

# Level of uncertainty in people living with HIV

## Abstract

**Introduction:** Worldwide, human immunodeficiency virus (HIV) infection continues to be an emerging public health problem. With the positive screening of this chronic degenerative disease, the virus generates physical, psychological, social and spiritual changes in people, that lead to uncertainty in the face of an uncertain future. Identifying the uncertainty in the patients, allows the care professional to plan integral interventions to favour the reduction of this process and can integrate well-being in the experience with their chronic condition and thus, have quality of life.

**Objective:** To determine the level of uncertainty in a group of people living with HIV.

**Method:** Quantitative, descriptive and transversal study. Non-probabilistic sampling of 30 people living with HIV, from the CONVIHVE Civil Association of Morelia, Michoacán. An identification card and the scale "Uncertainty in front of the disease" (MUIS) of Merle Mishel were applied, with a reliability of (.904). The statistical package SPSS V was used to analyze the data. 22.

**Results:** 83.3% of the total population are men and 16.7% are women, 32-39 years of age (36.6%) of whom 70% are men. Being single, 53.3% have a bachelor's degree. 60% report being employed. 30% of the population refers to having more than 10 years of diagnosis and less than 5 years in treatment 53.3%. 76.7% are Catholic. From the total of participants, 23.3% showed a low level of uncertainty, followed by a level of regular uncertainty with 26.7%, and 50% showed a high level of uncertainty.

**Conclusion:** The level of uncertainty in people living with HIV is high. It is necessary to carry out comprehensive interventions that favour the reduction of the level of uncertainty and thus improve the well-being and quality of life of people living with HIV.

**Keywords:** HIV-AIDS, uncertainty, person living with HIV

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## Introduction

According to the World Health Organization (WHO) and the Joint United Nations Program on HIV/AIDS (UNAIDS), it is reported that infection of the human immunodeficiency virus (HIV) remains a public health problem, given that in 2017, 36.7 million people were reported living with HIV worldwide.<sup>1,2</sup>

In Mexico, the National Center for the Prevention and Control of HIV and AIDS (CENSIDA) reported in 2016, 220 thousand people were living with HIV, with a prevalence of 15 to 49 years of age; notifying 12 thousand new HIV infections per year.<sup>3</sup>

With respect to the state of Michoacán, there is a registry of 5,768 people with HIV-AIDS, reported 893 new cases between 2014 to 2016, predominating the male gender between 20 and 39 years of age in average.<sup>4</sup> Being Morelia, Apatzingán and Lázaro Cárdenas the entities with higher incidence according to the Ministry of Health of Michoacán.<sup>5</sup>

Due to the ideological determinants that prevail in México, the population does not seek timely screening, due to the uncertainty of the diagnosis of living with HIV<sup>6</sup> The HIV infection generated in the person; anguish, fear, resentment, depression I have intolerance, in response to the experience of an uncertain prognosis, the cumulus of unfavourable feelings generated in the person; uncertainty about the future, living under this condition of life.<sup>7</sup>

At present, there are some theoretical perspectives for dealing with chronic disease situations resulting from research experiences. The theoretical foundation of this research is the mid-range theory of Nursing, by Merle Mishel on Uncertainty Facing Illness.

The uncertainty is a cognitive state that represents the inadequacy of the existing cognitive scheme, whose function is to help the interpretation of the facts arising from the disease. Merle H. Mishel in 1988 of fine to uncertainty as the inability to determine the meaning of the facts that relate to the disease and appears when the person making the decision is not able to give defined values to the objects or facts, or it is not able to predict precisely what results will be obtained.<sup>8</sup>

In the Mishel theory, it is emphasized that uncertainty arises when the person cannot structure the disease adequately due to lack of sufficient information. The uncertainty can be presented in the form of: Ambiguity, complexity or lack of information, not consistent information and unpredictability.<sup>9</sup> when the typology, familiarity and coherence of the circumstances increase, the degree of uncertainty decreases.<sup>10</sup>

Identifying the uncertainty in the face of chronic illness in people is essential so that care professionals can carry out comprehensive interventions to promote Quality of Life in them.<sup>11</sup> for this reason it is considered an important problem in the person living with HIV and its approach is fundamental.<sup>12</sup>

## Overall objective

Determine the level of uncertainty in a group of people living with HIV.

