Expectations of self-efficacy for the aids...



# EXPECTATIONS OF SELF-EFFICACY FOR THE AIDS TREATMENT OF ADULTS IN A UNIVERSITY HOSPITAL

## EXPECTATIVA DE AUTOEFICÁCIA PARA TRATAMENTO DE ADULTOS COM AIDS DE UM HOSPITAL UNIVERSITÁRIO

## EXPECTATIVAS DE AUTOEFICACIA PARA EL TRATAMIENTO DE ADULTOS CON SIDA EN UN HOSPITAL UNIVERSITARIO

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#### **ARSTRACT**

Objective: to describe the expectation of ART self-efficacy for adults with HIV/AIDS. Method: cross-sectional, descriptive study, with a quantitative approach, conducted in January/June 2012 in an Outpatient Clinic for the Treatment of Infectious Diseases, in a university hospital in the southern region of Brazil using the self-efficacy expectations scale for following the antiretroviral prescription. The study was approved by the Ethics in Research, CAAE 0322.0.243.000-11. Results: positive scores were shown for following the antiretroviral prescription. The higher average of the items in the scale were in situations that require more planning, attention and organization to take the medications and that diminish the concern or confidence in the treatment. Conclusion: even with high levels of self-efficacy expectations, in some situations it tends to decrease. Such situations should be focused on by health professionals, aiming to help the patients to circumvent them, increasing this expectation, and consequently the adherence levels. Descriptors: Acquired Immunodeficiency Syndrome; HIV; Highly Active Antiretroviral Therapy; Self-efficacy; Nursing.

## RESUMO

Objetivo: descrever a expectativa de autoeficácia a TARV de adultos com HIV/AIDS. Método: estudo transversal, descritivo, com abordagem quantitativa, realizada de janeiro/junho de 2012 em um Ambulatório de Doenças Infecciosas, num hospital universitário da região sul do Brasil utilizando a Escala de expectativa de autoeficácia para seguir a prescrição antirretroviral. O projeto de pesquisa foi aprovado pelo Comitê de Ética em Pesquisa, CAAE 0322.0.243.000-11. Resultados: foram apresentados escores positivos para seguir a prescrição antirretroviral. As médias mais altas dos itens da escala foram nas situações que exigiam maior planejamento, atenção e organização para tomar os medicamentos e nas que diminuem a preocupação ou confiança no tratamento. Conclusão: mesmo com altos níveis de expectativa de autoeficácia, em algumas situações ela tende a diminuir. Tais situações devem ser enfocadas pelos profissionais da saúde, objetivando ajudar os pacientes a contorná-las, aumentando tal expectativa, e consequentemente os níveis de adesão. Descritores: Síndrome da Imunodeficiência Adquirida; HIV; Terapia Antirretroviral De Alta Atividade; Autoeficácia; Enfermagem.

#### RESUMEN

Objetivo: describir una expectativa de autoeficacia a TARV de Adultos con el VIH/SIDA. *Método*: estudio transversal Estudio descriptivo, con enfoque cuantitativo, realizada de enero / junio de 2012 en una Clínica de Enfermedades Infecciosas, en un hospital universitario en el sur de Brasil utilizando la Escala de las expectativas de autoeficacia para seguir la prescripción antirretroviral. El proyecto de investigación fue aprobado por el Comité de Ética de Investigación, CAAE 0322.0.243.000-11. *Resultados*: fueron presentadas puntuaciones positivas para seguir la prescripción antirretroviral. Las medias más altas de los ítems de la escala se encontraban en situaciones que requerían más planificación, la atención y la organización para tomar medicamentos que disminuyen y la preocupación o la confianza en el tratamiento. *Conclusión*: aún con altos niveles de auto-expectativas de eficacia, en algunas situaciones, tiende a disminuir. Tales situaciones deben ser enfocadas por profesionales de la salud, con el objetivo de ayudar a los pacientes a obtener alrededor de ellos, aumentando esta expectativa, y consecuentemente los niveles de afiliación. *Descriptores*: Síndrome de Inmunodeficiencia Adquirida; VIH; La Terapia Antirretroviral Altamente Activa; Autoeficacia; Enfermería.

