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Social stigma towards people with HIV/AIDS, in dentistry students from Concepción.

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Abstract

Objective: Characterize HIV/AIDS Social stigma towards people with HIV/AIDS in a sample of dentistry students from Concepción.

Materials and methods: Cultural adaptation and pre-test were developed for the Stigma and HIV/AIDS Scale in dental students. Researchers collected the data from the instrument, demographic (sex/age), and academic information (course/training in HIV/AIDS, knowing a person with HIV/AIDS, provision of dental services to people living with HIV/AIDS [PLHIV]). To characterize the sample, univariate and bivariate descriptive statistics were performed with absolute and relative frequencies; the reliability of the scale was assessed with Cronbach's alpha; the relationship between the quantitative and ordinal variables was analyzed with the Spearman correlation coefficient.

Results: The final sample comprised 138 dental students, whereas most of them reported not having training in HIV/AIDS nor providing dental services to PLHIV. Stigma and HIV/AIDS Scale showed good reliability. Two items expressing that PLHIV must disclose their condition to health professionals so they can take precautions have the highest values. A weak inverse correlation was found between Stigma and the variables age and course.

Conclusions: Dental school students from Universidad of Concepción have a low social stigma towards people with HIV/AIDS. Items regarding professional practice showed higher stigma levels.

Keywords: HIV, Social stigma, social discrimination, dentistry, dental students, health services.

Introduction

Globally, 38 million people are living with HIV. In Chile, a sustained increase has been observed since 2010, reaching 71,000 cases in 2019[1,2]. This has placed Chile as one of the leaders in the continent with a prevalence of 0.6 in 2020[3]. The latter has raised the alert in public health in Chile. Specifically, according to data provided by the Ministry of Health, the main route of VIH transmission in both sexes is sexual, whereas homosexual intercourse is predominant in males and heterosexual intercourse predominates in females. The highest concentration of cases is in the northern and metropolitan area, whereas the Biobío Region has one of the lowest, with an incidence rate of 19.7 per 100,000 inhabitants[4].

Social factors are closely related to HIV-AIDS, with stigmatization and discrimination being the most influential[5], which can be seen even in Health Services[6-8]. Health workers have the responsibility and commitment to providing all users with good quality care, regardless of race, religion, gender, sexual orientation, diagnosis, and/or prognosis[9]. However, there are still beliefs related to HIV/AIDS that lead to discriminatory practices towards seropositive people[6-10]. The stigma from health personnel has great repercussions on the quality of the service provided to this population. Stigma inhibits the timely consult, which produces not getting timely care or not receiving treatment at all, leading to complex consequences that can negatively influence prevention, diagnosis, treatment, and quality of life[6,8].

Studies indicate that people living with HIV-AIDS (PLHIV or PLWHA) and retroviral therapy have several oral manifestations, thus, demand dental care[11]. The perception that the seropositive patient has about the care they receive from the health professional is fundamental[12]. However, there are still many prejudices related to the care of patients with HIV by dentists, dental assistants, and dental students[13-15]. This stigma causes the HIV/AIDS status to be usually hidden by PLHIV as a means of protection to avoid social rejection or future inconveniences in their dentist-patient[12].

Given the above, several instruments have been developed to identify this stigma in health personnel, such as the "HIV/AIDS Stigma Instrument"[16], "HIV stigma scale"[17], "AIDS attitude scale"[18] the “Mental Health Professionals’ Attitude Towards People Living with HIV/AIDS Scale (MHP-PLHIV-AS)”[19] or the " Stigma and HIV/AIDS Scale”[20], among others. Although most of these instruments have good psychometric properties, the importance of the " Stigma and HIV/AIDS Scale"[20] lies in having been developed to be applied to Spanish-speaking health students, specifically Puerto Ricans[21]. This marks a step in obtaining culturally appropriate instruments to measure stigma towards PLWHA in Latin American students.

Despite the high prevalence of PLHIV in Chile [3], and the stigma associated with this condition, no studies have been reported in our country. In addition, given the high probability that a dentistry student in their clinical-practice stage will provide care to patients with HIV/AIDS, it is important to identify the stigma toward this population in Chilean dental students. Thereby, following the recommendations of the United Nations[9], our objective was to characterize HIV/AIDS Social stigma towards people with HIV/AIDS in a sample of Chilean dentistry students.