## Specific objectives

To identify the sociodemographic characteristics of the study population and to characterize it.

Identify the level of uncertainty in people living with HIV.

Correlating the level of uncertainty with sociodemographic characteristics.

## Material and methods of the study

**Study:** Quantitative. Descriptive and transversal design.

**Universe:** People living with HIV.

**Sample:** The sample was for convenience, so that 30 people from the CONVIHVE Civil Association from Morelia, Michoacán, participated.

**Sampling:** The technique for the collection of information was a card for the identification of sociodemographic characteristics of the participants of this investigation. To measure the Level of Uncertainty, Merle Mishel's Scale "Uncertainty versus illness" (MUIS) was used, adapted to Spanish by Torres, 2013 with a Cronbach's alpha of  $\alpha = 0.89$ . This scale measures the degree of uncertainty of patients with respect to diagnosis, treatment, relationship with care providers and planning for the future. This instrument has a Likert scale with scores from 1 to 5, where 1 is "totally disagree" and 5 is "totally agree", in which the level of agreement with the affirmations is measured. The total result of the scale is obtained by adding the score of each of the items, so that the higher score will have a higher level of uncertainty (NI). This score indicates that the categorization of the scores in the questions is as follows: scores 1 and 2 are related to a low level of uncertainty, scores 3 and 4 are related to the level of regular uncertainty and scores 4 and 5 are related to the level of uncertainty. High uncertainty (Table 1).

**Table 1** Scores of the uncertainty scale for disease

Level 1 y 2	NI <69	Low
Level 3 y 4	NI 69- 92	Regular
Level 4 y 5	NI 93- 115	High

\*Cut points from those indicated by Torres, 2013.

## Selection criteria

**Inclusion:** were people over 18 years living with HIV and that after informed consent they wanted to participate.

**Exclusion:** were people under 18 years living with HIV and people who did not want to participate in the study as well as people not belonging to the self-help group.

## Statistic analysis

A data matrix was made for the analysis through the statistical program Statistical Package for the Social Sciences (SPSS) V.22, as a first step we proceeded to verify the normality of the data with the Shapiro-Wilk statistical test, given that the  $<50$  For the analysis of sociodemographic variables, descriptive statistics were used, using frequencies of: mean, median, mode, standard deviation, use of percentages and frequencies.

For the fulfilment of the general and specific objective, inferential statistics was used, using nonparametric comparison tests using Pearson Chi-square.

## Results

In this section we present the results, which translates into the application of the identification card for the sociodemographic

variables and the escalation "level of uncertainty regarding the disease". For the present investigation, the level of statistical significance of  $p < 0.05$  is shown.

To determine the reliability of the "MUIS" instrument, a pilot test was carried out, and a consistency was obtained with the Cronbach's Alpha test of .904 on the full scale.

To observe the normality of the data, the Shapiro-Wilk test was performed, in which a statistical significance of .000 was obtained, respectively.

The total response is 83.3% (25) are men and 16.7% (5) are women in Table 2. The age ranges were obtained by the Sturges rule, with a prevalence of 32 to 39 years, 36.6% (eleven). 53.3% (16) participants have a bachelor's level of education, followed by 16.7% (5) high school. 76.7% (23) refers to being Catholic, in relation to marital status, 70% (21) are single, 20% (6). 60% (18) of the population is related to employees and 30% (9) is unemployed.

**Table 2** Sociodemographic variables of the study group

	Variable	f	%
1	Gender		
	Man	25	83.3
	Woman	5	16.7
	Total	30	100
2	Age		
	24-31	8	26.5
	32-39	11	36.6
	40-47	5	16.7
	48-55	3	10.1
	56-63	3	10.1
	Total	30	100
3	Scholarship		
	Without studies	1	3.3
	Primary	1	3.3
	High school	3	10
	High school	5	16.7
	Bachelor's degree	16	53.3
	Specialty	1	3.3
	Other	3	10
	Total	30	100
4	Religion		
	Atholic	23	76.7
	Jehovahs Witness	1	3.3
	Unbeliever	6	20
	Total	30	100
5	Labor situation		
	Unemployed	9	30
	Employee	18	60

Table Continued....