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#### INTRODUCTION

Over three decades of the acquired immunodeficiency syndrome (AIDS) epidemic, there were advances in knowledge related to this disease, which is caused by infection of the Human Immunodeficiency Virus (HIV). Among these advances, is highlighted, the evolution of antiretroviral therapy (ART), which is aimed at the suppression of viral replication, which leads to recovery or preservation of the immune function and, therefore, the reduction in the frequency of infections and opportunistic neoplasms.1

The evolution of ART has had a major impact in reducing the mortality and morbidity of HIV infection, allowing a considerable decrease in associated clinical manifestations, which implies a better prognosis of people in treatment and quality of life, however, for this to occur there is a need for the use of 95% or more of the recommended medication doses. Thus, the capacity to follow this recommendation is defined by the adherence concept.<sup>2-4</sup>

Adherence is considered a challenge to a good therapeutic response and is linked to a set of factors, such as: the availability of access to the service; frequency and laboratory tests; consultations and pick-up of medications. Making it an interactive, dynamic and continuous process.<sup>5-7</sup> In addition to these factors, the psycho-social aspects should also receive special attention, because variables and situational personal interfere negatively in compliance behavior of people in ART.<sup>3</sup> These variables are directly linked to the concept of self-efficacy expectations, which is defined as one's belief about the ability to successfully perform a certain requested behavior, in order to produce a result, being able to handle situations that may prevent the realization of these health protective behaviors.<sup>4,8</sup>

Self-efficacy is directly linked to the question of adherence to antiretroviral therapy, where there must be personal confidence to take medication as prescribed and the conviction of being able to control the circumstances that may hinder the regular follow-up of the prescription, which is influenced by the self-efficacy expectations.9-

Beliefs generated by the self-efficacy expectations affect thinking in various ways helping or hindering, 11 however, even if it is of great importance for the implementation of ART, in Brazil there are two studies that developed the Self-Efficacy Expectation Scale for Following the Antiretroviral Prescription Expectations of self-efficacy for the aids...

(AP), assessing the population of adults and children/adolescents. 4.9

## **OBJECTIVE**

• To describe the expectation of ART selfefficacy for adults with HIV / AIDS.

#### **METHOD**

Cross-sectional, descriptive study with a quantitative approach, the result of the subproject of the study << Factors associated with adherence to antiretroviral treatment of adults with HIV/AIDS. Symbol - ART IV >>.

The data collection field was the infectious disease clinic of the University Hospital of Santa Maria (HUSM), in Rio Grande do Sul, Brazil, after meeting the inclusion criteria: adults of age ≥ 20 years with HIV/AIDS in ART, registered for at least three months in the UDM of HUSM, monitored at the outpatient clinic; and exclusion: patients with limited and/or cognitive mental ability, difficulty of understanding and/or verbal expression; in a penitentiary system (for privacy and confidentiality of information); pregnant women or puerperium (sometimes make only the prophylactic treatment of HIV vertical transmission). There were 432 patients who met the inclusion criteria. Of these, 179 were part of the sample, with a sampling error of 5.7 %, confidence interval of 95% and 50 %.

The data collection step occurred in the period of January to June 2012, applying the Self-Efficacy Expectation Scale for Following the Antiretroviral Prescription (AP). It has 21 items, with answers in the Five Point Likert Scale (0 = definitely not going to take it; 1 = I think that I will not take it; 2 = I don't know; 3 = I think I'll take it; 4 = I will definitely take it).9

For the insertion of data the Epi-info®, version 3.5 was used, with dual independent typing, to ensure the accuracy of the data. correction of the errors inconsistencies, a descriptive analysis of the AP variables was performed, by means of the program PASW Statistics® Predictive Analytics Software, SPSS Inc., Chicago, USA) 18.0 for

The scores of this scale, the values of the 21 questions were summed and subtracted from this value the minimum assumed by the scale (in this case zero), in order to thereby divide the scale range (84-0), multiplying by 100. These scores proposed a continuous variable that can vary from 0 to 100, in which higher values indicate less self-efficacy expectations for complying with the ART.9

The internal consistency of AP was assessed by Cronbach's alpha coefficient (0.93) in order to verify the reliability of the measure to which the instrument is proposed, so that values above 0.70 are confirmatory for this purpose. The normality of scale through the Kolmogorov-Smirnov test was also performed to check the adherence of the data to a normal distribution. 12-3

Ethical and methodological aspects were treated according to the guidelines set forth in Resolution 196/96 and the complementary National Board of Health and approved by the

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Ethics Committee in Research of the Federal University of Santa Maria, CAAE In 0322.0.243.000 -11. The patients voluntarily accepted to participate in the study and signed the Free and Informed Consent.