Materials and methods

Sample selection

The target population comprised undergraduate dental students from the University of Concepción, a total of 480 students. Exchange or foreign students were excluded due to language and/or cultural barriers.

Instrument

The "Stigma and HIV/AIDS Scale"[21] is composed of 11 factors, with 4 items each. It measures the stigma towards people with HIV/AIDS by asking participants to respond to the extent to which they agree in various situations related to or referred to people with HIV/AIDS through a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). High scores indicate social stigma towards people with HIV/AIDS, while lower scores indicate less or no stigma towards people with HIV/AIDS.

According to the authors, the scale does not present a categorization and the results can be reported globally and/or by dimension. It presents a global internal consistency, via Raykov's, of 0.85. The subscales report an internal consistency of 0.65 to 0.79. Validity RMSEA = 0.08, TLI = 0.92, and WRMR = 1.45[21].

1. *Cultural adaptation*

As this instrument has been developed and validated in Spanish speaking population (Puerto Rico), the translation process was not carried out. The cultural adaptation process was carried out through a multidisciplinary committee of experts. The face validity process was carried out according to the adaptation process according to Beaton[22]. In the first instance, a committee composed of four Chilean public health experts with different academic backgrounds analyzed the instrument in search of a preliminary version regarding feasibility, comprehension, coherence with the style and format, as well as the precision of the language used.

2. Pre-test

Then, a pilot was carried out with the preliminary version with 15 sixth-year dentistry students from the University of Concepción. The difficulties and problems of understanding the instrument were evaluated, making the following modifications:

- The phrase "*Me causa lástima*" was replaced by "*Me causa pena*", "*Departamento de Salu*d" was replaced by "*Ministerio de Salud*", "*médico*" was replaced by "*doctor*", "*niños/as*" was replaced "*niños, niñas o adolescentes*

(NNA)". Also, the phrase "*Me causa lástima que la mujer siendo fiel"* was replaced by "*me causa pena que una persona sea fiel*"

Also, an item was eliminated during the piloting:

- *Preliminary version: The original Spanish version. Item 44 says:" Es imposible identificar si alguien tiene VIH/SIDA mirando su cuerpo" (It is impossible to identify if someone has HIV/AIDS by looking at their body).*
- *Final version: Elimination of item 44 as the negative question generated confusion. The item was not adapted, as item 41 "Yo puedo identificar si una persona tiene VIH/SIDA mirando su cuerpo" (I can identify if a person is HIV/AIDS positive by looking at their body) already had the 44 statement as a positive question.*

The final version of the instrument had 43 items (Appendix 1)

Data collection

All students from first to fifth were invited to participate. Four researchers collected the data from the instrument, demographic (sex/age), and academic information (course/training in HIV/AIDS, knowing a person with HIV/AIDS, provision of dental services to PLHIV) during the year 2020-2021 through Google Forms. The students were contacted via institutional mail, and a reminder was sent a month and then after two months. There was no financial or academic compensation associated with participation.

Ethics

This study was approved by the Research and Bioethics Committee of the Faculty of Dentistry of the Universidad de Concepción (C.E.C. Nº31/19) and was conducted in full compliance with the Declaration of Helsinki of the World Medical Association. All respondents voluntarily chose to participate by accepting informed consent. The survey was anonymous, and the information was used for this research only.

Statistical analysis

To characterize the sample, univariate and bivariate descriptive statistics were performed with absolute and relative frequencies. The reliability of the scale was assessed with Cronbach's alpha for the total scale and dimensions; then measures of central tendency (mean) were presented for variables of interest. Finally, the

relationship between the quantitative and ordinal variables was analyzed with the Spearman correlation coefficient. No inference was made since there are no previous hypotheses. The data were analyzed with the software Stata 14 (STATA Corp, USA).

Results

One hundred forty-five dental students answered the invitation, but seven have not answered the whole instrument. The final sample comprised 138 dental students, whereas most of them reported not having training in HIV/AIDS nor providing dental services to PLHIV (Table 1).

Table 1. Sociodemographic characteristics of the sample

Regarding the instrument, showed a good global internal consistency. However, one dimension presented a value lower than 0.6 (Table 2).

Table 2. Reliability of the Scale on Stigma Related to HIV/ AIDS.

