DOI: 10.1590/1413-81232022273.05372021

Experiences and perceptions on sexuality, risk and STI/HIV prevention campaigns by university students. Designing a digital intervention

Giuliano Duarte-Anselmi (https://orcid.org/0000-0001-9724-0796) [1]
Eduardo Leiva-Pinto (https://orcid.org/0000-0002-9026-0345) [2]
Jairo Vanegas-López (https://orcid.org/0000-0001-5281-483X) [1]
Jeffrey Thomas-Lange (https://orcid.org/0000-0002-3414-7858) [3]

Abstract *This study reports on the qualitative phase of a study that seeks to design a digital intervention for the prevention of STI / HIV and promotion of sexual health in university students. The experience and perception that university students have about sexuality, risk and prevention campaigns are addressed through focus groups. Semi-structured interviews are conducted with key informants. The results reveal that sexual education is limited and restricted to the biological aspect, as well as loaded with prejudices and gender biases, which narrows the information provided to the student population. Wavering prevention strategies that fail to motivate students or offer them opportunities for making informed and independent decisions about their sexual health are apparent. The STI / HIV campaigns assessed are distant, fear-based and not inclusive. Interventions in sexual health do not weigh experiential aspects of youth sexuality, as they are based on models of ideal and stereotyped behavior, discarding first-person narratives and their rich complexity. It is imperative to innovate in the prevention of STI/HIV, formulating interventions based on an integrative, multidisciplinary and contextualized design that values the theory and experience of the target populations.*

Key words *STI, HIV, Sexuality, Young people, Prevention*

[1] Escuela de Obstetricia y Puericultura, Facultad de Ciencias Médicas, Universidad de Santiago de Chile. Av. Libertador Bernardo O'Higgins 3363, Estación Central. Santiago Chile. giuliano.duarte@usach.cl
[2] Escuela de Periodismo, Facultad de Ciencias Sociales, Universidad Bernardo O´Higgins. Santiago Chile.
[3] Instituto de Salud Pública, Facultad de Medicina, Universidad Andres Bello. Santiago Chile.

Introduction

Sexually transmitted infections (STI) represent a major public health concern, as they have high social and economic costs. Every day, more than 1 million people become infected with a sexually transmitted infection around the world[1]. The manifestations of STIs depend on their etiological agent, for example, in gonorrhea, genital warts, chlamydiosis, hepatitis, syphilis, and the human immunodeficiency virus (HIV).

According to data from UNAIDS[2], Chile has the highest STI/HIV incidence rate in Latin America, and young people would be the group with a particularly high infection risk. At the national level, the age groups with highest incidence of HIV, gonorrhea, hepatitis B and syphilis are precisely the 20–24 and 25–29 5-year brackets[3], which are the age groups that the majority of university students belong to. Currently, chlamydia is the STI with the highest prevalence among young people[4] and a concerning increase of HIV cases has also been witnessed in this population[5]. The risk of becoming infected with STIs/HIV is not always considered by young people, or they lack the knowledge about preventive practices against these[6]. The last National Health Survey (2016-2017) shows that only one in five young people would use condoms[7].

Young people form a community and share places, preferences and common experiences. According to Arnett[8], university years represent a crucial stage (emerging adulthood) for the creation and adjustment of healthy habits. Therefore, institutional policies for universities that seek to improve students' health may generate an especially high impact.

A qualitative review on experiences and perceptions about sex education received by young people under 25 years of age[9], which included 48 studies conducted in the five continents, shows consistent results despite the geographic and cultural differences among countries. Educational centers seem to address sex education in the same way they deal with any other subject and encounter difficulties in acknowledging the sexual activity of students. In turn, students express they need specialists and consider that the sex education received has been limited, late, focused on the biological aspects, heteronormative and sexist. Furthermore, they believe it is necessary to cover topics absent to this date, such as erotism and pleasure. This is in line with the results of studies conducted in Chile[10,11] .

At the regional level, sex education is part of the public agenda of Latin America. In a review of policies for sex education in Latin America, Baez[12] shows how three concepts have shaped the laws and programs in the continent, namely rights, gender perspective and comprehensiveness. However, it is not clear how each of these concepts translate into the different policies, existing, according to the author, some sort of semiotic broadness and "strategic ambiguity" that conditions the content imparted to students to the capabilities and interest of every educational institution.

