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# DETERMINANT FACTORS OF THE LACK OF ADHERENCE TO ANTIRETROVIRAL TREATMENT IN WOMEN CARRIERS OF THE HUMAN IMMUNODEFICIENCY VIRUS, ATTENDED AT THE HOSPITAL OF INFECTOLOGY "DR. JOSÉ DANIEL RODRÍGUEZ MARIDUEÑA" IN THE CITY OF GUAYAQUI

Dra. Rita Garcia Calvo[1], Dra. Dora Hasang Morán[2], Dr. Presley Fierro Aguilar[3], Dra. Freyita Castro Quiroz[4], Dr. Darío Vargas Pico[5], Dr. Javier Jiménez Carrera[6], Dra. Mónica Erazo Morcu[7]

*[1]Research Professor, Msc, médico. (Main Author), Universidad Católica, Santiago De Guayaquil,*
*emmydaniela21@hotmail.com, 0000-0003-1483-245X*
*[2]Msc, médico Infectologo. (Main Author)*
*do_hasang@hotmail.com, 0000-0002-7393-124X*
*[3]dr.presleyfierro@gmail.com, 0000-0001-62457282*
*[4]dra.anabel.castro@gmail.com, 0000-0001-8323-9655*
*[5]darvarjp@hotmail.com, 0000-0003-3390-3452*
*[6]Javierjimenez3125@gmail.com, 0000-0002-9175-809X*
*[7]monicaeramormd@hotmail.com, 0000-0002-3188-0608*

## ABSTRACT

INTRODUCTION: Few studies examine the conditioning factors of non-adherence to antiretroviral (ARV) treatment in the context of vulnerability in women carriers of the human immunodeficiency virus (HIV), many of which enhance gender inequality and have repercussions on the clinical, emotional, and socioeconomic evolution of this group. OBJECTIVE: To identify conditioning factors for the lack of therapeutic adherence to ARVs in women with HIV at the Hospital of Infectology José Daniel Rodríguez Maridueña (HIDJDRM) in the city of Guayaquil-Ecuador. METHOD: A descriptive, cross-sectional study with a qualitative approach was conducted from October 2021 to March 2022, in 85 HIV carrier women on ARV treatment between 20 and 50 years of age enrolled in the HIJDRM. A questionnaire was designed and applied with socio-economic-educational-cultural-quality of life information and demographic data related to the CD4 lymphocyte curve and HIV viral load; patients were classified into two groups: Group 1 "Adherent" and Group 2 "Non-adherent". RESULTS: 45% (n=38) of the women studied belonged to the "non-adherent" category, factors such as mood disorders, polypharmacy, family burden, poverty, discrimination, and social exclusion were present in 100% (n= 38) of the "Non-adherent" cases, while low cognitive development, economic dependence, physical abuse, and problematic substance use were identified in 34% (n=13) of them. CONCLUSIONS: Gender inequity recognized through various forms of discrimination such as the feminization of poverty, traditional practices of abuse of women and girls, lack of access to education and health promotion, and overload of family responsibilities, among others, are related to the lack of adherence to ARV treatment in the female HIV-positive population attended at HIJDRM.

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## RESUMEN

INTRODUCCIÓN: Son pocos los estudios que examinan los factores condicionantes de la falta de adherencia al tratamiento antirretroviral (ARV) en contexto de la vulnerabilidad en las mujeres portadoras del virus de inmunodeficiencia humana (VIH), muchos de ellos potenciadores de la inequidad de género y que repercuten en la evolución clínica, emocional y socioeconómica de este grupo. OBJETIVO: Identificar factores condicionantes de la falta de adherencia terapéutica a los ARV en mujeres con VIH del Hospital de Infectología José Daniel Rodríguez Maridueña (HIDJDRM) de la ciudad de Guayaquil-Ecuador. MÉTODO: Se realizó un estudio descriptivo, transversal, con enfoque cualitativo, durante los meses de octubre 2021 a marzo 2022, en 85 mujeres portadoras del VIH en tratamiento ARV con edades comprendidas entre 20 y 50 años captadas en el HIJDRM. Se diseñó y aplicó un cuestionario con información socio-económico-educacional-cultural-calidad de vida y datos demográficos relacionado con la curva de linfocitos CD4 y Carga viral VIH; se clasificó a las pacientes en dos grupos: Grupo 1 “Adherente” y Grupo 2 “No adherente”. RESULTADOS: El 45% (n=38) de las mujeres estudiadas pertenecieron a la categoría de “No adherente”, factores como los trastornos del estado de ánimo, polifarmacia, carga familiar, pobreza, discriminación y exclusión social, estuvieron presentes en el 100% (n= 38) de los casos “No adherentes”, mientras que un bajo desarrollo cognoscitivo, dependencia económica, maltrato físico y el consumo problemático de sustancias se identificaron en un 34% (n=13) de los mismos. CONCLUSIONES: La inequidad de género reconocida a través de varias formas de discriminación como la feminización de la pobreza, las prácticas tradicionales de abuso a las mujeres y niñas, la falta de acceso a la educación y promoción de salud, la sobrecarga de responsabilidades familiares, entre otras, se relacionan con la falta de adherencia al tratamiento ARV de la población femenina portadora del VIH atendida en el HIJDRM.

