000,5413, and by Municipal Council for Research Assessment (COMAP) of the city of Marília-SP. All participants signed the Free and Informed Consent Form (FICF).

RESULTS

The study was conducted from August 2020 to April 2021, with the participation of 150 individuals. Most study participants are female (82%), aged between 40 and 59 years (49.3%), with only elementary education (46.7%) and income of up to 2 minimum wages (80%) (Table 1).

After applying the S-TOFLHA, it was found that the level of functional health literacy (FHL) was considered adequate in 47.3% of the participants. Thus, most patients had failures in relation to the FHL test, as 11.3% were considered limited and 41.3%, inadequate.

Table 2 presents the analyses between the sociodemographic characteristics of patients and performance in functional health literacy, in the stages of interpretation, numerical skills and their sum, described as overall FHL. It was found that age, education level and family income significantly influenced the performance of participants in the FHL test ($p<0.05$) and the participant's gender was not an important aspect for this performance.

The Morisky test showed that most patients in the study had failures in adherence, with 37.3% being considered to have low adherence and 45.3% to have median adherence. Thus, only 17.3% were highly adherent to the treatment.

Among the independent variables that could influence adherence to treatment, only the age group of the participants showed a significant association with the results obtained in the Morisky Test ($p<0.05$). The lowest adherence rates were found in patients aged 18 to 39 years (Table 3).

The analysis to verify if FHL could influence adherence to treatment with antidepressant drugs was performed by comparing the performance of participants in FHL (overall,

Table 1 – Sociodemographic characterization of patients (n=150) using antidepressants provided in municipal pharmacies. Marília, São Paulo, Brazil, 2021

		n	(%)
Gender	Male	27	18
	Female	123	82
Age group	18-39 years	31	20.7
	40-59 years	74	49.3
	>59 years	45	30
Education Level	Elementary	70	46.7
	High School	56	37.3
	Higher Education	24	16
Family Income (Minimum wages)	Up to 2	120	80
	3 to 4	21	14
	>4	9	6

Source: Research data, 2021.
*In national minimum wage: (+/- BRL 1,100.00)

numerical and interpretation) and level of FHL (inadequate, limited and adequate) with the performances obtained in the Morisky adherence test and levels of adherence (high, medium and low). After performing all these combinations, no correlations were found between FHL and adherence to antidepressant treatment (p>0.05). The results are presented in Table 4.

DISCUSSION

Most participants in this study did not presented an adequate level of FHL. Similar results were observed in a study conducted in a public service of specialized care, which assessed FHL in people living with HIV, in which 68% of the participants had inadequate FHL and 21.8% had limited FHL[12].

Table 2 – Influence of sociodemographic aspects on Functional Health Literacy (n=150). Marília, São Paulo, Brazil, 2021

Functional Health Literacy				
		Overall	Numerical	Interpretation
		M(±SD)	M(±SD)	M(±SD)
Gender	Male	59(26.1)	15.6(9)	43.8(20.1)
	Female	62.4(28)	16.3(11.8)	46(21.4)
		p=0.556	p=0.751	p=0.621
Age group	18-39 years	85.8(19.1)[a]	21.2(7.3)[a]	64.9(13.4)[a]
	40-59 years	63.9(25.6)[b]	17.8(12.8)[a]	45.8(19.7)[b]
	>59 years	41.8(20.7)[c]	9.9(8)[b]	31.8(17.1)[c]
		p<0.001*	p<0.001*	p<0.001*
Education Level	Elementary	45.7(22.6)[a]	11.9(10.3)[a]	34.2(17.7)[a]
	High School	73.9(23.7)[b]	18.6(9.7)[b]	54.6(18.7)[b]
	Higher Education	80.5(23.8)[b]	22.8(13.1)[b]	57.6(19.4)[b]
		p< 0.001+	p< 0.001+	p< 0.001+
Family Income (Minimum wages)	Up to 2	58.7(27.6)[a]	15.1(10.7)	43.5(21.3)[a]
	3 to 4	69.3(27)	20.1(14.9)	49.2(20.4)
	>4	85(13.5)[b]	21(7)	64(8.3)[b]
		p=0.009*	p=0.076++	p=0.028*

Source: Research data, 2021.
*indicates significant difference between groups by the Kruskal-Wallis test for p-value ≤ 0.05.
+indicates a significant difference between the groups by the Anova-one-way test for p-value ≤ 0.05.
++p-value calculated by the Anova-one-way test.
Different letters indicate a significant difference between the groups by the Sidak post-test for p-value ≤ 0.05.