Such is the case in Chile, where the Law 20,418 passed in 2010 made sex education compulsory in primary and secondary education institutions. Nevertheless, this law does not establish mandatory contents for this subject, thereby allowing the same educational institutions to deliver sex education "…based on their own principles and values, include contents that motivate a responsible sexuality and that fully inform about the different existing and authorized contraceptive methods, according to the educational project, convictions and beliefs adopted and imparted by each educational institution together with the parents and guardians associations"[13]. According to Figueroa[14], this "right to free choice" would force schools to choose from specific moral values, which would be presented as universal in the end. The result is, as seen in other places over the world, a deficient heteronormative education centered on contraception, and loaded with moral values and taboos[15].

The case of Brazil is different. This country stands out in the south American continent because of the implementation of mandatory sex education since the mid-nineties, underscoring anti-homophobia and articulating human rights and LGBTI (lesbian, gay, bisexual, transgender, or intersex) organizations[12]. In 2004, Brazil implemented the program for "Combating Violence and Discrimination against LGBTI People, and Advocating Homosexual Citizenship", denominated "Brazil without Homophobia". This program depends on the Secretariat for Human Rights and was created with the participation of different sectors, namely education, health, labor and justice. Nevertheless, in 2011 the strategy "School Kit against Homophobia" (denominated the "gay kit") – a package with a series of leaflets, posters and audiovisual material – was strongly criticized by religious groups and legislators representing evangelical sectors[16]. Such was the level of controversy that the President of that period vetoed the distribution of the kit and established that this type of material should have been analyzed in advance by a committee from the Secre-

tariat for Social Communication, which is under a wing of the Presidency. This marked the end of a model sex education at the Latin American level, leaving the subject restricted to the political bias that seems to exist until these days[17,18].

The Chilean and Brazilian examples indicate that sexual education is an unsolved matter in our continent, as it is heavily influenced by political and cultural aspects.

Among the preventive strategies generated by different organizations and governments, both in Latin America and in the rest of the world, are individual, group and community interventions. Regardless of the level, these interventions share a common goal: to modify the behavior, attitudes and structural barriers that aggravate the problem[19].

The application of scientific theory in the design of intervention strategies is key[20], and there is a wide range of theoretical models that focus on behavioral change[21]. This study addresses one of them in depth: the Behavior Change Wheel. This model proposes a behavior system based on the capability, opportunity and motivation of human beings (COM-B System)[22]. In this way, a comprehensive and complex analysis of changes in habits and behaviors is achieved, which has been already used in the prevention of the so-called "big four", namely tobacco, alcohol, sedentarism and healthy eating[23,24]. However, no studies have centered on the use of the Behavior Change Wheel to design interventions for the prevention of STI/HIV.

Based on this model, young people should be provided with processable information to protect themselves, as well as clear guidelines for healthy behaviors or habits. To make information "processable", it is first necessary to identify, with precision, what behaviors are involved: who has to do what, when and where. Second, it needs to be ensured that people have the capability, opportunity and motivation to perform the desired behaviors[25]. If any of these elements is absent, the desired behavior will not be adopted[26].

Recommendations for behavioral changes (desired and preventive behavior) will vary according to the modifications – in capability, opportunity and motivation – required for achieving the desired behavior[22]. The starting point for a successful behavioral change intervention is to establish in a clear and specific way what changes are required. To this end, narratives, discourses, devices or platforms can be employed. One of the advantages of the Behavior Change Wheel is precisely defining the content and context to be modified[27].

Currently, the World Health Organization (WHO) acknowledges the increase in the prevalence of STI/HIV and its consequences for health. In addition to recognizing this increase as one of the most important health challenges in the 21st century, the WHO states that prevention policies are often applied in a non-systematic and unspecific manner. Therefore, the organization recommends—besides incorporating scientific theories into the design of health interventions—to center on specific population groups, to consult extensively with the recipients and give them voice in the design, application and evaluation of such interventions[28]. Joint and multidisciplinary efforts in prevention are necessary to tackle the obstacles that university students face to adopt behaviors that allow for a safe sex practice[29], and the perception of young people is essential for the development of quality sex education programs[11,30].

It is important to consider the lessons learned when building interventions and prevention campaigns for STI/HIV. The opinions of those involved should be incorporated into the final decisions and behavioral science should be central in the design, planning and implementation of new interventions that are meaningful to the target populations.

This manuscript represents the initial stage (qualitative) of a larger study that aims to design a digital intervention—implemented with the Behavior Change Wheel – for the prevention of STI/HIV and the promotion of sexual health in university students. In this first stage, the general objective is to delve into the experiences and perceptions that university students have about sexuality, risk and STI/HIV prevention campaigns. In addition, the study seeks to compare these narratives with the opinion of experts in the subject.