## INTRODUCTION

One of the major problems faced by people with HIV is the adaptation to ARV treatment [1-4]. Focusing on a large literature on adherence to ARVs, elements with greater affectation in women with HIV and that evaluate the association of medical determinants with social and gender inequity and its impact on the clinical and emotional status of those affected are analyzed [5-9].

Several studies have shown a high incidence of abandonment of antiretroviral therapy, especially in female patients, because they live in more unequal socioeconomic, educational, and health conditions, a situation in which several risk factors tend to converge: the area of origin, cultural roles within the family and community, understanding of health, and disease, the type of affiliation to the health system, jobs, or “ways of earning a living”, income level, and access to economic resources such as property, and credit, among other factors [10-13].

Ecuador has reported 45,0561 cumulative cases of HIV, 66% of people living with HIV/AIDS (PLWHA) on antiretroviral treatment corresponds to men and 34% of women, with 80% and 82%, respectively, showing a suppressed viral load (<1000 copies/ml) [14]. Achieving viral suppression is the goal of ARV therapy and has become a guarantee for PLWHA to maintain good health status, in addition to reducing the likelihood of HIV transmission. However, at the zonal level, a total of 13453 PLWHA with ARVs and 1395 treatment abandonments have been reported, as well as the Infectious Diseases Hospital, a national reference center for the care of patients with HIV/AIDS, recorded around 2000 HIV consultations in 2021, with frequent admissions due to exacerbation or the appearance of opportunistic diseases resulting from immunological depletion and a percentage of them with therapeutic abandonment, which decreases survival and increases mortality in this group.

*Treatment adherence* is understood as active involvement and voluntary collaboration of the patient in a mutually agreed behavioral development, to produce a desired therapeutic result. The latter emphasizes the psychological

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components, especially the volitional components of the patient, which induce him/her to structure a compliance behavior [15].

## METHODOLOGY

A descriptive, cross-sectional study with a qualitative approach was conducted during the period October 2021 to March 2022, in 85 women carriers of HIV on ARV treatment for more than 6 months and presenting alerts of failure of pharmacological adherence, aged between 20 and 50 years, captured in the HIJDRM. The adherence investigation was carried out through the objective direct method by reviewing the CD4 curve, HIV viral load, and the medical record to contrast the clinical evolution of the patient, estimating the lack of viral suppression, the decrease or stop of the CD4 level or the appearance of other opportunistic infections as warning indicators of failure to adhere to ARVs in the absence of pharmacological interaction or known initial resistance to these drugs, from which the patients were classified into two groups: Group 1 “Adherent” and Group 2 “Non-adherent”. As an indirect method, a simple qualitative questionnaire structured in several sections based on the Simplified Medication Adherence Questionnaire (SMAQ) [16] was designed and applied to Group 2, which also includes socioeconomic-educational-cultural-quality of life data and demographic information. These data were processed and the variables were analyzed with the SPSS program.

## RESULTS

Out of a universe of 103 women PLWHIV enrolled, 85 patients on ARV treatment were followed up. Forty-five percent of the women on ARV treatment were classified as “non-adherent” [Table 1] using the criteria of poor clinical evolution with spikes in HIV viral load and no increase in CD4 lymphocytes, presenting CD4 controls with figures below 200 lymphocytes and viral load above 50 copies/ml. Sixty-one percent of the patients lived in the province of Guayas and 39% came to the hospital referred from further away from the Ecuadorian coast. Fourteen percent of the PLWHA reported having a partner, while more than 75% reported having a family burden, 76% of them being younger than 40 years of age [Table 2].

