2023

SUMMARY **REPORT**

Biobehavioral Survey (BBS) among Venezuelan Migrants living in Lima/Callao and Trujillo

IOM UN MIGRATION

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

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SUMMARY REPORT

Biobehavioral Survey (BBS) among Venezuelan Migrants living in Lima/Callao and Trujillo

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A. INTRODUCTION

Visit to temporal shelter in Comas Perú 2023 | ©OIM Perú

Historically, human migrations and mobilizations have affected different societies around the world.[1] According to the most recent report of the International Organization for Migration (IOM) released in 2022, estimates calculated from 2000 to 2020 asserted that 281 million people had migrated from their home countries and cities. This represents 3.6% of the world's population.[1] Venezuela is the Latin American country with the highest migration rate in the region.[2] The current crisis in Venezuela has noticeably affected these migration flows. According to data from 2021, nearly 5.6 million Venezuelans left their country. Of these, 85% moved to other countries in Latin America and the Caribbean.[3] According to data from the Refugees and Migrants Working Group (RMWG), Peru receives the second greatest number of Venezuelan migrants, after Colombia. [4] As of late 2021, there were an estimated 1.29 million Venezuelan migrants and refugees living in Peru, a number that is expected to reach 1.56 million by the end of 2022. [3]

There are several social determinants of health that have negatively affected Venezuelan migrants living in Peru (e.g., employment, immigration status, COVID-19, access to health care services, etc.). [5-9] At the same time, we know that HIV is a public health problem in Peru, and while its prevalence in the general adult population hovers around 0.4%, this epidemic is concentrated in more vulnerable populations, such as men who have sex with men (MSM) and transgender women, with a prevalence of 10% and 30%, respectively. [10-12] Additionally, access to health services in Peru to receive care for HIV is a major problem among people living with HIV/AIDS (PLWHA), including migrants, due to social determinants that hamper and delay the start of antiretroviral treatment, as well as the stigma and discrimination faced by people living with HIV. [11,13,14]

The purpose of this survey is to describe the sociodemographic characteristics, HIV risk behaviors, health status, and access to services among the migrant population. These objectives are essential for planning, implementation, and access to health services. Also, to support local HIV and syphilis surveillance efforts, ensuring that evidence is used to develop programs and inform policy decisions on these diseases for Venezuelans living in Peru. Finally, this survey provides estimates on the prevalence of HIV among the general adult population (≥ 18 years old) of Venezuelan migrants living at two sites in Peru, Lima/Callao and Trujillo, as well as generating preliminary estimates of knowledge of HIV status, access to antiretroviral therapy, and viral load suppression (VLS), according to the care continuum following the guidelines proposed by UNAIDS (95-95-95) among the general population of Venezuelan people living with HIV (PLWHA). Finally, describing the sociodemographic characteristics, risk behaviors for acquiring HIV, the health situation, and access to services of the migrant population is essential for the planning, implementation, and access to health services that adequately respond to this population needs.

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2. METHODOLOGY

Prior to gathering information through the biobehavioral survey applied at the enrollment sites, a formative assessment (FA) was conducted in Lima/Callao and Trujillo. The FA involved focus group (FG) discussions with key informants among migrant Venezuelans and in-depth interviews (IDI) with health service providers and authorities from the Ministry of Health (MOH). The FGs and IDIs informed the survey implementation process, the sites chosen for participant enrollment, adequate compensation for participation, and barriers of access to health care.

In all, FG were performed, including men and women, and people belonging to HIV vulnerable populations such as PLWHA, MSM, and transgender women, and ten in-depth interviews were carried out with health providers and MOH authorities, as well as five focus groups.

After performing the FA, the survey sites were identified, along with the first seeds. The seed is a participant that is recruited by investigators or survey staff. All Respondent-Driven Sampling (RDS) surveys begin with their selection. The survey was implemented through the seed's enrollment. The study sample size was powered to estimate HIV prevalence assuming a 1% HIV prevalence among the general population, alpha 0.5%, margin of error of 0.005 and a design effect of two. The survey sample was 6,200 participants, 4,650 in Lima/Callao and 1,550 in Trujillo. These sites were selected because they have received the greatest number of Venezuelan migrants and reported the highest HIV prevalence among the migrant and local population, according to information provided by the National Superintendency of Migration and the data on prevalence by region from the Directorate of Prevention and Control of HIV, Sexually Transmitted Infections and Hepatitis (DPHIV) [15]. Participants had to meet the following criteria for inclusion: 1) Being a Venezuelan migrant; 2) Aged 18 or older; 3) Migrated to Peru in 2015 or later; 4) Residing in Peru; 5) Be able to communicate in Spanish; 6) Be able to provide verbal informed consent; 7) Have and present a valid peer recruitment coupon (excluding seeds). The procedures used for the survey involved the administration of a structured questionnaire that included questions on demographics and social information, sexual risk behaviors, alcohol and drug use, mental health, stigma, discrimination, and violence, as well as health service use, COVID-19 symptoms, and HIV testing history [23-27]. Rapid testing for HIV/syphilis was conducted using Bioline™ HIV/Syphilis Duo dual rapid test. Confirmatory testing used Geenius™ HIV ½ confirmatory assay for HIV, and ARCHITECT Syphilis TP test for syphilis. Results were provided to participants during the second visit.

The participants were enrolled through respondent-driven sampling (RDS). Purposive sampling was used to recruit people belonging to the migrant population who not only meet the inclusion criteria but had a broad social network that varied their characteristics in terms of sex, education level, NGO participation, etc. These individuals were called seeds, eight seeds were allotted for Lima/Callao and six for Trujillo. After participating in the survey, they received three coupons to invite another three Venezuelan migrants to participate. The enrollment speed was adjusted by adding more seeds at each site and providing four coupons instead of three. By the end of enrollment, there were 13 seeds in Lima/Callao and 11 in Trujillo who were able to achieve the goal according to the assigned sample for each site. Data collection in Lima was of nine months (from November 09th,2021 to July 27th,2022), and six months for Trujillo (from November 17th,2021 to April 28th,2022).

Data processing and analysis was performed using Stata version 16.0 software (StataCorp. 2016. Stata Statistical Software: Release 16. College Station, TX, United States of America). We cleaned the database looking for missing data, duplicate data, recoded variables, and conversion variables, depending on the analysis to be performed. For population estimates, we used RDS-Analyst (RDS-A) software, a statistical package designed for the processing and analysis of RDS data. (15) Estimates by site were based on the report of the National Superintendency of Migrations, with 694,068 migrants in Lima/Callao and 52,902 migrants in Trujillo according to information as of July 2022. The adjusted analysis was performed by site using Giles-SS with 500 bootstraps. The aggregate estimates were determined using the adjusted estimates for each site and the population size estimate for each city.