Dimension 2 had the highest values, specifically, the item 8 "*Una persona con VIH/SIDA debe estar obligada a revelar siempre su condición a los/as profesionales de salud, para que éstos/as tomen las debidas precauciones*" ("A person with HIV/AIDS must always disclose their condition to health professionals, so that they can take due precautions") had a mean of 4.1. Which had a median of 4.7 in 2º students and in students that would not provide dental services to PLHIV.

Moreover, though dimension 1 had a mean of 2.7, the item "A las personas con VIH/SIDA se les debe obligar a revelar su condición de salud a su doctor/a" ("People with HIV/AIDS should be obliged to reveal their health condition to their doctor") also had a high value, with a mean of 3.8.

Table 3. Summary measures of the mean level of stigma by academic and sociodemographic variables

A weak inverse correlation was found between stigma and the variables age (-,238) and course (-,224). The latter was also observed between the dimensions 4 (-,371 and -,379), 6 (-,328 and -,268) and 8 (-,263 and -,251).

Discussion

Dental school students from Universidad of Concepción have a low social stigma toward people with HIV/AIDS. This was consistent among all the variables measured in this study.

It is interesting to highlight that most students felt like they did not have training in HIV/AIDS. Though this topic is considered in different subjects throughout the dental curricula, one specific and mandatory course could address this issue. This concern has also been reported in dental students from China[23], Iraq[24], Sudan[25], and Pakistan[26], where dental students report having poor knowledge regarding HIV-related issues, recognizing the need for further education[25]. Moreover, according to a qualitative study in Colombia, most dental students reported having some knowledge about HIV/AIDS transmission and prevention, but that this knowledge was acquired primarily by tv and the internet[27].

Knowledge of HIV/AIDS among dental students in this matter is insufficient considering the risk represented by the age range included in the study[28] and the high HIV/AIDS prevalence in Chile[3]. Moreover, dentists as health professionals, have the responsibility to instruct their patients regarding HIV/AIDS[29].

Though only a small percentage of students would not provide dental services to a PLHIV, it is a worrisome situation, as health professionals are not supposed to discriminate against patients because of their health status, sexual orientation, gender, or ethnicity, among others[30,31]. The latter could set off barriers to access to dental care for the HIV population, diminishing their quality of life[23,30].

The 2 items of the scale with the higher values are closely related to the dental care duty. Therefore, it must be noted that dental students may be worried about getting infected with HIV/AIDS from their patients, thus possibly presenting a negative behavior towards this population. A similar finding was reported in Brazil[14], where 98.3% of dental students agreed that PLHIV should indicate to health personnel their condition so that they can act to prevent contagion. Moreover, in Venezuelan dental students, though they had in general a positive attitude toward HIV/AIDS, 67% of them considered that HIV testing should be regulated in public and private dental services[32].

Training in HIV did not show any differences in the social stigma, though this must be interpreted with caution as only 24 students reported having training. This agrees with

previous results from Varas-Díaz et al[33], Ellepola et al[34], Li[35], Singh[36], and Hamid[24], where students thought they had a high knowledge of HIV, the majority displayed a negative attitude towards this population.

Though in this study the correlation between the social stigma and the variables age and course was low, other studies in Pakistan[26] and Brazil[14] have found the same correlation. In contrast, Díaz-Varas[33] in a Standardized Patient study, found no clear link between stigma and the same variables or stigma behaviors. Thus, stigma is difficult to predict based on sociodemographic or academic variables.

Regarding the instrument, it showed a good global internal consistency, although above the recommended value (<0.9), which could be indicating redundancy, as several items were very similar between them. Regarding the dimensions, six dimensions reported values lower than 0.7, which could be indicating noise in the responses or more than one dimension. Moreover, the length of the survey could trigger a lack of quality of the answers since the respondents could have answered quickly just to comply or simply leave the survey halfway because they get tired or bored[37].

Though participation was low in this study, this is the first paper to describe the stigma toward PLHIV among dental students in Chile. These findings might help to define strategies to improve the training of Chilean dental students in this matter. More studies are needed with larger samples and include more variables to identify the stigma and the possible modulating factors in Chile.

Conclusion

Dental school students from Universidad of Concepción have a low social stigma toward people with HIV/AIDS. There is a weak inverse correlation between stigma and the variables age and course. Items regarding professional practice showed higher stigma levels.