Table 3 – Influence of sociodemographic aspects and treatment time on performance in the Morisky adherence test (n=150). Marília, São Paulo, Brazil, 2021

		Morisky Test		
		Mean	**SD**	**p-value**
Gender	Male	6.1	1.5	0.386
	Female	5.7	1.8	
Age group	18-39 years	4.7a	2	< 0.001+
	40-59 years	5.9b	1.7	
	>59 years	6.2b	1.5	
Education Level	Elementary	6.1	1.5	0.323*
	High School	5.7	1.7	
	Higher Education	5.3	2.4	
Family Income (Minimum wages)	Up to 2	5.8	1.7	0.463++
	3 to 4	6.1	1.7	
	>4	5.2	2.8	
Treatment time	Up to 5 years	5.8	1.9	0.524
	6 to 10 years	5.4	1.4	
	> 10 years	5.9	1.6	

Source: Research data, 2021.
+indicates significant difference between the groups by the Anova-one-way test for p-value ≤ 0.05
*p-value calculated by the non-parametric Kruskal-Wallis test.
++ p-value calculated by the Anova-one-way test
Different letters indicate a significant difference between the groups by the Sidak post-test for p –value ≤ 0.05.

Similarly, an Iraqi study about the association of health literacy and assessment of nutritional status with glycemic control in adults with type 2 diabetes mellitus, using the Iraqi (Arabic) version of the S-TOFHLA, showed that 55.6% of interviewees had inadequate levels of FHL and 20.8% had limited levels[13].

With regard to sociodemographic variables, patients under 60 years of age presented the best FHL performances, who had at least completed high school and earned more than 3 minimum wages. These data are reinforced by a study conducted with patients with cardiovascular diseases, which showed that younger patients presented more satisfactory performances in the FHL tests[7]. In order to emphasize the relationship between age group and FHL level in adults, another study involving the performance of a population with type 2 diabetes mellitus in FHL also showed that the older the age, the less adequate the FHL[14].

Likewise, when the numerical skills of the patients were analyzed, it was observed that the worst performance was obtained in the oldest patients, that is, those over 59 years old. The numerical aspects of the test may indicate the existence of difficulties in administering medications at the correct doses and times.

Table 4 – Correlation between FHL and treatment adherence. Marília, São Paulo, Brazil, 2021

	Morisky		Degree of adherence**	
	r	p-value	R	p-value
Overall FHL	-0.035	0.666	0.003	0.975
Numerical FHL	-0.031	0.707	0.032	0.700
Interpretation FHL	-0.028	0.733	-0.008	0.921
Functional Literacy Level*	-0.036	0.665	0.049	0.549

Source: Research data, 2021.
Note: Spearman's correlation coefficient (r)
*Functional Health Literacy Level (inadequate, limited and adequate)
**Degree of adherence (high, medium and low)

The results regarding the interpretation stage also followed the same logic of progressive decrease in the performance of the participants according to advancing age. These aspects are important and may reflect on the patient's understanding on their disease and its treatment.

In this sense, polypharmacy becomes a problem, as it is higher in this age group. In addition, the elderly may have visual and hearing problems, with prescriptions that are difficult to understand, leading to the incorrect use of medications[15].

Therefore, it becomes important the presence of a multidisciplinary team in the health care of the elderly, guiding to possible adverse reactions, dosage and way of using the medication[15]. Approaches of this nature may be useful in the development of strategies aimed at health education, especially in the elderly population.

In this context, the role of the nursing team to verify the levels of FHL and adherence is highlighted. Through work processes, nursing can identify the patient's needs and specificities and plan health education actions, that can contribute to improve adherence rates[6].