This project was reviewed in accordance with CDC human subjects research protection procedures and was determined to be non-research. The survey protocol and tools were reviewed in Peru by the ethics committee at Via Libre (Comite the Bioetica de Via Libre).

3. RESULTS: Our main findings are detailed below:

Fig. 1. Recruitment Networks in Lima/Callao, Peru-2022

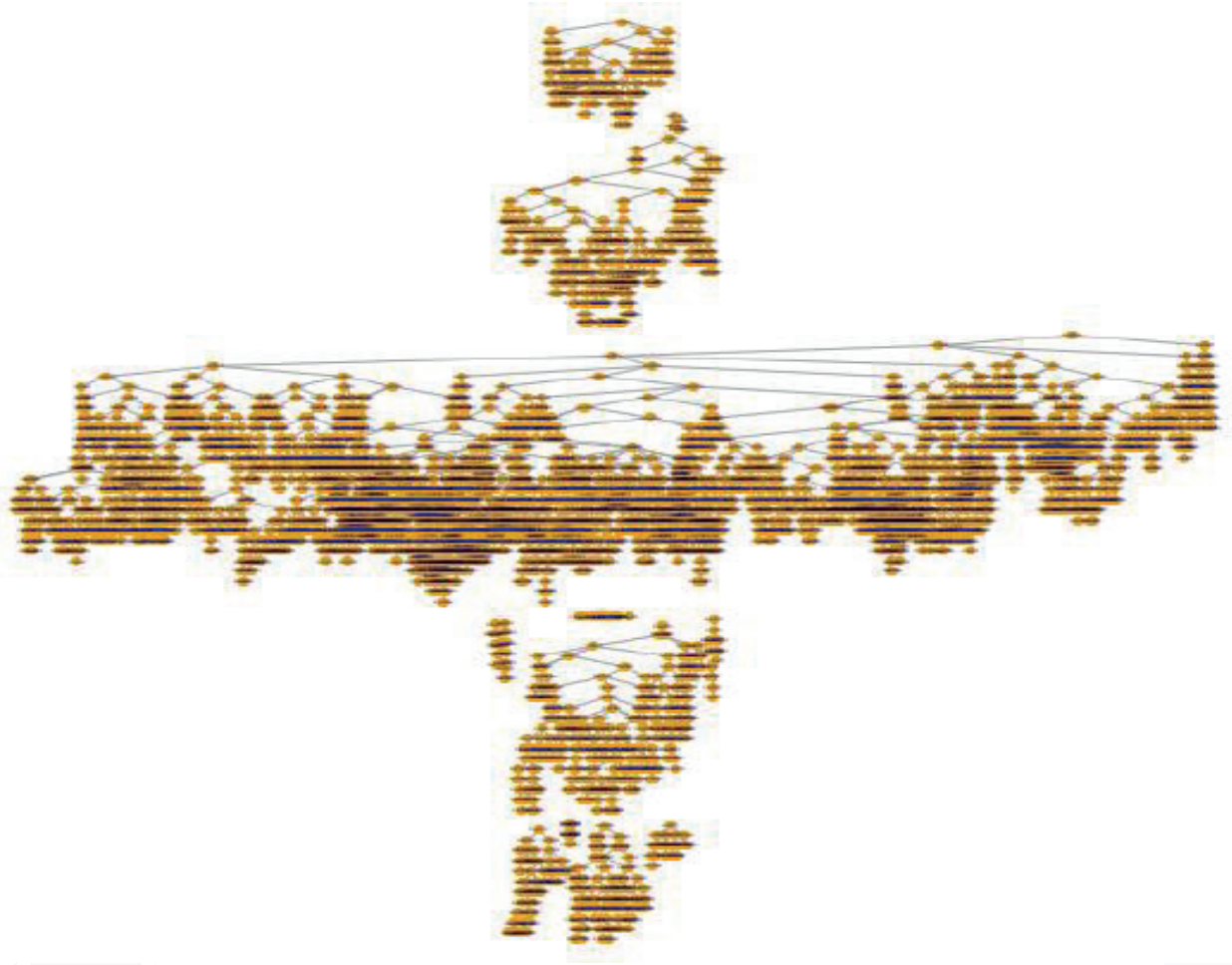

Fig. 1 shows the graph of networks resulting from recruitment in Lima/Callao using the RDS methodology. We can see that, of the 13 seeds, 1 led to the greatest number of participants, while another 4 played an important but lesser role, and the rest produced a much lower number of recruits or no recruits at all.

