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Author manuscript

*J Assoc Nurses AIDS Care*. Author manuscript; available in PMC 2022 October 01.

Published in final edited form as:

*J Assoc Nurses AIDS Care*. 2007 ; 18(5): 51–56. doi:10.1016/j.jana.2007.07.001.

## Chilean University Students: Knowledge and Concern About HIV/AIDS

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### Abstract

According to a 2004 report by the Joint United Nations Programme on HIV/AIDS, Chile has an incipient HIV/AIDS epidemic. Regardless of the classification, every year the cumulative incidence of HIV/AIDS increases. Young Chileans have been the most affected group; still, their knowledge, attitudes, and concerns about HIV/AIDS are not known. This study describes Chilean university students' HIV/AIDS-related knowledge, their worry about getting the virus, and the correlation between both variables. A convenience sample of 45 university students responded to an anonymous self-administered questionnaire after orally consenting to participate in this study. Overall, students had good levels of HIV/AIDS-related knowledge, with 77% responding correctly to at least 85% of the questions. Despite this knowledge, almost 56% of students stated that they were not worried about getting HIV/AIDS. The situation was corroborated by a nonsignificant statistical correlation between both variables ( $p > .05$ ). These results are congruent with literature from other countries and strengthen the need for further research to clarify why university students, the majority of whom are well-educated and engage in behaviors that place them at risk for contracting the virus, do not worry about HIV.

### Keywords

HIV/AIDS; knowledge; personal concern; Chile; university students

This generation of young people is the largest in history; nearly half of the global population is younger than 25 years of age. It has only known a world with HIV/AIDS. Every day, 6,000 young people become infected with HIV; they account for half of all new HIV infections. An estimated 11.8 million young people were living with HIV/AIDS at the end of 2001 (UNAIDS, 2003). In Latin America, approximately 610,000 young individuals are living with HIV, representing a prevalence of .6% (UNAIDS, 2004).

In Chile, 752 students (701 male, 51 female) have been diagnosed with HIV/AIDS since the first case in 1986. A total of 63% of these cases were diagnosed from 1999 to the present, suggesting that there has been an increasing trend of the epidemic (CONASIDA, 2003). However, there is a paucity of published studies concerning HIV/AIDS knowledge and attitudes among Chilean students.

The Chilean Ministry of Health (2005) reported that 23% of pregnant women and 11% of women who use some method of birth control are younger than 19 years. These statistics prove that young people are having sex and therefore are at risk of contracting HIV. A survey conducted by CONASIDA (2000) on the sexual behavior of Chileans revealed that young men ages 18 to 24 years reported their first sexual relation at 17.3 years of age and young women at 18 years of age.

In other countries, college students have been recognized as a population at risk for HIV infection (Kelly & Murphy, 1992). Risky sexual experiences, partner change, peer influence, and the use of alcohol and drugs are behaviors of individuals in this age group that have made them potentially vulnerable to infection (MacDonald et al., 1990). Furthermore, perceived low vulnerability to HIV/AIDS infection is associated with unprotected sexual practices among college students (Ratliff-Crain, Donald, & Dalton, 1999). When low concern about HIV is combined with ignorance, the risk of infection among youth is compounded. It is also important to note that the majority of the 11.8 million young people living with HIV do not know that they carry the virus. This ignorance increases young people's chances of acquiring HIV and other sexually transmitted disease (UNAIDS, 2003).

In many societies, there is a refusal to acknowledge that young people may be responsible and autonomous in their choices and behaviors. As such, discussions with them on many subjects, including HIV/AIDS, is taboo (UNESCO-World Bank, 2002). Embarrassment and ignorance go hand in hand, resulting in youths' lack of knowledge about sex, sexuality, and HIV/AIDS (UNAIDS, 2003). Young people and their lifestyle are heavily influenced by their peers. Adolescent and young adult risk-takers tend to associate in social networks with peers who engage in similar risk behaviors (Fisher & Misovich 1990).

Adolescents are in a transitional phase between childhood and adulthood characterized by physiological, cognitive, and emotional changes (Gillies, 2000). Lack of accessibility and education is often associated with increased HIV risk and infection. Many students cannot afford and do not have access to quality prevention interventions, counseling/testing, and overall reproductive health care. State managed care plans do not cover the broad range of school health services needed by most adolescents. Furthermore, few managed care

organizations have identified adolescents as a special population or incorporated programs for adolescents into their delivery systems (Hutchinson & Poole, 1998).

This study is being conducted to gain some understanding of Chilean university students' knowledge of HIV/AIDS and to measure if there is any relationship between their knowledge and their personal concern about the virus. Statistics show that Chilean students' infection rates have recently increased and are becoming a health care threat.