## **RESULTS**

The socio-demographic characteristics of the patients participating in the study are shown in Table 1.

Table 1. Distribution of the socio-demographic characteristics of people with HIV/AIDS. Santa Maria/RS 2012. n=179

	Variables	n	%
Gender	Male	91	50.8
	Female	88	49.2
Age	20 to 24 years	4	2.2
	25 to 29 years	12	6.7
	30 to 34 years	22	12.3
	35 to 39 years	35	19.6
	40 to 49 years	65	36.3
	50 to 59 years	29	16.2
	Older than or equal to 60 years	12	6.7
Schooling	No schooling	7	3.9
	Incomplete elementary school	77	43.0
	Complete elementary school	17	9.5
	Incomplete high school	23	12.8
	Complete high school	22	12.3
	Incomplete college	17	9.5
	Complete college	12	6.7
	Incomplete post-graduation	2	1.1
	Complete post-graduation	2	1.1
Number of children	No children	38	21.2
	One child	52	29.1
	Two to four children	76	42.5
	Five or more children	3	7.3
Marital Status	Living with spouse /companion	87	48.6
	Lives alone	45	25.1
	Separated; divorced; widowed	47	26.3
Per capita family	One minimum wage	13	7.5
income (n=174)	Two Minimum wages	114	65.5
	Three Minimum wages	44	25.3
	Four Minimum wages	3	1.7

Of the total patients, 50.8% were male, 43.0% had completed elementary school, 42.5% had two to four children, 48.6% lived with spouse or partner and 65.5% had family income of up to two minimum wages (reference amount R\$ 622,00). (Table 1)

The descriptive analysis of AP was calculated by means of the raw score scale. The average score was 79.83; standard deviation (7.65); minimum score (42) and maximum (84). The internal consistency of this scale was high with coefficient of *Cronbach's alpha* (0.93), this indicates that the scores of the 21 items suggests reliable measures of the variables studied.

The completion the Komogorov-Smirnov test showed a concentration of responses from the AP score of 80. This indicates that the scale does not show adherence at a normal distribution.

The items on this scale reflect the level of experience of the subjects in the treatment for HIV/AIDS and assess the follow-up of ART in different situations. Items 5, 6, 7, 13, 16, 17, 19 of AP are related to the difficulty in following the requirements of treatment in situations that require more planning, care and organization to take the medication and are described in Table 2.

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**Table 2.** Descriptive Statistics of the items in the Self-Efficacy Expectations Scale to fulfill the antiretroviral prescription, in situations that require more planning, care and organization for taking the medication. Santa Maria - RS 2012. n=179.

AP	Question	r ta	will not ake en it	th wil be	hink nat I Il not take it		lon't now	that	hink : I will ke it	I will definitely take it		Average	Standard Deviation	Cronbach's Alpha if item deleted (0.93)
		n	%	n	%	n	%	n	%	n	%			
5	If I am busy or having fun.	0	0	1	0.6	4	2.2	25	14.0	149	83.2	3.80	0.49	0.92
6	If I am traveling for leisure or business.	0	0	0	0	2	1.1	9	5.0	168	93.9	3.93	0.30	0.92
7	If I am on the street.	1	0.6	3	1.7	8	4.5	16	8.9	151	84.4	3.75	0.67	0.92
13	If I have to take medication several times a day.	0	0	3	1.7	6	3.4	15	8.4	155	86.6	3.80	0.57	0.92
16	If it is a holiday or weekend.	0	0	1	0.6	8	4.5	9	5.0	161	89.9	3.84	0.51	0.92
17	If I have to change my schedule to eat or sleep.	0	0	2	1.1	7	3.9	7	3.9	163	91.1	3.85	0.52	0.92
19	If I am doing things out of my routine.	0	0	1	0.6	9	5.0	21	11.7	148	82.7	3.77	0.56	0.92

The situations that tend to decrease the concern with the disease or the confidence in

the treatment are represented by items 1, 2, 8, 12, 20 of AP and are described in table 3.

**Table 3.** Descriptive statistics of items Scale-efficacy expectations to fulfill antiretroviral prescription in situations that tend to diminish the concern with illness or confidence in the treatment. Santa Maria - RS 2012. n=179.