Fig. 2. Recruitment Networks in Trujillo, Peru-2022

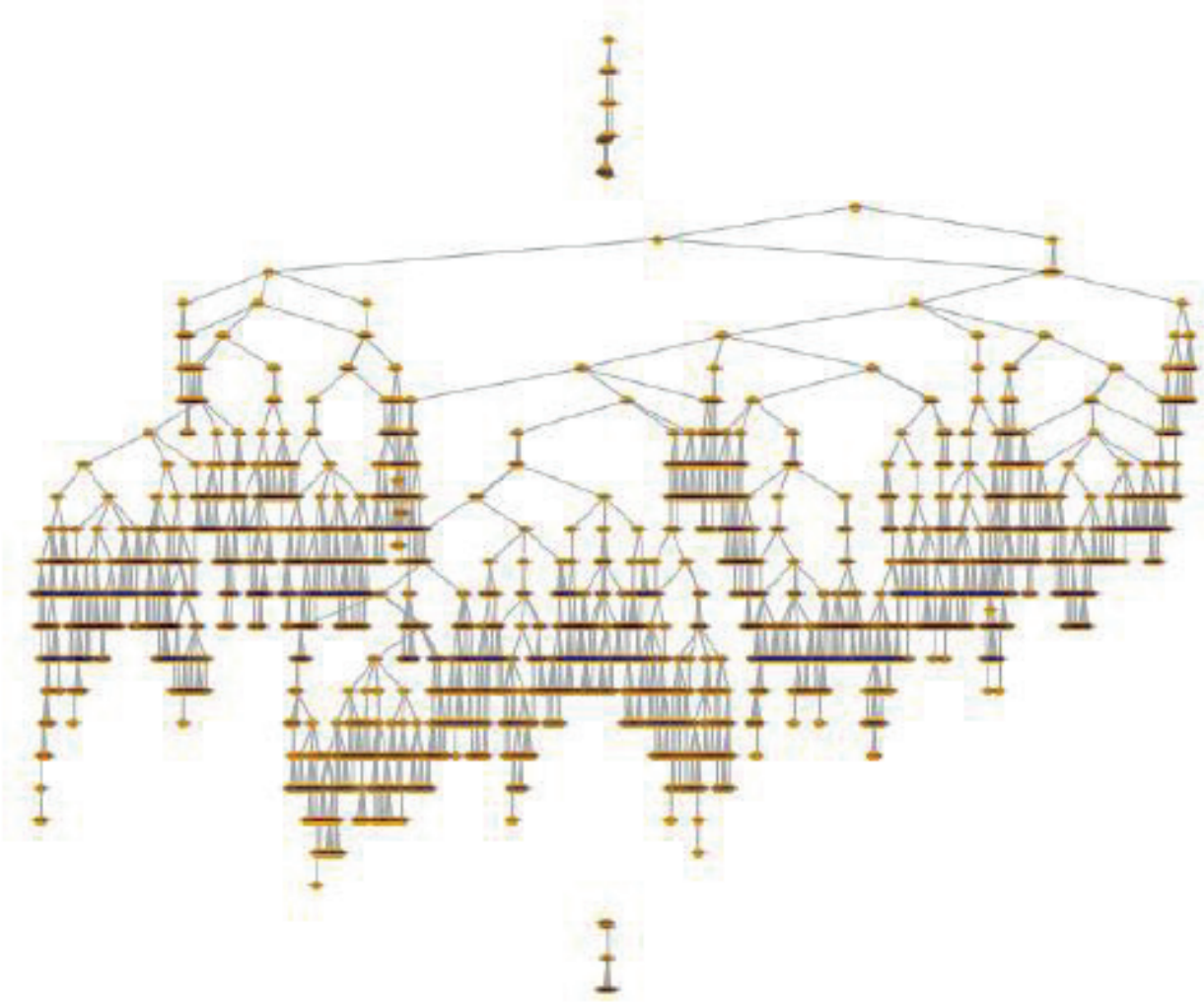

Fig. 2 shows the graph of networks resulting from recruitment in Trujillo. We can see that, of the 8 seeds, 1 led to the vast majority of participants, while another 2 played a minor role, and the rest produced no more participants.

Table 1. Sociodemographic Characteristics of Venezuelan Migrants Living in Lima/Callao and Trujillo, Peru-2022.

	Lima/Callao (n=4650)				Trujillo (n-1550)				Total (N=6200)			
	n	Sample Proportion %	Population Estimate %	IC 95%	n	Sample Proportion %	Population Estimate %	IC 95%	n	Sample Proportion %	Population Estimate %	IC 95%
Sex												
Male	1547	33.3	33.4	31.1-35.7	664	42.8	38.9	34.8-43.1	2211	35.7	33.8	31.7-35.9
Female	3103	66.7	66.6	64.3-68.9	886	57.2	61.1	56.9-65.2	3989	64.3	66.2	64.2-68.2
Gender identity												
Man	1539	33.1	32.7	30.5-34.9	650	41,9	37.5	33.3-41.6	2189	35.3	33	31.0-35.1
Woman	3053	65.7	65.9	63.6-68.1	874	56.4	60.8	56.7-64.9	3927	63.3	65.5	63.4-67.6
Transgender woman	30	0.6	0.6	0.3-0.9	14	0.9	0.7	0.2-1.1	44	0.7	0.6	0.3-0.9
Transgender man	13	0.3	0.5	0.2-1.0	8	0.6	0.6	-0.1-1.4	21	0.3	0.6	0.2-0.9
Non - binary	2	0	0.1	0.0-0.1	2	0.1	0.1	-0.1-0.1	4	0.1	0.1	-0.0-0.1
*Other***	13	0.3	0.2	0.0-0.4	2	0.1	0.3	-0.6-1.3	15	0.3	0.2	0.0-0.4
Median Age (IQR)	33(14)				31(13)				32(15)			
Marital status												
Married/Cohabitating	2075	44.6	43.6	40.9-46.1	687	44.3	42.1	38.2-45.9	2762	44.6	43.5	41.1-45.9
Divorced/Separated	626	13.5	13.3	11.7-14.8	181	11.7	11.6	9.0-14.2	807	13	13.2	11.7-14.6
Single	1865	40.1	42	39.5-44.5	662	42.7	45.1	41.1-49.1	2527	40.8	42.2	39.9-44.6
Widow(er)	84	1.8	1.1	0.7-1.5	20	1.3	1.2	0.3-2.0	104	1.6	1.1	1.0-1.2
Migration status***												
Regular	3491	75.1	72.8	70.7-74.9	1252	80.8	79.3	75.9-82.8	4743	76.5	73.3	71.375.2
Irregular	1159	24.9	27.2	25.1-29.3	298	19.2	20.7	17.2-24.1	1457	23.5	26.7	24.8-28.7
Education level												
No education	28	0.6	0.8	0.3-.1.3	10	0.6	0.6	0.1-1.2	38	0.6	0.8	0.3-1.3
Primary	281	6	5.9	4.9 – 6.9	68	4.4	5.4	3.6-7.3	349	5.6	5.9	4.9-6.8
Secondary	2461	52.9	54.0	51.7-56.3	774	49.9	50.3	46.6-53.9	3235	52.2	53.7	51.6-55.9
Higher education (University/ Tech.)	1816	39.1	37.6	35.3-39.9	677	43.7	42.6	38.8-46.3	2493	40.2	38.0	35.8-40.1
*Others***	64	1.4	1.7	1.1-2.3	21	1.4	1.1	0.5-1.7	85	1.4	1.7	1.1-2.2
Employment												
On full-Time Formal payroll	396	8.5	8.4	7.2-9.6	190	12.3	14.5	11.5-17.4	586	9.5	8.8	7.7-10.0
On Part-Time Formal payroll	127	2.7	2.2	1.6-2.9	76	4.9	5.8	3.9-7.7	203	3.3	2.5	1.8-3.1
Informal	1190	25.6	26.3	24.2-28.4	507	32.7	29.1	25.6-32.6	1697	27.4	26.5	24.5-28.5
Street vendor	1413	30.4	29.2	27.0-31.4	415	26.8	24.0	20.5-27.5	1828	29.5	28.8	26.8-30.9
Full-Time student	21	0.5	0.7	0.3-1.1	11	0.7	1.1	0.2-2.1	32	0.5	0.7	0.4-1.1
Unemployed	1315	28.3	28.5	26.4-30.5	281	18.1	21.5	18.2-24.8	1596	25.7	28.0	26.1-29.9
Retired	23	0.5	0.5	0.2-0.8	6	0.4	0.7	-0.1-1.4	29	0.5	0.5	0.2-0.8
*Other***	165	3.5	4.2	3.3-5.1	64	4.1	3.4	2.0-4.8	229	3.6	4.1	3.3-5.0

Table 1. Sociodemographic Characteristics of Venezuelan Migrants Living in Lima/Callao and Trujillo, Peru-2022.