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VARIABLE		COURSE				TOTAL	
		1º to 3º		4º to 6º			
		n	%	n	%	n	%
SEX	Female	67	82,7	41	72,0	108	78,0
	Male	14	17,3	16	28,0	30	22,0
AGE	18 -21	67	82,7	5	8,8	72	52,0
	22-30	14	17,3	52	91,0	66	48,0
Training in HIV/AIDS	Yes	6	7,4	18	32,0	24	17,0
	No	75	92,6	39	68,0	114	83,0
Would provide dental services to PLHIV	Yes	77	95,1	55	97,0	132	96,0
	No	4	4,9	2	3,5	6	4,3
Has provided services to PLHIV	Yes	0	0,0	4	7,0	4	2,9
	No	81	100	53	93,0	134	97,0
Knows a person with HIV/AIDS	Yes	4	4,9	2	3,5	6	4,3
	No	77	95,1	55	97,0	132	96,0
TOTAL		81	58,7	57	41,0		

DIMENSION	NUMBER OF ITEMS	CRONBACH ALPHA
RIGHTS OF PLWHA	4	0,605
PLWHA AS OBLIGED TO REVEAL SEROSTATUS	4	0,803
RESPONSIBILITY OVER INFECTION	4	0,648
LACK OF PRODUCTIVITY OF PLWHA	4	0,871
PERSONAL CHARACTERISTICS OF PLWHA THAT FOSTER INFECTION	4	0,650
FEAR OF INFECTION	4	0,867
EMOTIONS ASSOCIATED WITH HIV/AID	4	0,834
CLOSENESS TO DEATH	4	0,726
NEED TO CONTROL PLWHA	4	0,515
PLWHA AS VECTORS OF INFECTION	4	0,695
BODY SIGNS OF HIV/AID	3	0,632
GLOBAL	43	0,935

Variable		Global	D-1	D-2	D-3	D-4	D-5	D-6	D-7	D-8	D-9	D-10	D-11
Sex	**Female**	2,3	2,6	3,3	2,1	2,1	1,7	2,4	2,7	2,4	2,5	2,0	1,6
	Male	2,5	2,7	3,1	2,4	2,4	2,2	2,6	2,8	2,7	2,7	2,4	1,7
Age	**18-20**	2,5	2,8	3,4	2,2	2,4	1,9	2,7	2,8	2,7	2,6	2,2	1,6
	21-23	2,2	2,5	3,2	2,2	1,9	1,8	2,1	2,7	2,3	2,4	2,0	1,5
Course	**1º-3º**	2,5	2,7	3,4	2,2	2,4	1,8	2,6	2,8	2,6	2,6	2,1	1,6
	4º-6º	2,3	2,6	3,1	2,2	1,9	1,9	2,2	2,7	2,3	2,4	2,0	1,6
Training in HIV/AIDS	**Yes**	2,3	2,4	3,0	2,2	2,0	1,8	2,3	2,9	2,4	2,4	2,0	1,6
	No	2,4	2,7	3,4	2,2	2,2	1,9	2,4	2,7	2,5	2,5	2,1	1,6
Would provide services to PLHIV	**Yes**	2,4	2,6	3,3	2,1	2,1	1,8	2,3	2,7	2,5	2,5	2,1	1,6
	No	3,0	3,0	4,0	2,6	2,9	2,1	3,8	3,7	3,1	2,9	2,6	1,6
Has provided services to PLHIV	**Yes**	2,0	2,6	3,1	1,9	1,8	1,6	1,6	2,3	2,1	2,4	1,4	1,4
	No	2,4	2,7	3,3	2,2	2,2	1,8	2,4	2,8	2,5	2,5	2,1	1,6
Knows a person with HIV/AIDS	**Yes**	2,2	2,6	3,3	2,2	2,0	1,4	1,6	2,5	2,4	2,5	2,0	1,4
	No	2,4	2,7	3,3	2,2	2,2	1,9	2,4	2,8	2,5	2,5	2,1	1,6
TOTAL		**2,4**	**2,7**	**3,3**	**2,2**	**2,2**	**1,8**	**2,4**	**2,8**	**2,5**	**2,5**	**2,1**	**1,6**