## Method

This cross-sectional study helps establish baseline HIV/AIDS information for a group of Chilean university students' knowledge, attitudes, perception, stigma, and personal concern related to HIV/AIDS. A convenience sample of 45 undergraduate students from different majors (see Table 1) enrolled in an elective course on sexuality during the first and second semester of 2005. They responded to a self-administered questionnaire about HIV/AIDS-related knowledge, attitudes, perception, stigma, and personal concern about this epidemic. This article reports on their knowledge and personal concern.

The classroom where the students normally had their lectures was used to conduct the questionnaire. The students were not formally educated about HIV/AIDS in the class before answering the questionnaire. Although it was not a requirement of the course to complete or return the questionnaire, the response rate was 100%, and each participant orally consented participation.

The questionnaire used for the study was revised and adapted for Chilean university students by Cianelli (2003). The first section contained three demographic questions, the second section had 27 questions that explored HIV/AIDS knowledge, and the third section was a free response question exploring personal concern. The students answered *true*, *false*, or *do not know* in the HIV/AIDS knowledge section. The responses were scored 0 or 1 (0 was assigned when the response was incorrect or *do not know*, and 1 was assigned when the answer was correct). The score was then calculated by adding the responses to the 27 questions. Thus, the possible HIV/AIDS knowledge score ranged from 0 to 27, recording the number of correct answers. The last question was a dichotomous *yes* or *no* answer with space for the student to provide a free response assessing personal concern about contracting HIV.

## Results

SPSS (Statistical Packages for the Social Sciences) version 11.0 (SPSS Inc., Chicago, IL) was used for statistical analysis. Regarding descriptive statistics, the data revealed that students were highly educated about HIV/AIDS. The HIV knowledge maximum was a perfect score of 27, the minimum was 18, and the mean was 23.5, which the authors consider a high level of knowledge. A total of 77% ( $n = 40$ ) of the class earned an HIV score of 22 or higher, which means having at least 81% of the answers correct. Only 5 students earned a score lower than 22. There were five HIV knowledge questions that were consistently answered incorrectly (see Table 2).

Data regarding personal concern were recorded as a dichotomous, nominal variable. This analysis showed that 55.6% ( $n = 25$ ) of the students were not concerned about HIV/AIDS. In answer to the question about being concerned or not, participants frequently stated that they were not concerned because they were in a monogamous relationship. Being in a stable relationship was considered a protective factor. In addition, students believed that HIV was not prevalent in Chile so as to be concerned about its spread.

Nonparametric test, chi-square was used to calculate if there was a connection between university students' HIV-related knowledge and personal concern about acquiring this disease. No significant differences were found between the variables.

## Conclusion and Discussion

Current HIV/AIDS statistics in Chile are only an estimate. The Chilean Ministry of Health does not promote HIV testing, and accessibility to testing is limited. Because early signs or symptoms of HIV may be diffuse, testing must be made more accessible to gain tangible HIV statistics and truly assess the population's risk for the virus. In the public health care setting, an HIV test requires a referral from a health care professional, and completion of the HIV test is a long, arduous process with many barriers. Most students have neither the money nor the time to travel to the hospital and take the HIV test.

It was encouraging to find that university students in this study were highly educated about HIV and AIDS. However, the authors' data show that despite knowledge of risks, the students were not personally concerned about contracting the virus. Also, no relationship was found between knowledge and personal concern; hence, these results seem to indicate that knowledge has no effect on personal concern for HIV, putting university students at possible risk of acquiring HIV/AIDS.

Questions about sexual activity or specific HIV-related risk factors were not asked, but a study conducted on sexual behaviors showed that Chileans have sexual initiation at a mean age of 18 (CONASIDA, 2000). This means that most university students are sexually active. In addition, the same study showed that 48% of the participants believed they were not at risk because they were in a stable relationship and in love. This reason for lack of concern is consistent with university participants' responses. It is also surprising, that in terms of condom use, only 10.2% of women and 20.9% of men who use condoms do so as a sexually transmitted infection protective factor, regardless of the number of sexual partners.

Specifically regarding incorrect knowledge, participants believed that all secretions of people living with HIV contain the virus. This potentially increases use of excessive protection measures related to daily activities, which contributes to isolation of people living with HIV. This is consistent with 14% of participants believing that HIV could be transmitted in public bathrooms.

In other countries, education and skill development strategies have been identified as necessary approaches to prevent HIV transmission among young people (Schuster, Bell, Berry, & Kanhouse, 1998). Training groups with videotaped role-play simulation have shown significant changes in knowledge and negative attitudes about HIV/AIDS

(Dommeyer, Marguard, Gibson, & Taylor, 1989). It is necessary to encourage young people to practice safe behaviors, not just through factual information but also by placing those risky behaviors into real-life situations so the young people can practice choosing healthy behaviors. This has not been the case in Chile, where no specific intervention for university students has been reported except for one conducted with nursing and medical students (Ferrer et al., 2006).