AP	Question		l will not take even it		l think that I will not be take it		l don't know		I think that I will take it		will nitely ke it	Avera ge	Standa rd Deviat ion	Cronbach 's Alpha if item deleted (0.93)
		n	%	n	%	n	%	n	%	n	%			
1	If I am good health.	0	0	1	0.6	4	2.2	5	2.8	169	94.4	3.91	0.40	0.96
2	If the virus in my blood is so little that does not appear in the viral load test.	1	0.6	1	0.6	7	3.9	8	4.5	162	90.5	3.84	0.56	0.92
8	If I feel sick.	1	0.6	1	0.6	3	1.7	11	6.1	163	91.1	3.87	0.50	0.92
12	If keep changing the doctor that I see.	1	0.6	1	0.6	6	3.4	10	5.6	161	89.9	3.84	0.55	0.92
20	If I am with someone who thinks its stupid that I take these drugs.	0	0	0	0	3	1.7	11	6.1	165	92.2	3.90	0.35	0.92

The issues relating to negative experiences with the medication and the negative effects present in this process are represented by

items 3, 4, 9, 10, 11, 14, 15, 18 and 21 and are described in table 4.

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**Table 4.** Descriptive Statistics of the items in the Self-Efficacy Expectations Scale for fulfilling the antiretroviral prescription, in situations relating to negative experiences with the medication and the negative effects present in this process. Santa Maria - RS 2012. n=179.

AP	Question I will I thir not that take will n even it be tal it		nat I I not take it		lon't now	that	hink t I will ke it	defii	vill nitely ce it	Average	Standard Deviation	Cronbach's Alpha if item deleted (0.93)		
		n	%	n	%	n	%	n	%	n	%			
3	If I'm bored and feeling down.	1	0.6	2	1.1	10	5.6	16	8.9	150	83.8	3.74	0.66	0.92
4	If I am discriminated or rejected.	2	1.1	0	0	8	4.5	11	6.1	158	88.3	3.80	0.62	0.92
9	If I am with someone that I do not want them to know that I have the AIDS virus.	4	2.2	0	0	7	3.9	25	14.0	143	79.0	3.69	0.75	0.92
10	If I have to take many pills.	0	0	3	1.7	7	3.9	13	7.3	156	87.2	3.80	0.58	0.92
11	If I am nervous or angry.	2	1.1	1	0.6	6	3.4	16	8.9	154	86.0	3.78	0.64	0.92
14	If I am with strangers.	1	0.6	2	1.1	7	3.9	16	8.9	153	82.5	3.78	0.62	0.92
15	If the medicine is difficult to swallow.	0	0	1	0.6	11	6.1	9	5.0	158	88.3	3.81	0.56	0.92
18	If the medicine has bad taste or smells strong.	0	0	0	0	6	3.4	15	8.4	158	88.3	3.85	0.44	0.92
21	If the medicines are causing me bad effects.	2	1.1	8	4.5	18	10.1	23	12.8	128	71.5	3.49	0.93	0.93

According to tables 2, 3 and 4, the patients had positive scores to follow the prescription antiretroviral (ART), where the responses focused on alternatives with higher scores, "I think I'll take" and "I will definitely

take", which had values three and four respectively.

The analysis of the responses made it possible to identify the medium highest and lowest related to sure to take the drugs, which are shown in Figure 1.

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	Higher Average response of the AP	Lower Average response of the AP
	"If I am traveling for leisure or business"	"If the medicines are causing me bad effects"
	$(3.93 \pm 0.30);$	$(3.49 \pm 0.93);$
	93.9% of the patients responded that	71.5% of the patients responded that certainly
	certainly would take the ARTs.	would take the ARTs.
	"If I'm in good health" (3.91 ± 0.40);	"If I am with someone that I do not want
	94.4% of the patients responded that	them to know that I have the AIDS virus" (3.69
	certainly would take the ARTs.	± 0.75);
		79.0% of the patients responded that certainly
		would take the ARTs.

Figure 1. Illustrative Figure of highest and lowest averages in the AP. Santa Maria/RS 2012.

In the responses with lower average, although more than 70% of patients have obtained maximum values of response of AP, 12.8% and 14.0% said they thought that they would take the drugs for the two situations "If the medicines are causing me bad effect" and "If I am with someone who doesn't want to know that I have the AIDS virus", respectively.