	Lima/Callao (n=4650)				Trujillo (n-1550)				Total (N=6200)			
	n	Sample Proportion %	Population Estimate %	IC 95%	n	Sample Proportion %	Population Estimate %	IC 95%	n	Sample Proportion %	Population Estimate %	IC 95%
Income*												
Less than Minimum wage (930 soles)	2965	63.8	63.8	61.5-66.1	985	63.5	64	60.2-67.8	3950	63.7	63.8	61.7-66.0
Minimum wage (930 soles)	1215	26.1	27.5	25.5-29.6	416	26.8	27.8	24.3-31.3	1631	26.3	27.5	25.6-29.4
From 930 - 1500 soles	427	9.2	7.8	6.7-9.0	126	8.1	7.1	5.2-9.0	553	8.9	7.8	6.7-8.8
Over 1500 soles	43	0.9	0.9	0.5-1.1	23	1.5	1.1	0.4-1.7	66	1.1	0.9	0.6-1.2

*((The equivalent value of soles to dollars is S/. 3.8 = $1, where the minimum wage in soles of S/. 930 is equivalent in dollars to $244.7(exchange rate in September 2022.))

** Other categories not covered

*** Migration status (Regular status: Person who enters the country with Peruvian state authorization accordance with its laws. / Irregular status: Person who enters the country without Peruvian state authorization accordance with its laws)

Table 1 shows the sociodemographic characteristics of the Venezuelan migrants. In Lima/Callao 66.6% (CI: 64.3 - 68.9) and 61.1% (CI: 56.9 - 65.2), were women in Trujillo.

The median age in Lima/Callao was 33% (IQR: 27 - 41) and 31% (IQR: 26 - 39) in Trujillo. Also, 42% (CI: 39.5 - 44.5) and 45.1% (CI: 41.1 - 49.1) of migrants in Lima/Callao and Trujillo, respectively, were single, while 43.6% (CI: 40.9 - 46.1) and 42.1% (CI: 38.2 - 45.9) were married or cohabitating.

The majority had a regular migration status in Lima/Callao 72.8% (CI: 70.7 - 74.9) and Trujillo 79.3% (CI: 75.9 - 82.8). Over half of migrants had finished their secondary education in Lima/Callao 54% (CI: 51.7 - 56.3) and Trujillo 50.3% (CI: 46.6 - 53.9). Additionally, 26.3% (CI: 24.2 - 28.4) of migrants in Lima/Callao and 29.1% (CI: 25.6 - 32.6) in Trujillo are informally employed. Despite this, 28.5% (CI: 26.4 - 30.5) in Lima/Callao and 21.5% (CI: 18.2 - 24.8) in Trujillo are unemployed. Lastly, the majority earn less than minimum wage 63.8% (CI: 61.5 - 66.1) in Lima/Callao and 64% (CI: 60.2 - 67.8) in Trujillo.

Table 2. Health Characteristics of Venezuelan Migrants Living in Lima/Callao and Trujillo, Peru-2022

	Lima/Callao (n=4650)				Trujillo (n-1550)				Total (N=6200)			
	n	Sample Proportion %	Population Estimate %	IC 95%	n	Sample Proportion %	Population Estimate %	IC 95%	n	Sample Proportion %	Population Estimate %	IC 95%
BMI*												
Underweight (<18,5)	166	3.6	4.4	3.4-5.4	39	2.5	3.3	1.6-5.0	205	3.3	4.3	3.4-5.2
Normal (18,5-24,9)	1765	37.9	38.6	36.3-40.9	566	36.5	40.5	36.8-44.2	2331	37.6	38.7	36.6-40.8
Overweight (25,0-29,9)	1531	32.9	32.3	30.1-34.4	578	37.3	33.4	29.9-36.9	2109	34.0	32.3	30.3-34.3
Obesity (>=30)	1188	25.6	24.8	22.8-26.9	367	23.7	22.9	19.8-25.9	1555	25.1	24.7	22.8-26.6
"Anxiety in male (PHQ-4) (ref: no)"	188	12.2	10.5	8.4-12.7	58	8.7	9.30	5.8-12.9	246	11.1	10.4	8.4-12.4
"Anxiety in female (PHQ-4) (ref: no)"	644	20.8	20.0	17.8-22.1	110	12.4	11.4	8.5-14.3	754	18.9	19.4	17.4-21.4
"Depression in male (PHQ-4) (ref: no)"	184	11.9	9.42	6.6-21.2	68	10.2	11.7	5.8-17.5	252	11.4	9.6	2.8-16.4
"Depression in female (PHQ-4) (ref: no)"	545	17.6	17.5	15.1-19.9	98	11.1	10.7	6.4-15.0	643	16.1	17.0	14.7-19.3
Hazardous drinking alcohol (Audit-c)**												
Men	201	12.9	9.6	7.5-11.6	61	9.2	11.9	6.9-16.8	262	11.9	9.7	7.8-11.6
Women	339	10.9	10.9	9.3-12.5	124	14	14.2	10.6-17.7	463	11.6	11.1	9.6-12.7
Drug use (ref: no) Yes	235	5.1	4.9	3.9-5.9	86	5.5	5.5	3.7-7.2	321	5.2	4.9	4.0-5.9
Pregnancy while in Peru (ref: no) Yes	1062	22.8	22.2	20.1-24.3	265	17.1	16.1	13.3-18.9	1327	21.4	21.8	19.8-23.7
Accessed prenatal care (among those reporting live births) (ref: no) No	272	25.6	26.6	22.2-30.9	69	26,0	22.5	13.8-31.0	341	25.7	26.3	22.2-30.4
N° of times general health services were sought for any medical condition												
None	2809	60.4	61.3	59.1-63.4	1044	67.4	66.4	62.7-70.3	3853	62.2	61.7	59.6-63.7
Once	796	17.1	16.4	14.7-18.1	277	17.9	18.2	15.1-21.3	1073	17.3	16.5	14.9-18.1
Twice	499	10.7	10.9	9.5-12.3	123	7.9	9.3	6.8-11.8	622	10	10.8	9.5-12.1
Three or more times	546	11.7	11.5	10.1-12.9	106	6.8	6.1	4.4-7.8	652	10.5	11.1	9.8-12.4
Received all requested health services												
None of the services	155	8.4	7.7	4.4-10.9	46	9.1	9.8	3.7-15.9	201	8.6	7.8	4.8-10.9
Some of the services	926	50.3	49.8	46.2-53.3	262	51.8	53.7	47.6-59.9	1188	50.6	50.1	46.7-53.4
The majority of the services	366	19.9	18.9	16.4-21.6	109	21.5	20.3	15.9-24.6	475	20.2	19	16.6-21.4
All of the services	394	21.4	23.6	21.1-26.1	89	17.6	16.2	12.3-20.1	483	20.6	23.1	20.7-25.4
Reason for not accessing requested services												
Cost	929	64	63	59.1-66.9	281	67.2	65,9	59.3-72.4	1210	64.7	63.2	55.4-71.0
Service unavailable	310	21.3	21.8	19.1-24.6	66	15.8	15.7	11.5-20.0	376	20.1	21.4	18.8-23.9
Lack of time	109	7.5	8	5.8-10.2	38	9.1	9.7	5.8-13.6	147	7.9	8.1	6.1-10.2
Other	104	7.2	7.2	3.2-11.1	33	7.9	8.7	2.9-14.6	137	7.3	7.3	3.6-11.0