Materials and methods

The research project entitled "Effects of Digital Interventions for the Prevention of STIs and HIV" has a methodology with both qualitative and quantitative components. This article deals with the first stage of research, which is mainly exploratory and qualitative in nature, and combines bibliographical sources, focus groups with young people (2) and semi-structured interviews with key informants (13). The sample selection criterion was intentional, choosing participants who would be related to the object of study from

different perspectives, and who would provide diversity and complementarity in the approach to the main issues and information provided.

Regarding the focus groups, 20 young people (6 males and 14 females) aged 18 to 25 years; males, females, non-gender conforming, heterosexual, homosexual, lesbian and bisexual. During the meeting, dialogue was centered on the following topics: sexuality, sex education, perceptions about risk behaviors, and HIV/AIDS and STI prevention campaigns. All participants were students from Universidad de Santiago de Chile, studying english teaching, obstetrics, international studies, chemical engineering, mathematical engineering and industrial design. Student organizations, as well as the Committee for Gender and Sexuality of the University collaborated in the call for participants. The saturation principle was estimated to define the sample, considering the adjustments proposed by Morse [31], Denzin[32] and Mayan[33].

As for interviews with key informants, these were conducted with non-medical professionals for the Pan American Health Organization (PAHO), health professionals specialized in STI/HIV/AIDS, sexual dissent and STI/HIV/AIDS activists from Fundación Savia, a researcher and philosopher specialized in youth (CEDER, Universidad de Los Lagos, consultant for the National Institute of Youth – INJUV), a researcher on behavioral changes in youth (Department of Behavioural Science and Health, University College London), a researcher specialized in STI/HIV/AIDS in Latino populations in the USA (School of Nursing, University of North Carolina – Chapel Hill), non-medical professional from the Ministry of Health of Chile (MINSAL), and the former head of strategic communication and campaigns of MINSAL.

Each interview and focus group were conducted in a single session, at the educational institution or workplace of the interviewee. Participants accepted to participate voluntarily without any payment. Participants from focus groups signed an informed consent that contained the research objectives and guaranteed confidentiality. The study was validated by the Scientific-Ethical Committee of Universidad de Santiago de Chile (Ethics Report No. 226, May 16, 2019).

Focus groups and interviews were recorded, transcribed word for word and subsequently organized. A content analysis was conducted based on the different data collection instruments – focus groups and interviews to key informants – integrating both for their interpretation. The software Atlas.ti was employed for data analysis and systematization. To ensure the methodological rigor of the study, the criteria described by Guba and Lincoln[34] were observed: credibility, neutrality and transferability.

Results

After analyzing the transcripts, three meta-categories were created: (1) perceptions about sex education and sexuality; (2) experiences and perceptions about risk; (3) STI/HIV prevention campaigns. Categories were applied in both participant groups (focus groups and key informants).

To quote the participants from focus groups, the following code will be used: female student No. (FS#), and male student No. (MS#). For quoting the key informants, the following code will be used: Key informant No. vrg. (KI#, vrg.).

With respect to the **perceptions about sex education and sexualities**, the university students agree that the approach to sex education during their school period had a purely biological focus, centered on fear and loaded with stigma and gender bias. One example of this is the story of a participant, who expressed:

If we see it from a sociocultural perspective, STIs are a punishment because they are supposed to be caused by licentiousness, by experimenting sexually […] In high school, I was never taught how to be with someone who had an STI (FS#6).

This perception by young people is shared by the professional experts, who also add the need of addressing other aspects – such as pleasure – and not only the biological and genital dimension of sexuality:

In the educational systems, if there is sex education, contraceptive methods are what ends up being discussed and from a biological perspective. We have lacked a discussion from the emotional, affective perspective. There is little debate about the topic of pleasure (KI#2, infectious disease medical doctor).

Students indicated that this would be related to teacher training, since education professions would not graduate with adequate training to teach about sexuality: *The teachers from our generation had no training in sex education and currently teaching programs do not train them on sex education. If one wants to work (in this field), one has to take diploma courses. Therefore, there is this shortcoming at the national level* (FS#4).

