

Comparison of comorbidities prevalence in patients with HIV vs non HIV

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Introduction:

USF Arte Nova (USFAN) is inserted in the Baixo Vouga ACES and serves a population of 13086 users. In this population, 29 people have been diagnosed with Human Immunodeficiency Virus (HIV) based on data collected in 2021.

HIV infection can contribute to the development of complications related to both the disease and its treatment, such as mental health, sexually transmitted diseases, obesity, hypertension, neoplasms, heart disease, and social problems. [1,2,3]

Therefore, this study's purpose was to explore the association of being HIV positive with different medical complications, as the ones mentioned before.

Methods:

All the comorbidities presented before were analyzed as binary variables using the R tool version 4.2.0 and the significance level used was 0.05.

The prevalences of the different variables by group (HIV vs non-HIV) were calculated and tested through the chi-square test. The association effect was assessed using Odds Ratio (OR) and its confidence interval. If the variables are directly associated, the OR is greater than 1; if the variables are inversely associated, the OR is less than 1; if the OR is equal to 1, the association effect is null. [4]

Results:

In the HIV population, the comorbidities with lower prevalence compared to the non-HIV population were Depressive Disorder and Sleep Disorder, whose $OR < 1$. However, the decreased prevalence of these two was not statistically significant, as shown in Table 1.

Based on the p-values obtained, it was observed that the prevalence of feeling anxious/nervous/tension, ne/other psychosis, male syphilis, altered lipids, obesity, Hodgkin's disease/lymphoma, malignant skin neoplasm, ischemic heart disease without angina, acute myocardial infarction and tuberculosis were statistically significant in HIV population.

Discussion:

Comparing the prevalence of comorbidities between the HIV and non-HIV population, it was found that the HIV population had a higher incidence in most comorbidities under study. However, Depressive and Sleep Disorder had the lowest prevalence in the HIV population. This observation is not in accordance with the current literature. [3,5,6,7,8,9]

However, the data analyzed was from 2021, so levels of Depressive and Sleep Disorder may be increased in the general population due to the pandemic.

The events assessed are rare for the non-HIV population which becomes a limitation of this study as it leads to imprecise estimates of the association effect and in order to improve the accuracy of the results, the sample size could be increased.

Keywords:

HIV, comorbidities, USF Arte Nova, comorbidity prevalence

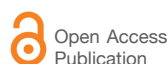
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Conflict of interest:

The authors declare no conflict of interests

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Table 1 - Comparison of prevalence among the various comorbidities

	HIV (n=92)	Non-HIV (n= 13057)	Prevalence ratio	CI (95%)	Attribute prevalence	CI (95%)	OR	CI (95%)	P- Value
DEPRESSIVE DISORDER	2	997	0.91	0.24, 3.48	-0.66	-9.90, 8.57	0.91	0.22, 3.81	1.000
ANXIETY DISORDER/ANXIETY STATE	2	737	1.22	0.32, 4.66	1.25	-7.98, 10.48	1.24	0.29, 5.22	0.678
SLEEP DISTURBANCE	1	481	0.94	0.14, 6.44	-0.24	-6.88, 6.41	0.93	0.13, 6.88	1.000
FEELING ANXIOUS/NERVOUS/ TENSION	2	49	18.38	4.69, 72.04	6.52	-2.70, 15.74	19.66	4.55, 84.97	0.006
NEUROSIS/OTHER PSYCHOSIS	1	4	112.56	12.97, 976.81	3.42	-3.22, 10.06	116.54	12.63, 1075.70	0.011
PERSONALITY DISORDER	1	26	17.32	2.43, 123.41	3.25	-3.39, 9.89	17.90	2.35, 136.48	0.058
HEPATITIS B	1	34	13.24	1.87, 93.54	3.19	-3.45, 9.83	13.68	1.81, 103.42	0.075
CERVICAL DISEASE NE	1	89	5.06	0.73, 35.10	2.77	-3.88, 9.41	5.20	0.70, 38.66	0.182
MALE SYPHILIS	4	2	900.48	171.59, 4725.56	13.78	1.23, 26.33	1044.40	182.92, 5963.04	<0.001
HTN	7	2544	1.24	0.65, 2.36	4.65	-10.94, 20.24	1.31	0.56, 3.08	0.486
ALTERATION IN LIPIDS	8	160	22.51	12.24, 41.41	26.36	10.09, 42.63	30.71	13.40, 70.36	<0.001
OBESITY	5	163	13.81	6.13, 31.10	15.99	2.24, 29.74	16.48	6.21, 43.73	<0.001
NON-INSULIN DEPENDENT DIABETES	1	167	2.70	0.39, 18.61	2.17	-4.47, 8.81	2.76	0.37, 20.38	0.313
MALIGNANT COLON/ RECTUM NEOPLASM	1	49	9.19	1.31, 64.33	3.07	-3.57, 9.71	9.48	1.26, 71.06	0.241
HODGKIN'S DISEASE/ LYMPHOMA	2	18	50.03	12.16, 205.87	6.76	-2.46, 15.98	53.66	11.87, 242.63	<0.001
MALIGNANT SKIN NEOPLASM	2	51	17.66	4.51, 69.14	6.51	-2.72, 15.73	18.89	4.38, 81.54	<0.001
ISCHEMIC HEART DISEASE WITHOUT ANGINA	2	107	8.42	2.18, 32.48	6.08	-3.15, 15.30	8.97	2.11, 38.18	0.010
ACUTE MYOCARDIAL INFARCTION	2	57	15.80	4.05, 61.68	6.46	-2.76, 15.68	16.89	3.92, 72.72	<0.001
PROBLEM DUE TO ILLNESS OF FATHER/MOTHER/ FAMILY MEMBER	1	42	10.72	1.53, 75.30	3.13	-3.52, 9.77	11.07	1.47, 83.22	0.091
POVERTY / ECONOMIC PROBLEM	1	28	16.08	2.26, 114.28	3.23	-3.41, 9.88	16.62	2.19, 126.39	0.062
TUBERCULOSIS	2	16	56.28	13.55, 233.79	6.77	-2.45, 16.00	60.38	13.24, 275.41	<0.001

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