The results obtained in the FHL test showed a better performance of patients with a secondary and higher education level. A study that correlated education level with the results in the S-TOFHLA test showed that patients with ten or more years of schooling were more likely to present adequate performance in the FHL test[14].

These results reinforce that health-related guidance should be provided considering the patient's education level. An alternative to verify the understanding of the guidance provided is to ask the patient to repeat the information transmitted by the health professional, which will allow the identification of their real understanding of what was transmitted[16].

The analysis of the influence of family income on FHL showed a more satisfactory performance in patients with higher family income. These results were obtained in relation to the aspect of the test focused on interpretation and also in terms of overall performance, however not for numerical skills. Obtaining better results in the FHL test, according to income, may also be associated with education level, since generally, individuals with better training tend to achieve higher salaries, as well as greater access to information[17].

Regarding adherence to antidepressant treatment, it was observed that most patients treated at municipal pharmacies had failures in adherence, and only 17.3% of participants were considered highly adherent to treatment. Another study that investigated adherence to drug therapy in patients with depressive disorders observed that adherence rates in these patients varied, with 27% showing a high degree of adherence, using the 4-item Morisky scale (MMAS-4) as an instrument and 20% had a high degree in MMAS-8[3].

Low adherence in young patients was also observed in a study conducted with depressed patients, suggesting the existence of a significant association between the concern with pharmacological treatment and its side effects, that is, the lower the concern with the drugs and their effects, the greater the patient adherence[18].

Another aspect that can lead to failure in adherence to treatment is the lack of clarification by the patient regarding the disease and the importance of the correct use of medications[6]. In this sense, strategies can be developed with the involvement of caregivers, family members and

the health team, with the development of a care plan that makes the patient aware of his diagnosis and the importance of complying with the drug therapy, with obedience to dosage regimens. It is also necessary to provide clarification on possible adverse effects caused by the treatment[19].

In this logic, psychoeducation emerges as a tool to be used to improve adherence to antidepressant agents. This technique consists of providing information to the patient through verbal or written guidance, which can be performed by simple actions using the telephone, e-mail and formation of groups, or by more complex actions such as home visits[5].

Since the treatments, mostly, are offered free of charge by the Unified Health System (*Sistema Único de Saúde* – SUS), strategies that strengthen broad access to these drugs can contribute to improving the population's access to these treatments, thus contributing to lessening the consequences of inappropriate use of antidepressants agents, among which suicide represents the most worrying aspect. Data show that, in every 100 patients with depression, one commits suicide[20]. Only in 2019, there were more than 800,000 cases of suicide[20]. While suicide rates worldwide decreased by 36% in the last 20 years, in the Americas, in the same period, there was an increase of 17% in these cases[19].

Another important aspect emerges from the need for investments in educational health strategies to clarify, make aware and motivate the patient, making him understand about the characteristics of the disease and the importance of the correct use of medicines and possible side effects, in order to improve adherence to treatment. In addition, some strategic actions that can reverse these difficulties in understanding the information transmitted by health professionals are important.

The initial hypothesis of this study to verify whether FHL could influence adherence to treatment with antidepressant drugs was not confirmed. Studies with more robust samples can be developed to confirm the results obtained in the present study.

The relationship between FHL and adherence to drug treatment was investigated in another study conducted with patients with type 2 diabetes, showing that most patients had inadequate FHL, and that text interpretation was the main responsible for this result[14]. Regarding adherence, the study also showed that the majority of participants adhered to the treatment, but a different instrument was used than the one used in the present study. However, unlike the present study, patients with inadequate FHL were considered highly adherent to drug therapy, and patients with adequate FHL were less adherent.

A fragility of the present study was the verification of family income instead of the participant's income, since the simple statement of family income can be influenced by the number of economically active members in the family. In addition, this socioeconomic identification format in the questionnaire fails in identifying the main aspect, which is the individual performance of the study participant.