The university population emphasizes the need for a profound change in mentality regard-

ing sex education, acknowledging some, yet insufficient progress. They mention the persisting reproductive and chauvinistic conception of sexuality, which among other inconsistencies, reasserts masculine virility as an argument for not using condoms:

It happens a lot that men get offended if one says: 'ok, but let's use a condom', and they reply 'Hey, I don't have any, and tell you: 'don't you use birth control? Don't you take the pill?' Therefore, the condom is very much associated with not having children (FS#10).

In addition, there is a conservative view reflected in sex education being loaded with taboos – both in public and private spheres – and with State policies strongly influenced by the Catholic and Evangelic churches. On this, a former ministry official recognizes that: *When the intention has been to address sexuality as a normal process of life, the opposition led by the Church and more conservative groups has been tremendous* (KI#5. health physician).

It is observed that even students and health professionals, who would have a broader knowledge about sexuality compared to the general population, do not escape from this conventional sex education that, among other flaws, would be marked by inadequately including diversity and sexual dissidence in all its expressions, being focused from a heterosexual and heteronormative approach. Acknowledging this fact, an expert indicates:

We have tried to launch educational campaigns for health professionals – about sexual diversity, for example – and it has been very difficult […] if people are discriminated in the primary health care center, they won't go there anymore (KI#5, health physician).

Students mention that homosexuals are only assigned a masculine identity, stigmatizing them as risk groups and excluding also other identities such as lesbians and transsexual. A student wonders: *And what happens with queer people, or intersexual people, or trans people? It turns out that most of them do not make appointments with the midwife, psychologist or gynecologist, because health professionals are not trained to give quality of service to these people either. They feel afraid of making appointments because of lesbophobia, transphobia and things like that* (FS#14).

The experts recognize a major contribution from the social movements of the last years have brought a less homophobic view of sexual diversity, positioning sexuality as a conversation and debate topic. However, they indicate that health authorities continue to demand a position of denial regarding various sexual health problems.

The sex education received by different generations across time – limited, focused on biological aspects and loaded with prejudice and gender bias – would currently translate into a lack of knowledge about the topic in the general population. Even the university population would not be able to differentiate among each STI or STD, nor between their nomenclature, with little information and several myths regarding their symptoms, forms of transmission and treatments.

Regarding risk behaviors, students indicate scarce information and general knowledge about sexuality as a cause of concern. This would result in the young population having little awareness of what are risky sexual behaviors and practices. For example, they express that the use of condoms in university population – rare – would be limited to the practice of anal/vaginal sex and absent in oral sex. This reflects a limited knowledge about the transmission mechanisms of STIs, or an underestimation of the risk. A student comments: *Few people use condoms for oral sex, very, very few. They are not aware that (STIs) are transmitted both in men and women* (FS#10).

In addition, there would be a clear bias on the use of the vaginal condom, with unawareness of its availability, use and even existence. In this way, another student says: *At least until this year, I had no idea either of how to put on a vaginal condom, nor even that they existed. That information is not available either. And the same with condoms, condoms are supposed to be free in Family Health Care Centers if one enrolls in them, or even without enrolling there?* (FS#1).

The university population indicated the use of alcohol and drugs as a direct risk factor in sexual risk behavior: *I believe that alcohol is also a very strong component in this […] because one just goes out and does it. I've been drunk and I don't care about anything […] of course one is more uninhibited!* (FS#9). Regarding the influence of alcohol on behavior, there was not only concern about self-care but also about responsibility with others and the importance of consent: *Consent is a huge issue. When someone is drunk or under the influence of alcohol, they can agree on having sexual relations (with you), even when in a previously more sober state they clearly said no. This is what derives in abuse* (MS#3).

Students argue that a more responsible sex practice should be based on awareness, self-care and affective responsibility with the community

and sexual partners. In this way, testing would be currently becoming naturalized as an STI prevention method, as well as requesting it from sexual partners without feeling prejudices nor stigmatization:

There is nothing bad in making sure that your sex partners do not have any disease or infection, because this is also being responsible with the community; by not having the risk of infecting someone else. Social and community responsibility are often left aside (FS#14).

Among the key informants, there is consensus that the increase of STI/HIV in the young population stems from multiple factors: "*It has to do with people's loss of fear (towards HIV/STIs), that's for sure, but the habits of sexual behavior have also changed*" (KI#10, health physician). Regarding these behaviors, an HIV/AIDS activist declares that: *You identify the groups, but more through their practices, the type of relationship they have and the use they made of their bodies. That is to say, penis-vagina, penis-anus, mouth-anus* (KI#6, HIV/AIDS activist).