	Variable	f	%
	Retired	3	10
	Total	30	100
6	Civil status		
7	Years of Diagnosis		
	-1 año	4	13.3
	01-Mar	7	23.3
	04-Jun	8	26.7
	01-Oct	2	6.7
	+10 años		9
			30
	Total	30	100
8	Years in treatment		
	0-5	16	53.3
	06-Nov	7	23.3
	Dec-17	3	10
	18-23 4	4	13.3
	Total	30	100

\*Identification card for socio-demographic characteristics May, 2018.

30% (9) has more than 10 years of diagnosis, from 4 to 6 years, 26.7% (8) and 23.3% (7) from 1 to 3 years. There is 100% of the participants in the retroviral treatment, where 53.3% (16) have less than 5 years in the retroviral intake (Table 2).

Table 3 gives an answer to specific objective number two. It was identified that 23.3% (7) of the population reported having a low level of uncertainty, followed by 26.7%, (8) reported having a level of regular uncertainty and 50% (15) had a high level of uncertainty, according to the description of the scores of the uncertainty scale against the disease.

**Table 3** Level of uncertainty in the study group

Level of uncertainty	(n=30)	
	f	%
Low	7	23.3
Regular	8	26.7
High	15	50
Total	30	100

Scale result "Uncertainty in front of the disease" (MUIS) of Merle Mishel Mayo, 2018.

\*\*F, frequency; %, percentage

To respond to the objective number three that the letter says: correlate the level of uncertainty with the sociodemographic characteristics in the study group, then the results are described in Table 4.

Instrument "MUIS" brief version applied to people living with HIV participants in the CA study. CONVIHVE of Morelia, Michoacán, 2018.

Table 4 shows that the variables with the highest correlation of statistical significance is the sex variable, 53.3% (16) corresponds to

the male and these presented a high level of uncertainty; in relation to women, only 10% (3) presented a high level of uncertainty; with a statistical significance of .381 given by Chi-square. Followed by the age variable, in the range of 24 to 31 years of age, participants presented a high uncertainty level of 26.5% (8); in the range of 32-39 years of age, they presented a high level of uncertainty of 20% (6); with a Chi-square of .397 and 22 degrees of freedom. And finally in the variable schooling it can be seen that the participants of the undergraduate level presented a novel of regular uncertainty 26.7% (4), followed by 20% (3) with a high level of uncertainty. Chi-square shows the level of statistical significance that is 154.

## Discussion

**Following the results obtained, the following can be analyzed:**

Starting with the socio-demographic variables, it was found that the male gender was the majority in the sample, men who have sex with men (MSM), these results are the same as the statistical data presented by the Joint United Nations Program on HIV/AIDS (UNAIDS) In relation to age, the greatest number of people corresponds to the range of 24 to 39 years of age, these data coincide with that indicated by Chianca et al.<sup>13</sup>

In relation to the variable marital status, it was reported that most of the participants are single, due to the fact that most of them do not have a stable partner, as in the study by Vélez et al.<sup>14</sup>

Regarding the educational level, the study group refers to having a bachelor's degree, this result is similar to that reported by da Rodríguez et al.<sup>15</sup> in 2017 in their study population<sup>15</sup>; At present there is no official data at the World, National or State level that refer to the educational level that predominates in people living with HIV.

In relation to the work situation of the people in the study group, more than a third of them refer to being employed unlike the rest of the group, this has a logical explanation because people are at a productive age, according to the census national economic 2014 INEGI states that, Michoacán has an economic participation of 55.4% in men and 44.6% in women.<sup>16</sup> The religion variable revealed that the highest percentage of participants refer to being Catholic, this result is similar to the one presented by the National Survey on Religious Beliefs and Practices in Mexico,<sup>17</sup> although the religious panorama in the country has been modified, it can be pointed out that in Michoacán the Catholic religion still predominates.<sup>18</sup>

An important part in the prevention of HIV is the timely diagnosis and initiation of retroviral treatment, given that the study group refers to having more than 10 years of diagnosis, but in their entirety they have less than 5 years of having initiated the intake of drugs specialized in virus control. In Latin America and the world, HIV infection is a chronic disease, since the onset of antiretroviral therapy (ART) 18; universal access to ART is free and in México is not the exception, since the health secretary is the governing body to ensure through the fragmented system, effective control and distribution of ART, avoiding in people living with HIV the appearance of opportunistic infections and associated neoplasms.<sup>19</sup>

When applying the theory of uncertainty to the illness of nurse Michel M. (1988), the study group allows to observe the level of uncertainty in the face of an uncertain future in PLHIV; in the results it can be observed that half of the investigated showed a high level of

uncertainty, these levels are significant, could be by age and years of diagnosis.