**Table 1. HIV-POSITIVE WOMEN AND ADHERENCE TO ARV TREATMENT.**

| HIV-positive women on ARV treatment | Nº | % | Category |
|---|---|---|---|
| CV <50 copies and/or CD4 lower >200 cells. | 47 | 65 | Group 1: Adherent |
| CV >50 copies and/or CD4 lower <200 | 38 | 45 | Group 2: Non-adherent |
| Total patients | 85 | | |

Source: Own elaboration.

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**Table 2. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PLWHA WITH LACK OF ADHERENCE TO ARV TREATMENT.**

| Socio-Demographic Characteristics | Nº | % |
|---|---|---|
| **Source** | | |
| Guayas | 23 | 61 |
| Other provinces | 15 | 39 |
| **Marital Status** | | |
| Single | 4 | 12 |
| Free union | 6 | 14 |
| Separated | 27 | 71 |
| Widow | 1 | 4 |
| **Age** | | |
| 20-30 years | 13 | 34 |
| 31-40 years | 16 | 42 |
| 41-50 years | 9 | 24 |
| **Total Patients** | 38 | |

Source: Own elaboration.

According to the economic level of the patients, 68% of the women only had primary education and the same percentage dedicated themselves exclusively to housework, 37% reported earning less than the basic salary while 32% did not receive any salary [Table 3] and to the question "Have you had economic difficulties when going to the health unit to pick up your medications? 97% always had difficulty getting to the health unit to pick up ARVs and medical check-ups because they have other economic responsibilities for maintenance, represented by 82% of this sample [Table 4].

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**Table 3. SOCIO-ECONOMIC, EDUCATIONAL AND CULTURAL CHARACTERISTICS OF PLWHA WITH LACK OF ADHERENCE TO ARV TREATMENT.**

| Features | N | % |
|---|---|---|
| **Financial income** | | |
| Less than basic | 14 | 37 |
| Base salary | 9 | 22 |
| Higher than basic | 3 | 9 |
| None | 12 | 32 |
| **Occupation** | | |
| Housewife | 26 | 68 |
| Public employee | 5 | 14 |
| Private employee | 7 | 18 |
| **Instructional level** | | |
| Primary | 26 | 68 |
| Bachelor | 11 | 28 |
| Superior | 1 | 3 |
| **Religion** | | |
| Catholic | 23 | 61 |
| Evangelical | 12 | 32 |
| Others | 3 | 7 |
| **Total de Patients** | **38** | |

Source: Own elaboration.

**Table 4. QUESTIONS RELATED TO THE ECONOMIC FACTOR IN PLWHA WITH LACK OF ADHERENCE TO ARV TREATMENT.**

| Financial income | Always | | Sometimes | | Few times | | Never | |
|---|---|---|---|---|---|---|---|---|
| | Nº | % | Nº | % | Nº | % | Nº | % |
| Have you encountered financial difficulties when picking up your medications at the health unit? | 14 | 37 | 12 | 32 | 11 | 28 | 1 | 3 |
| Do you receive financial assistance from anyone? | 0 | 0 | 5 | 14 | 26 | 68 | 7 | 18 |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Do you have financial responsibility for household members (children, family)? | 27 | 71 | 4 | 11 | 0 | 0 | 7 | 18 |
| **Total patients** | **38** | | | | | | | |

Source: Own elaboration

In the assessment of the degree of discrimination and exclusion, almost half of the patients studied, 94% reported receiving psychological abuse, 58% reported having received physical abuse, and in response to the question "Do you feel discriminated against for being a carrier? 80% of the PLWHA reported feeling discriminated against or excluded because of their medical condition [Table 5].

**Table 5. DISCRIMINATION, MALTREATMENT, AND SOCIAL EXCLUSION IN PLWHA WITH A LACK OF ADHERENCE TO ARV TREATMENT.**

| **Support and discrimination: Social Environment** | **Never** | | **Always** | | **Sometimes** | | **Only once** | |
|---|---|---|---|---|---|---|---|---|
| **Nº** | | **%** | **Nº** | **%** | **Nº** | **%** | **Nº** | **%** |
| Are you currently receiving psychological abuse? | 3 | 6 | 8 | 22 | 19 | 51 | 8 | 22 |
| Do you receive physical aggression? | 16 | 42 | 3 | 9 | 10 | 25 | 9 | 24 |
| Do you feel discriminated against/ excluded because you are HIV positive? | 7 | 20 | 17 | 45 | 11 | 28 | 3 | 7 |
| **Total patients** | **38** | | | | | | | |

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Source: Own elaboration.