Study results were consistent with the previous literature. Knowledge does not necessarily correlate with students' personal concern or their perception of risk of contracting HIV. Education campaigns for students may be generally successful but only marginally effective in changing HIV/AIDS-related attitudes (Gilliam & Seltzer, 1989; Sales, Milhausen, & Diclemente, 2006). Regardless of the small change in attitudes, getting information could be the trigger for the application of knowledge, therefore a starting point for changing attitudes and behaviors.

A study in England reported that third-year nursing students had a significantly increased knowledge about HIV and AIDS, but there was no difference in their attitude and moral judgment as compared with their first year (Snowden, 1997; Watkins & Gray, 2006). This study, though, was not done in a context of a directed HIV intervention. Education can influence behavioral change, but it does not mean having access only to HIV/AIDS information; it needs to be guided and in the context of incorporating that knowledge into daily life (Sales et al., 2006).

Another study conducted in Spain also showed that young individuals have high levels of HIV-related knowledge, but after an intervention their knowledge was improved further and attitudes changed. This is probably because they were made aware of how to use their knowledge (Fernández et al., 2000).

A proven behavior-changing intervention would be an effective way to provide prevention for university students in Chile, a group that so far has not been a target of prevention HIV interventions regardless of their risk behaviors.

Because this research is the first of its kind, the data may be used to assess Chilean university students' HIV knowledge, attitudes, and risk perception. Additional important relationships may be discovered by correlating variables other than knowledge and personal concern. Qualitative research can be conducted regarding the open-response question measuring students' personal concern. This analysis would reveal the reasons behind students' level of concern about HIV/AIDS. Although the majority of the students were not concerned about HIV, their responses may have been justified by consistent protective behaviors. A section assessing the behaviors and practices of the students should also be added to the survey.

### **Limitations**

More data and more participants would have strengthened this research study. Using a convenience sample of only students enrolled in a sexuality course was also another

limitation. Their enrollment in the course implied that they were interested in the subject matter, which could skew the results.

### **Nursing Implications**

Education and attitudes are worthless without practical application. People who received skills training and peer support endorsed stronger attitudes in favor of safer sex than those who received only lectures and discussion about safer sex (Leviton et al., 1990). As health professionals and educators, nurses can create a supportive environment so young people can obtain HIV and reproductive health information, education, and services. This role can be taken while teaching students at the university level or while providing care at inpatient or outpatient centers. The nursing intervention, though, cannot consist only of providing information or assessing an individual's knowledge, it needs an understanding of the individual's concerns, behavior, and real understanding and use of their personal knowledge.

A study conducted by Pontifical Catholic University of Chile (Ferrer et al. 2006; Cabieses et al., 2006) reported that future nurses and physicians who have direct contact with patients and act as regular health care providers are not confident providing HIV/AIDS-related care and perceive a lack of formal training in their curricula. Addressing this objective at the undergraduate level is essential to reducing the incidence of this epidemic. To prevent HIV transmission, it is important to supplement young Chileans' strong foundation of HIV knowledge with applied learning.

Ultimately, these students will become leaders and educators of the next generation of youth. Empowering today's youth will help assist them to protect themselves against HIV/AIDS. To be successful, it is necessary to protect not only today's generation of youth, but tomorrow's as well.

In the context of nursing care for vertical transmission of HIV, it is also important to consider that most young people who are sexually active and in their reproductive years do not know how to prevent mother-to-child transmission. This is especially important because Chilean nurses at the primary care level, particularly in the public health care system, provide initial prenatal care; therefore, they need to consider counseling all women on HIV prevention. Also, in postnatal care in inpatient and outpatient settings, nurses need to consider counseling regarding transmission through breastfeeding, a less common practice in Chile.

### **Acknowledgment**

Special thanks to Dr. Beverly J. McElmurry in recognition of her support and help to develop this research article. This study was supported by the University of Illinois, Chicago (UIC), Minority International Research Training Program (T37W00057) and UIC/Chile AIDS International Training Program (AIRTP) NIH (D43 TW01419).

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**Table 1.**

Distribution of Students According to Major

<b>Major</b>	<b>Students</b>
Engineering	14
Health profession	13
Biological sciences	9
Social sciences	6
Did not report	3

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**Table 2.**

## Sample Questions with Corresponding Frequency of Wrong Answers

Question	Incorrect Answers
HIV/AIDS is not transmitted by using public bathrooms.	14 (31%)
All body secretions from an HIV-positive person contain the HIV virus.	23 (51%)
A pregnant woman who is HIV-positive and receiving treatment during her pregnancy has less chance of passing the virus to her child.	29 (64%)
Having a cesarean birth does not decrease the newborn baby's chances of getting infected by the HIV virus.	33 (73%)
A newborn baby can acquire the HIV virus through breastfeeding from an HIV-positive woman.	20 (44%)

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