**Body mass index (BMI) was obtained from height and weight data.*
***Hazardous drinking was determined based on the Audit-C scale.*
Anxiety and depression indicators were obtained from the PHQ-4 scale.
Some questions are sequential so some n, do not necessarily reflect the total population.

Table 2. Health Characteristics of Venezuelan Migrants Living in Lima/Callao and Trujillo, Peru-2022

Table 2 shows variables related to health and access to services among the migrant population. Approximately one out of every three migrants 32.3% (CI: 30.1-34.4); and 33.4% (CI: 29.9-36.9)) were overweight and less than one fourth 24.8% (CI: 22.8-26.9); and 22.9% (CI: 19.8-25.9) were obese in Lima/Callao and Trujillo, respectively. We also found that women have a higher prevalence of anxiety compared to men 19.4% (CI: 17.4-21.4) vs. 10.4% (CI: 8.4-12.4), with similar proportions in the depression prevalence among women and men 17.0% (CI: 14.7-19.3) vs 9.6% (CI: 2.8-16.4). Dangerous alcohol consumption was evaluated with Audit-C scale [29]. Approximately one in ten male migrants have a dangerous alcohol consumption in Lima/Callao 9.6%. (CI: 7.5-11.6)) and Trujillo 11.9% (CI: 6.98-16.8)) Among women consumption was 10.9% (CI:9.3-12.5) in Lima/Callao and 14.2% (CI:10.6-17.7) in Trujillo. Drug use prevalence was similar in Lima/Callao and Trujillo, at 4.9% (CI: 3.9-5.9) in Lima/Callao and 5.5% (CI: 3.7-7.2) in Trujillo. In terms of access to health services, we found that 22.2% (CI:20.1-24.3) and 16.1% (CI: 13.3-18.9) of migrant couples in Lima and Trujillo, respectively, had a pregnancy while in Peru. Of these, 26.6% (CI: 22.2-30.9) and 22.5% (CI:13.8-31.0) did not have access to prenatal care in Lima/Callao and Trujillo. Finally, of those migrants who required one or more health services, only 23.6% (CI: 21.1-26.1) and 16.2% (CI: 12.3-20.1) in Lima/Callao and Trujillo were able to access all the services they sought out, the main reason for not accessing the services they sought were economic factors in 63.0% (CI:59.1-66.9) and 65.9% (CI:59.3-72.4) in Lima/Callao and Trujillo, respectively.

Table 3. Characteristics of Violence Experienced by Venezuelan Migrants Living in Lima/Callao and Trujillo, Peru-2022

	Lima/Callao (n=4650)				Trujillo (n-1550)				Total (N=6200)			
	n	Sample Proportion %	Population Estimate %	IC 95%	n	Sample Proportion %	Population Estimate %	IC 95%	n	Sample Proportion %	Population Estimate %	IC 95%
Received physical or sexual threat*												
No	*283*	*56.1*	*57.6*	*51.9-63.2*	*56*	*47.9*	*49.6*	*36.7-62.5*	*339*	*54.5*	*57*	*51.7- 62.4*
Yes	*222*	*43.9*	*42.4*	*36.8-48.1*	*61*	*52.1*	*50.4*	*37.5-63.2*	*283*	*45.5*	*43*	*37.6-48.3*
Experienced physical violence												
No	*200*	*52.8*	*55.1*	*48.8-61.3*	*49*	*51.6*	*59.8*	*48.4-71.5*	*248*	*52.5*	*55.4*	*49.6-61.3*
Yes	*179*	*47.2*	*44.9*	*38.7-51.1*	*46*	*48.4*	*40.2*	*28.5-51.6*	*224*	*47.5*	*44.6*	*38.7-50.4*
Was obligated to have sex**												
No	*29*	*50*	*52.5*	*35.4-69.8*	*11*	*55*	*83.4*	*76.5-90.9*	*40*	*51.9*	*54.7*	*38.8-70.8*
Yes	*29*	*50*	*47.5*	*30.2-64.7*	*9*	*45*	*16.6*	*9.1-23.5*	*37*	*48.1*	*45.3*	*29.2-61.3*
Was forced/coerced into having sex***												
No	*42*	*54.5*	*50*	*35.4-64.8*	*16*	*59.3*	*67*	*43.4-87.8*	*58*	*56.3*	*51.8*	*38.0-65.5*
Yes	*35*	*45.5*	*50*	*35.2-63.6*	*11*	*40.7*	*33*	*12.3-53.6*	*45*	*43.7*	*48.2*	*35.0-61.5*
Any experience of stigma or discrimination												
No	*1319*	*28.4*	*29.1*	*26.9-31.3*	*485*	*31.3*	*31.5*	*27.9-35.3*	*1804*	*29.1*	*29.3*	*27.2-31.3*
Yes	*3331*	*71.6*	*70.9*	*68.7-73.2*	*1065*	*68.7*	*68.5*	*64.7-72.2*	*4396*	*70.9*	*70.7*	*68.6-72.8*

**Violence indicators are based on the disaggregation of those who reported having experienced violence in the last 12 months while they were in Peru.*