In one of the questionnaires assessing the level of self-esteem of the patients, do you feel low morale? This was due to the degree of self-esteem, discouragement, and sadness, which reached 87% in this group; however, 77% of the PLWHA denied having suicidal thoughts when asked the question: "Have you ever felt like committing suicide? [Table 6].

**Table 6. ASSESSMENT OF THE LEVEL OF SELF-ESTEEM IN VPPs WITH LACK OF ADHERENCE TO ARV TREATMENT.**

| **MENTAL AND PSYCHOLOGICAL EVALUATION** | **Never** | | **Always** | | **Sometimes** | | Few times | |
|---|---|---|---|---|---|---|---|---|
| | **Nº** | **%** | **Nº** | **%** | **Nº** | **%** | **Nº** | **%** |
| Do you feel low morale? | 7 | 19 | 10 | 25 | 12 | 33 | 9 | 23 |
| Do you feel sad? | 5 | 13 | 10 | 25 | 15 | 40 | 8 | 22 |
| Have you ever felt like committing suicide? | 29 | 77 | 1 | 3 | 5 | 12 | 3 | 8 |
| **Total patients** | **38** | | | | | | | |

Source: Own elaboration.

To the question "Do you receive affection?", 79% responded "always" related to affection from their partner, children, and other relatives; however, regarding childcare support, 41% reported not having support from their spouse or any relative [Table 7].

**Table 7. FAMILY SUPPORT FOR PLWHA WITH LACK OF ADHERENCE TO ARV TREATMENT.**

| **Family support** | **Always** | **Sometimes** | **Never** | **No children** |
|---|---|---|---|---|

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Nº** | | **%** | **Nº** | **%** | **Nº** | **%** | **Nº** | **%** |
| Do you receive Affection for the people who live with you? | 7 | 19 | 30 | 76 | 1 | 3 | 0 | 0 |
| Do you receive childcare support if you have children? | 4 | 12 | 13 | 34 | 16 | 41 | 5 | 13 |
| **Total patients** | **38** | | | | | | | |

Source: Own elaboration.

## DISCUSSION

Few studies examine the risk factors for abandonment or failure to adhere to ARV treatment in HIV-positive women, applying a gender approach and vulnerability measurement.

The World Health Organization in 2016 [4] defined key populations and groups in situations of vulnerability for HIV to focus attention on the usual behavior of people in these groups, as well as on the legal and social barriers that deepen their vulnerability, however, women were not included as part of these priority care groups.

In our study, non-adherence to ARVs was high (45%) and most women living with HIV share social characteristics of vulnerability due to the inequity and social discrimination they suffer and which constitute barriers to equitable access to health services, thus leading to irregularity or abandonment of ARV treatment. Some authors report similar results in this context [17-22].

A study carried out in Spain [23] showed that 84% of HIV-positive women had optimal adherence to ARV therapy, but among PLWHA with suboptimal/very poor adherence, low educational level (22.3%), foreign origin (55% Africa), worse social situation (59.1% homeless patients) or employment status (22.5% unemployed) were observed.

A group of researchers in Mexico [24] claim that *"the gender perspective is a useful tool to assess whether the care provided to people with HIV is equitable and favors equal treatment (...). The result of a review under this approach will allow making proposals to improve the regulatory framework, as well as planning or reorienting public policies for the equal care of groups of women/girls/adolescents, trans women".*

The difference between this study and other research is that methods were used to identify the causes of failure to adhere to ARV treatment with a medical and gender anthropological approach to the particular context and behavior of Ecuadorian women living with HIV, which is essential for health care providers to be aware of the need for psychoeducational interventions for those patients who require effective tools to face a series of risks and prejudices from the environment that surrounds them. Biopsychosocial, cultural, economic, discrimination and exclusion aspects were considered, and not only the correct practice of taking ARVs and having a planned medical regimen. Further research is needed to determine the presence and weight of these same factors in the group of women adherents to ARV therapy.

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## CONCLUSION

In the present study, the women with HIV and ARV treatment who were "non-adherent" revealed conditioning factors of vulnerability, many of which are factors that enhance gender inequity and have repercussions on the clinical, emotional, and socioeconomic evolution of this group, since they constitute limiting factors for equitable access to health services, leading to irregularity or abandonment of ARV treatment and, consequently, deterioration in the quality of life. These specific gender differences, which are more noticeable in HIV disease conditions, should be taken into account when establishing strategies for the proper management of adherence to ARV treatment in compliance with the 90-90-90 objective in certain population groups.

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