Another limitation of this study refers to the sample size, which was calculated according to an average effect size between the variables. Thus, a more robust sample would allow the correlation analyses between treatment adherence and functional health literacy, according to the antidepressant used by the patient. This aspect is important, since the medications have particularities that can interfere with adherence, among which stand out side effects and latency time between beginning of treatment and improvement of symptoms.

FINAL CONSIDERATIONS

The main contribution of the present work refers to the verification, for the first time in the Brazilian population, of the correlation between FHL and the process of adherence to antidepressant treatment, using instruments of international reference, however adapted to our culture.

In this perspective, this study may favor the understanding of the importance of adherence to drug treatment, since the medicalization of the patient involves several health professionals, responsible for prescribing, dispensing, preparing and administration. In the last stage of this process are the nursing professionals who are responsible for direct patient care, including medication administration and monitoring of side effects.

The results showed that the population studied presented difficulties in understanding the information provided by health professionals. In addition, some difficulties related to numerical skills were found, with possible repercussions in following the dosage schedules of prescribed medications. The difficulties pointed out by the functional health literacy test were more prominent in older people, with less schooling and lower monthly income. According to these results, patients with pharmacological treatment for depression with these sociodemographic characteristics are the most vulnerable in terms of following the guidance provided by health professionals.

Regarding adherence to drug treatment, it was found that a significant portion of the population had problems regarding the correct use of medications. In this aspect, the population most likely to not adequately adhere to the pharmacological treatment is represented by younger people.

Although the present study demonstrated these vulnerabilities regarding the understanding of health information

and also potential failures in adherence to antidepressant treatment, under the conditions studied, no significant associations were found between FHL and adherence to treatment.

The results found show the need for greater investments to improve adherence to antidepressant treatment. However, considering the profile of this population, characterized by a deficit in the FHL, it is important that health actions are carried out in accessible language, using figures and pictograms and avoiding technical terms, thus allowing the population to better understand information transmitted by the health professional.