*** Obligate: Compelled to have non-consensual sexual relations*

**** Coerced/forced: When a power is exercised so that person under the influence to comply to have non-consensual sexual relations.*

Table 3 shows violence-related events experienced by Venezuelan migrants living in Peru in the last 12 months because of being migrants. Weighted received physical or sexual threat in the last 12 months (while in Peru) was of 42.4% (CI: 36.8-48.1) in Lima/Callao and 50.4% (CI: 37.5-63.2) in Trujillo. Furthermore, 44.9% (CI: 38.7-51.1) in Lima/Callao and 40.2% (CI: 28.5-51.6) in Trujillo had experienced physical violence, while 47.5% (CI: 30.2-64.7) and 16.6% (CI: 9.1-23.5) were forced to have sex. Additionally, 50.0% (CI: 35.2-63.6) in Lima/Callao and 33.0% (CI: 12.3-53.6) in Trujillo were forced/ coerced into having sexual relations. Finally, the majority had experienced stigma and discrimination while in Peru, with 70.9% (CI: 68.7-73.2) in Lima/Callao and 68.5% (CI: 64.7-72.2) in Trujillo.

Table 4. Sexual Health and HIV Characteristics of Venezuelan Migrants Living in Lima/Callao and Trujillo, Peru-2022

	Lima/Callao (n=4650)				Trujillo (n-1550)				Total (N=6200)			
	n	Sample Proportion %	Population Estimate %	IC 95%	n	Sample Proportion %	Population Estimate %	IC 95%	n	Sample Proportion %	Population Estimate %	IC 95%
Ever HIV test												
No	*1702*	*36.6*	*39.2*	*36.9-41.3*	*734*	*47.4*	*51.7*	*47.8-55.7*	*2436*	*39.3*	*40.1*	*38.0-42.1*
Yes	*2884*	*62*	*59.3*	*57.1-61.5*	*794*	*51.2*	*47*	*42.9-50.9*	*3678*	*59.3*	*58.4*	*56.3-60.5*
Don't know	*64*	*1.4*	*1.5*	*0.9-2.1*	*22*	*1.4*	*1.3*	*0.3-2.3*	*86*	*1.4*	*1.5*	*1.0-2.0*
Ever STI test in Peru												
No	*3592*	*77.2*	*78.5*	*76.7-80.3*	*1268*	*81.8*	*83.4*	*80.5-86.3*	*4860*	*78.4*	*78.8*	*77.1-80.5*
Yes	*1008*	*21.7*	*20.4*	*18.6-22.1*	*265*	*17.1*	*15.6*	*12.8-18.4*	*1273*	*20.5*	*20*	*18.4-21.6*
Not sure	*50*	*1.1*	*1.1*	*0.7-1.7*	*17*	*1.1*	*1*	*0.2-1.8*	*67*	*1.1*	*1.2*	*0.7-1.6*
Confirmed HIV diagnosis*												
Negative	*4601*	*98.9*	*98.9*	*98.5-99.5*	*1531*	*98.8*	*99.2*	*98.6-99.7*	*6132*	*98.9*	*99*	*98.6-99.4*
Positive	*49*	*1.1*	*1.1*	*0.6-1.5*	*19*	*1.2*	*0.9*	*0.3-1.4*	*68*	*1.1*	*1*	*0.4-1.7*
Confirmed syphilis diagnosis**												
Negative	*4461*	*95.9*	*95.8*	*94.8-96.7*	*1498*	*96.6*	*96.9*	*95.6-98.2*	*5959*	*96.1*	*95.8*	*95.0-96.7*
Positive	*189*	*4.1*	*4.2*	*3.3-5.2*	*52*	*3.4*	*3.1*	*1.8-4.4*	*241*	*3.9*	*4.2*	*3.3-5.0*
***Active syphilis	*40*	*0.9*	*0.9*	*0.5-0.4*	*15*	*0.9*	*0.8*	*-0.8-2.4*	*55*	*0.9*	*0.9*	*0.5-1.4*

*HIV confirmation using Geenius HIV 1/2.

**Syphilis confirmation using Architect Syphilis TP assay (CLIA).

*** Active syphilis: Architect Syphilis TP assay (CLIA) positive + RPR (≥8 dils)

***Technical health standard for public health epidemiological surveillance of human immunodeficiency virus (HIV) infection and sexually transmitted infections in Peru. NTS-N°115- MINSA/DGE V.01