When these results are compared with those obtained by Johnson and Hurtado in 2017, in older adults diagnosed with cancer, they were similar since more than half of their population of older adults have a high level of uncertainty.<sup>20</sup>

Given the above, PLHIV experience complex processes of personal transformation upon being diagnosed and living with a chronic disease,<sup>21</sup> knowing the level of uncertainty in people living with HIV, linked to the difficulty in coping with the symptoms of uncertainty in the face of evolution of the disease and the complexity of the treatment, allows care professionals to be a source of support in the interpretation of the facts arising from the disease.<sup>22</sup>

**Table 4** Level of uncertainty correlated to significant socio-demographic characteristics

Variable		Bajo		Regular		Alto		$\chi^2$	
		f	%	f	%	f	%	gl.	Sig.
Sex	Man	3	10	6	20	16	53.3	2	0.381
	Woman	1	3.3	1	3.3	3	10		
	Total	4	13.3	7	23.3	19	63.3		
Age	24-31	0	0	0	0		8	22	0.397
	32-39	2	6.7	3	10	6	20		
	40-47	0	0	2	6.7	3	10		
	Total	2	6.7	5	16.7	17	56.5		
Civil status	Single	10	20	7	33.3	4	20	2	0.681
	Total	3	20	5	33.3	3	20		
Scholarship	high school	1	6.7	2	13.3	0	0	8	0.154
	Bachelor's degree	1	6.7	4	26.7		20		
	Total	2	13.4	6	40		40		
Employment situation	Employee	3	20	5	33.3	3	20	2	0.681
	Total	3	20	5	33.3	3	20		
Years of diagnosis	0-5 years	10	13.3	2	13.3	2	13.3	8	0.668
	4-6 years	1	6.7	1	6.7	2	13.3		
	More than 10 years	1	6.7	2	13.3	0	0		
	Total	4	26.6	5	33.3	4	26.6		
Years in treatment	0-5	3	20	2	13.3	4	26.7	6	0.524
	06-Nov	0	0	2	13.3	1	6.7		
	Total	2	13.4	5	33.3	4	26.7		

\*f, frequency; %, percentage;  $\chi^2$ , pearson chi-square, gl, degrees of freedom; Sig, significance (asymptotic).

## Conclusion

In light of the results, it is concluded that the level of uncertainty in people living with HIV is high. What suggests to identify the need to carry out integral interventions that favour the well-being and the quality of Life and with it to achieve that the level of uncertainty can diminish.

Gomes in 2015 affirms that care professionals can reduce the degree of uncertainty in patients, making innovative and comprehensive interventions that are triangulated to the principles of nursing, mentioned by Merle H. Mishel in her Theory of Uncertainty the Chronic Disease.<sup>23</sup>

This work identifies the need for the care professional to implement care plans based on scientific evidence, and can be adapted to uncertainty as a resource in the person under this condition of life. This need is identified in Merle Mishel's theory, which proposes a nurse-person and nurse-context relationship, to understand, analyze and reflect on the implementation of new nursing care interventions.<sup>19</sup>

Therefore, the following suggestions are made:

1. Training for Health personnel so they can identify the uncertainty in people living with HIV, which allows them to make comprehensive care plans.
2. Achieve the strengthening of areas that are under-powered by

Nursing, as are traditional and complementary therapies that may be beneficial for people with chronic conditions who experience Uncertainty.

3. That the multidisciplinary team establish a treatment for the person with uncertainty, with the aim of reducing negative effects on the person's life, increasing the quality of life.
4. That the care staff integrate people with uncertainty for the management, control and monitoring of uncertainty, so that they can do group tasks.
5. Investigate the level of uncertainty in the primary "direct family" caregiver of the person living with HIV.

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## Conflicts of interest

The authors declare no conflict of interest.

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