REFERENCES

1. World Health Organization. Group Interpersonal Therapy (IPT) for Depression. Geneva: WHO; 2016 [cited 2021 Sep 13]. Available from: https://www.who.int/publications/i/item/WHO-MSD-MER-16.4.
2. Motta CCL, Moré CLOO, Nunes CHSS. O atendimento psicológico ao paciente com diagnóstico de depressão na Atenção Básica. Ciênc Saúde Colet. 2017;22:911-20. doi: https://doi.org/10.1590/1413-81232017223.27982015.
3. Prakash J, Yadav YK, Srivastava K, Madhusudan T. Psychosocial correlates of medication adherence in patients with depressive illness. Ind Psychiatry J. 2019;28(1):135-40. doi: https://doi.org/10.4103/ipj.ipj_78_19.
4. World Health Organization. Adherence to long-temp therapies evidence for action. Geneva: WHO; 2003 [cited 2021 Sep 13]. Available from: https://apps.who.int/iris/bitstream/handle/10665/42682/9241545992.pdf?sequence=1.
5. Solmi M, Miola A, Croatto G, Pigato G, Favaro A, Fornaro M, et al. How can we improve antidepressant adherence in the management of depression? a target review and 10 clinical recommendations. Braz J Psychiatry. 2021;43(2):189-202. doi:
6. https://doi.org/10.1590/1516-4446-2020-0935.
7. Martins NFF, Abreu DPG, Silva BT, Semedo DSRC, Pelzer MT, Ienczak FS. Functional health literacy and adherence to the medication in older adults: integrative review. Rev Bras Enferm. 2017;70(4):868-74. doi: https://doi.org/10.1590/0034-7167-2016-0625.
8. Chehuen Neto JA, Costa LA, Estevanin GM, Bignoto TC, Vieira CIR, Pinto FAR, Ferreira RE. Letramento funcional em saúde nos portadores de doenças cardiovasculares crônicas. Ciênc Saúde Colet. 2019;24(3):1121-32. doi: https://doi.org/10.1590/1413-81232018243.02212017.
9. Cordeiro MD, Sampaio HAC. Application of the fundamentals of health literacy to the informed consent. Rev Bioét. 2019;27(3):410-8. doi: https://doi.org/10.1590/1983-80422019273324.
10. Baker DW, Williams MV, Parker RM, Gazmararian JA, Nurss J. Development of a brief test to measure functional health literacy. Patient Educ Couns. 1999;38(1):33-42. doi: https://doi.org/10.1016/s0738-3991(98)00116-5.
11. Bauer AM, Schillinger D, Parker MM, Katon W, Adler N, Adams AS, et al. Health literacy and antidepressant medication adherence among adults with diabetes: the diabetes study of Northern California (DISTANCE). J Gen Intern Med. 2013;28(9):1181-7. doi: https://doi.org/10.1007/s11606-013-2402-8.
12. Casagrande V, Spadella MA, Chagas EFB, Pinheiro OL. Construção e validação de material educativo sobre tratamento farmacológico da Leucemia Mieloide Crônica. Sustinere. 2021;9(2):731-45. doi: https://doi.org/10.12957/sustinere.2021.55657.
13. Perez TA, Chagas EFB, Pinheiro OL. Health functional literacy and adherence to antiretroviral therapy in people living with HIV. Rev Gaucha Enfem. 2021;42:e20200012. doi: https://doi.org/10.1590/1983-1447.2021.20200012.
14. Hashim SA, Barakatun-Nisak MY, Saad HA, Ismail S, Hamdy O, Mansour AA. Association of health literacy and nutritional status assessment with glycemic control in adults with type 2 diabetes mellitus. Nutrients. 2020;12(10):3152. doi: https://doi.org/10.3390/nu12103152.
15. Rocha MR, Santos SD, Moura KR, Carvalho LS, Moura IH, Silva ARV. Health literacy and adherence to drug treatment of type 2 diabetes mellitus. Esc Anna Nery. 2019;23(2):e20180325. doi: https://doi.org/10.1590/2177-9465-EAN-2018-0325.
16. Almeida NA, Reiners AAO, Azevedo RCS, Silva AMC, Cardoso JDC, Souza LC. Prevalência e fatores associados à polifarmácia entre os idosos residentes na comunidade. Rev Bras Geriatr Gerontol. 2017;20(1):143-53. doi: https://doi.org/10.1590/1981-22562017020.160086.
17. Torres GMC, Figueiredo IDT, Cândido JAB, Pinto AGA, Morais APP, Araújo MFM, et al. Therapeutic communication in the interaction between health workers and hypertensive patients in the family health strategy. Rev Gaucha Enferm. 2017;38(4):e2016-0066. doi: https://doi.org/10.1590/1983-1447.2017.04.2016-0066.
18. Simões CF, Amaral SCS. A relação entre a escolaridade e a pobreza: uma análise das políticas para democratização do acesso ao ensino superior no Brasil. Rev Bras Ens Sup. 2018;4(2):21-43. doi: https://doi.org/10.18256/2447-3944.2018.v4i2.2392.
19. Chawa MS, Yeh HH, Gautam M, Thakrar A, Akinyemi EO, Ahmedani BK. The impact of socioeconomic status, race/ethnicity, and patient perceptions on medication adherence in depression treatment. Prim Care Companion CNS Disord. 2020;22(6):20m02625. doi: https://doi.org/10.4088/PCC.20m02625.
20. Dell'Osso B, Albert U, Carrà G, Pompili M, Nanni MG, Pasquini M, Poloni N, et al. How to improve adherence to antidepressant treatments in patients with major depression: a psychoeducational consensus checklist. Ann Gen Psychiatry. 2020;19:61. doi: https://doi.org/10.1186/s12991-020-00306-2.
21. Organização Pan-Americana da Saúde. Uma em cada 100 mortes ocorre por suicídio, revelam estatísticas da OMS [Internet]. Brasília, DF: OPAS; 2021 [cited 13 Sep 2021]. Available from: https://www.paho.org/pt/noticias/17-6-2021-uma-em-cada-100-mortes-ocorre-por-suicidio-revelam-estatisticas-da-oms.

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