Figure 1. 95-95-95 among Venezuelan Migrants in Lima/Callao and Trujillo - 2022

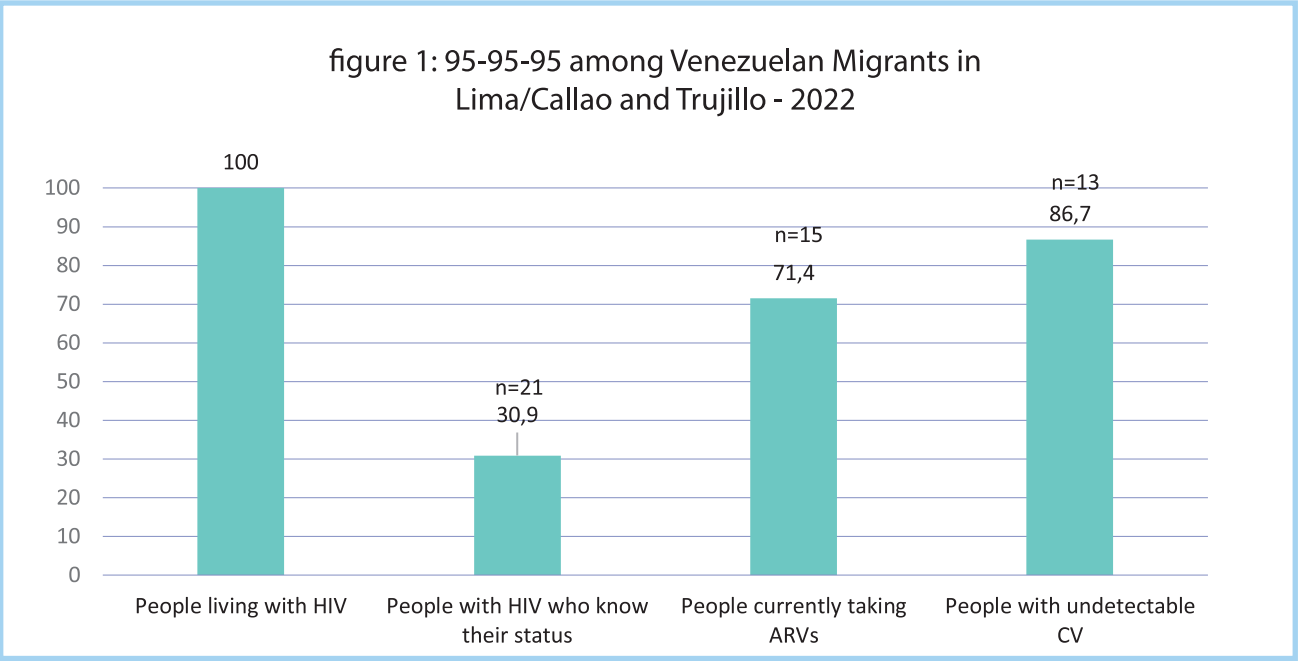

Table 4 shows the HIV and syphilis prevalence among Venezuelan migrants. We found that 59.3% (CI: 57.1-61.5) and 47.0% (CI: 42.9-50.9) of migrants who lived in Lima/Callao and Trujillo had previously taken an HIV test, respectively. Most migrants had never had a screening for a sexually transmitted infection (STI), 78.5% (CI: 76.7-80.3) in Lima/Callao and 83.4% (CI: 80.5-86.3) in Trujillo. The HIV prevalence in Lima/Callao was 1.1% (CI: 0.6-1.5) and 0.9% (CI: 0.3-1.4) in Trujillo. Finally, the syphilis prevalence in Lima/Callao was 4.2% (CI: 3.3-5.2) and 3.1% (CI: 1.8-4.4) in Trujillo.

A sub-analysis was performed showing achievements towards UNAIDS' 95-95-95 targets in Lima/Callao and Trujillo, Peru (see Fig. 1). We found that, of the 68 cases (100%) of participants with a confirmed diagnosis, 21 (30.9%) (CI: 20.9-43.0) knew their HIV-positive status. Of these, 71.4% (CI: 47.7-87.3) were receiving antiretroviral treatment. Of those 15 (71.4%), the 13 (86.7%) (CI: 56.0-97.0) are virally suppressed.

4. LIMITATIONS

It was more likely for migrants who were legally in the country to be willing to take part of the survey. It is possible that our survey captured a group of migrants who self-selected to participate because they felt more confrontable providing information about their legal status in the country. In addition, social desirability bias is common when conducting surveys that include questions about sexual behavior and illegal activities. The first limitation was addressed by the use of RDS, a sampling methodology that allows recruitment through the peer networks and monitoring of key variables for homophily, convergence, and to identify bottlenecks. The second limitation was addressed by using computer assisted questionnaire, so there was limited interaction during the survey response with the survey staff.


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5. CONCLUSIONS AND RECOMMENDATIONS

- The HIV prevalence in the migrant population was above than that reported in the Peruvian adult population (age 18 to 49). Providing early access to HIV prevention and diagnostic services, and guarantying access to treatment and auxiliary testing to begin antiretroviral treatment would be important. The cost of these services was identified as a major barrier for access to ART, since it is frequently paid out-of-pocket by the person living with HIV.

- This survey suggests that syphilis prevalence (Architect syphilis TP assay) and active syphilis (Architect syphilis TP assay + RPR ≥8 dils) in the migrant population are higher than the Peruvian adult population (prevalence 0·5%) (age 18 and over) [20], which highlights the importance of improving work for the prevention, diagnosis, and syphilis treatment with the support of government services and NGOs that provide treatment services to the migrant community.

- Prevalence of mental health problems was high among Venezuelan migrants, specifically depression and anxiety, with numbers three times higher than those reported in the Peruvian population during the pandemic for both mental health problems (depression prevalence 6.2% and anxiety prevalence 10.5%) [17]. However, this population's access to mental health services is very limited. Facilitating access to mental health services will allow for the early diagnosis and treatment of these problems that so frequently affect the migrant population.

- The migrants are targets of high levels of stigma and discrimination by the host community, very similar to those found in other studies done in Peru, this was also found in our survey [18] Coordinating with government agencies and non-governmental organizations to implement and strengthen stigma and discrimination mitigation strategies that result in programs that will allow migrants to access health services without fear. In addition, migrants will be more empowered to denounce acts of physical or sexual violence when provided with the means to reach services that are friendly to their needs. A coordinated response with the government and civil society organizations will help decrease episodes of stigma and discrimination experienced by Venezuelan migrants [19].

- Alcohol consumption among the migrant population was lower compared to the Peruvian adult population (age 18 and over) [21]. However, given the significant physical and mental harm linked to excessive alcohol consumption, an environment that facilitates the early identification of individuals with excessive alcohol intake will decrease the risk of suffering from the short and long term physical and social impact of alcohol use.

- Among the barriers that prevent participants from accessing health services, the most prevalent were economic issues and the unavailability of the services they need.

• Access to the formal job market for migrants is limited [22]. As a result, the vast majority are involved in informal work, which limits their opportunities of financial growth, with an income below the legal minimum wage. This is tied to their immigration status. The Alien Registration Card (Carné de Extranjería) is the document issued by the National Superintendency of Migration to regularize the status of migrants living in Peru. This document is valid for up to five years and can be renewed. While the survey shows that a large proportion of migrants have entered Peru as regular migrants or have an identity document, very few of them have an Alien Registration Card, or if they do, it has not been renewed or has expired. This limits their access to public services, including accessing and benefiting from comprehensive health insurance (SIS acronym in Spanish) coverage. Coordination with government agencies to promote regularization policy that allows migrants to obtain their Alien Registration Card will allow Venezuelan migrants to gain access to access health services, as well as the formal job market.

6. REFERENCES

1. OIM. World Migration Report. 2022. Available at www.iom.int.

2. Murillo-Pedrozo AM, Agudelo-Suárez AA. La migración Sur/Sur como un determinante social de impacto en las desigualdades e inequidades en salud bucal en Latinoamérica. Rev Perú Med Salud Publica. 17 Jan 2020; 36(4):692–699. Available at https://www.ncbi.nlm.nih.gov/

3. GTRM-Perú. Análisis Conjunto de Necesidades 2022. Plan Regional de Respuesta para Refugiados y Migrantes. 2022. Available at https://bit.ly/3FQtAAa

4. Mendoza W, Miranda JJ. La inmigración venezolana en el Perú: desafíos y oportunidades desde la perspectiva de la salud. Rev Perú Med Exp Salud Publica. 2019;36(3):497–503. Available at http://www.scielo.org.pe/scielo.php?script=sci_arttext&pid=S1726- 46342019000300497&lng=es&nrm=iso&tlng=es

5. Bernabé-Ortiz A, Carrillo-Larco RM. Multimorbidity and Disability Among Venezuelan Migrants: A Population-Based Survey in Peru. J Immigr Minor Health. 2022 Oct;24(5):1206–1213. Available at https://pubmed.ncbi.nlm.nih.gov/34448992/.