## DISCUSSION

The Cronbach's alpha value of AP obtained in this study was similar to other studies, where an expectation of self-efficacy assessed in adults and one in children and adolescents by parents / caregivers, and both obtained a value of 0.96.<sup>4,9</sup> This means that this scale, even being assessed in populations of different age ranges, it contains a good

internal consistency, possessing scores with reliable measurements. With regard to the AP normality test, a study using the same test, does not present a normal distribution.<sup>4</sup>

The high level of self-efficacy expectations for following the antiretroviral prescription was also evidenced in other studies that used the AP.<sup>3,9,14</sup> The self-efficacy expectations is considered the central mechanism of human actions being performed intentionally, so at high levels it favors the fulfilment of medication requirements.<sup>8</sup>

The highest averages of the items that compose the AP were concentrated in situations that require more planning, attention and organization to take medicines, and in the situations that diminish the concern or confidence in treatment. <sup>9</sup> These situations

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other issues related to prejudice and discrimination. 15, 20-3

are from cognitive processes, selection of activities and environments, and motivational processes, which are activated by the self-efficacy expectations. <sup>8</sup>

The cognitive process develops rules to influence events, set goals and strategies determining the effectiveness in solving problems, the selection of activities and environments it is understood by individual's participation in activities and / or environments that believes it can successfully perform the behavior of interest. Now the motivational processes, allow modify meanings of external influences to achieve the expectations of results of certain behavior and values of these results, and to modify the personal evaluation.8

The lowest rates of the items that make up the AP were concentrated in situations of negative experiences with ART and other negative affects natures, and they are found in another study that used the same scale items. "If the medicines are causing me bad effect", which had a mean response of 2.32 and "If I am with someone who I don't want to know that I have AIDS", with an average response of 3.18. Thus, even in this study these variables also have obtained the lowest average of the scale, they were still higher than those in the study cited.<sup>9</sup>

The variable "If the medicines are causing me a bad effect" refers the side effects of ARTs, which may be a factor of treatment interruption and also hinder adherence. However, some studies show a positive relationship between accession and these side effects, stating that people who meet the treatment feel more assiduously these effects over the them. 18-9

The physiological and emotional states of the people, affect the trial of their personal abilities. In addition, the domain of a given proposed, meet performance antiretroviral prescription even when the medicines are causing bad effect, it is perceived as a successful experience, by the fact that the person has been able to persevere in the creation and implementation of necessary actions and to overcome the obstacles encountered. This perception of success is one of the most effective sources for the development of the sense of effectiveness. However, the perception of having failed in their performance tends to undermine the self-efficacy conviction.8

The other variable of lowest average, "If I am with someone that I do not want to know that I have AIDS", relates to the social response to the AIDS epidemic and the stigmatization carried by disease, among

The stigmatized nature of the AIDS epidemic makes the revelation of the diagnosis of individuals for the other people, for fear of prejudice and discrimination, leading them to the occultation of the disease, in order to continue life without being accused and broken down, it is within the family, social or work; 15,22-3 with this, have a well developed ability to personal persuasion favors self-efficacy. People with a power of persuasion are able to successfully perform a proposed activity. These people tend to have greater self-efficacy and mobilize greater and more sustained efforts, but the reverse can also occur. 8

It can be said then, that even the study population has shown high levels of self-efficacy expectation, that expectation can change because self-efficacy is influenced and influences various daily situations, which can increase or decrease their levels.<sup>8,24.</sup>

## **CONCLUSION**

The high levels of self-efficacy expectations found in this study show that patients believe they are able to follow the requirements of ART, but with the emergence of some specific situations, for example, take the medicines close to someone who does not know their diagnosis of HIV/AIDS or if the drugs cause bad effects, the trial of their ability to fulfill the requirements tends to decrease. Thus, some situations should be diagnosed and focused by health professionals to patients in times of queries, aiming to help them overcome such situations.

The scale AP is easy to apply, and can also be used in clinical practice, with the aim of assessing the individual self-efficacy expectations of patients, allowing a work focused in the situations in which they are judged less able to comply with the prescription, helping them to develop mechanisms to cope with these situations, thus increasing the levels of self-efficacy and, consequently, the adherence to ART.

The scale can be used together with other assessing adherence and / or social support of people who have HIV / AIDS, for example, enabling a better understanding of the weaknesses that influence ART, but even being easy to apply, only a few studies using AE, which delimits further discussion of studies and comparisons. Thus, more research with its use is necessary.

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