6. Zambrano-Barragán P, Ramírez Hernández S, Freier LF, Luzes M, Sobczyk R, Rodríguez A, et al. The Impact of COVID-19 on Venezuelan Migrants' Access to Health: A Qualitative Study in Colombian and Peruvian Cities. J Migr Health. 2020 Dec 9;3. Available at https://pubmed.ncbi.nlm.nih.gov/34405183/

7. Hernández-Vásquez A, Vargas-Fernández R, Rojas-Roque C, Bendezu-Quispe G. Factores asociados a la no utilización de los servicios de salud entre migrantes Venezuelans en Perú. Rev Perú Med Exp Salud Publica. 2019;36(4):583–591. Available at: https://pubmed.ncbi.nlm.nih.gov/31967249/

8. PAHO. International Migrants' Health: Access to Health Services. 2022.

9. Antoñanzas Serrano A, Gimeno Feliu LA. Los determinantes sociales de la salud y su influencia en la incidencia de la COVID-19. Una revisión narrativa. 2022;15(1):12–19.

10. Chow JY, Konda KA, Borquez A, Caballero P, Silva-Santisteban A, Klausner JD, et al. Peru's HIV Care Continuum Among Men Who Have Sex with Men and Transgender Women: Opportunities to Optimize Treatment and Prevention. Int J STD AIDS. 2016 Oct;27(12):1039–1048. Available at https://pubmed.ncbi.nlm.nih.gov/27099168/

11. Leyva-Moral JM, Palmieri PA, Loayza-Enriquez BK, vander Linden KL, Elias-Bravo UE, Guevara-Vasquez GM, et al. 'Staying Alive' with Antiretroviral Therapy: A Grounded Theory Study of People Living with HIV in Peru. BMJ Global Health. 2021 Oct;6(10). Available at https://pubmed.ncbi.nlm.nih.gov/34711579/

12. Fraser B. Providing Care for Trans Women with HIV/AIDS in Peru. Lancet. 2019 Apr 6;393(10179):1399–1400. Available at https://pubmed.ncbi.nlm.nih.gov/30967204/

13. Paredes JL, Navarro R, Cabrera DM, Díaz MM, Mejía F, Cáceres CF. Desafíos para la continuidad de la atención de las personas que viven con VIH durante la crisis del COVID-19 en el Perú. Rev Peru Med Exp Salud Publica. 2021 Jan–Feb;38(1):166–170. Available at https://pubmed.ncbi.nlm.nih.gov/34190910/

14. Navarro R, Paredes JL, Echevarria J, González-Lagos E, Graña A, Mejía F, et al. HIV and Antiretroviral Treatment Knowledge Gaps and Psychosocial Burden Among Persons Living with HIV in Lima, Peru. PLoS One. 2021 Aug 19:16(8). Available at https://pubmed.ncbi.nlm.nih.gov/34411156/

15. CDC-MINSA(Sala Situacional de VIH) https://www.dge.gob.pe/vih/

16. RDS Analyst Install. {Hard-to-Reach Population Methods Research Group}. Available at http://wiki.stat.ucla.edu/hpmrg/index.php/RDS_Analyst_Install

17. Instituto Nacional de Salud Mental. Estudio Epidemiológico de Salud Mental en Lima Metropolitana y Callao Replicación 2012. Informe General. Anales de Salud Mental Vol. XXIX. Año 2013, Suplemento 1. Lima

18. Mougenot, Benoît, Amaya, Elard, Mezones-Holguin, Edward, et al. Immigration, perceived discrimination and mental health: evidence from Venezuelan population living in Peru; Globalization and Health; 2021 17(8)

19. INEI; Condiciones de vida de la población Venezolana que reside en el Perú; 2022

20. Carcamo CP, Campos PE, Garcia PJ, Hughes JP, Garnett GP, Holmes KK. Prevalences of sexually transmitted infections in young adults and female sex workers in Peru: a national population-based survey. Lancet Infect Dis. 2012;12(10):765-73.

21. Instituto Nacional de Estadística e Informática; PERU Enfermedades Transmisibles y No Transmisibles 2019: https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1734/cap01.pdf

22. ENPOVE 2022: "Condiciones de vida de la Población Venezolana que reside en el Perú - Resultados de la "Encuesta dirigida a la poblacion venezolana que reside en el pais" II ENPOVE 2022 - Peru | ReliefWeb

23. Bradley KA, DeBenedetti AF, Volk RJ, Williams EC, Frank D, Kivlahan DR. AUDIT-C as a brief screen for alcohol misuse in primary care. Alcohol Clin Exp Res. 2007 Jul;31(7):1208-17. doi: 10.1111/j.1530-0277.2007.00403.x. Epub 2007 Apr 19. PMID: 17451397.

24. Kroenke K, Spitzer RL, Williams JB, Löwe B. An ultra-brief screening scale for anxiety and depression: the PHQ-4. Psychosomatics. 2009 Nov-Dec;50(6):613-21. doi: 10.1176/appi.psy.50.6.613. PMID: 19996233.

25. Wirtz, A.L., Glass, N., Pham, K. et al. Comprehensive development and testing of the ASIST-GBV, a screening tool for responding to gender-based violence among women in humanitarian settings. Confl Health 10, 7 (2016). https://doi.org/10.1186/s13031-016-0071-z.

26. Sternthal, M., Slopen, N., Williams, D.R. "Racial Disparities in Health: How Much Does Stress Really Matter?" Du Bois Review, 2011; 8(1): 95-113.

27. U.S. Household Food Security Survey Module: Six-Item Short Form Economic Research Service, USDA September 2012.

28. Budzban N, Silverio K, Matta J. Estimating the Number of HIV+ Latino MSM Using RDS, SS-PSE, and the Census. Annu Int Conf IEEE Eng Med Biol Soc. 2021 Nov; 2021:1774-1780. doi: 10.1109/EMBC46164.2021.9630264. PMID: 34891631.

29. Bush K, Kivlahan DR, McDonell MB, Fihn SD, Bradley KA, Ambulatory Care Quality Improvement Project (ACQUIP. The AUDIT alcohol consumption questions (AUDIT-C): an effective brief screening test for problem drinking. Archives of internal medicine. 1998 Sep 14;158(16):1789-95

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