This would be important to identify key populations, term coined by UNAIDS, and the formerly called risk groups (men who have sex with men, sex workers, transgender people, people who inject drugs and convicts): *These are they key groups on which campaigns have to focus. They are not referred as risk groups because we all are at risk. These are more risk behaviors*" (KI#6, HIV/AIDS activist). This terminology would help reduce the stigma on specific groups and would promote awareness of the risk in the general population.

Professionals agree on the special vulnerability of young people to sexual risk behaviors, attributing this to different overlapping causes: experimenting phase, lack of information, less awareness of risks, high alcohol and drug consumption, and more access to casual sex, among others. Additionally, there would be cultural aspects deeply rooted that would work as risk factors as well. A professional indicates:

Why do Chileans not wear condoms? […] due to cultural reasons. I have heard, (they say) that it is like washing your feet with socks, like eating a chocolate with the packaging on. (They believe that) this is not gonna happen to you […] but it can happen! (KI#4, PAHO professional).

With respect to the use of condoms, an expert says: *The problem is that people do not spend on prevention, that has been proven. In other words, one will spend on antibiotics if very sick, but wouldn't spend the same amount to prevent that disease* (KI#5, health physician).

In the same line, students first point out to the cost of condoms as a barrier for access. Furthermore, they identify a moral burden between peers when using the dispensers placed inside the restrooms of universities, indicating that in general, there are strong prejudices against the quality of state-provided condoms, which are supplied in campaigns and the medical center of the university.

As for more adequate locations to place the dispensers, they indicate the need for normalizing their use, locating the largest possible number of them in all faculties and not only in some or inside restrooms. This would be a promotion and visibility strategy that would be part of a sex education free from taboos and prejudice.

Regarding STI/HIV prevention campaigns, both students and experts express concern about a fear-based approach, explaining that currently, campaigns only underscore the increase in the incidence rate of STI/HIV and/or promote testing, but fail to inform about affectivity, eroticism, pleasure, sexuality or about what to do if infected with a disease or infection, nor how to prevent them with efficacy. A student remembers:

There is a poster of a person going to the street and another person appears and saves him from being hit by a car […] like saying that if you don't get tested, you're gonna die. You were being hit by a car and they were comparing it with having HIV" (FS#2). A health expert was categorical when saying that "*terror campaigns showing dead bodies do not work* (KI#1, infectious disease physician), while other student adds:

I think that a good campaign should create awareness not terror, because that's what makes people keep avoiding the issue and believing that it is the worst that can happen to you in life (FS#5).

In relation to this message, an HIV activist highlights the importance of addressing the discrimination faced by HIV-positive people and the right they have to disclose their status, thereby contributing to prevention.

There is consensus among all interviewees, young people and experts, on the need of addressing the issue comprehensively, targeting the population as a whole, recognizing sexual dissidence and diversity, and focusing on risk behaviors instead of stigmatizing and segregating groups wrongly characterized as risk population. A student expresses:

Prejudice is generated, and if people don't feel identified with the case, they think that it is not gonna happen to them. It doesn't touch me. For a long time, I thought this was a purely homosexual

Ciência & Saúde Coletiva, 27(3):909-920, 2022

topic, and only for homosexual men, because that's how it was showcased in television and that's how we were told as kids (FS#2).

As mentioned above, both interviewee groups agree that campaigns should generate awareness – and not fear – and to that end, messages should be directly linked to emotions and personal experiences, thereby making young people feel identified with them. They also highlight the need of promoting sexuality as a natural practice associated with enjoyment, pleasure, relationships and socialization, as a part of people's daily life, and not only restricted to the reproductive aspect, and also including affective responsibility as one of the central axes: *[…] normalizing that we're sexual being is the base. That it is normal, no taboos, no fear, nothing. Normalizing that we're sexual beings* (FS#9).

Another important point on the STI/HIV campaigns developed in Chile, acknowledged by both students and key informants, is the discourse that has persisted since the 90s about three prevention methods: (1) abstinence, (2) single partner and (3) use of condoms; with the recent addition of testing. It is noteworthy that students recognize the use of condoms as an effective STI/HIV prevention method that matches their sex-affective reality. A student states*: The most known measure is abstinence, (but) if STI cases have increased, it is because people didn't abstain from sex* (MS#7).

Some of the topics young people identify as important for STI/HIV campaigns are the practical use of condoms "for the penis" and "for the vagina"; the visibility of risk behaviors; alcohol and drug use; acknowledgment of sexual and affective diversity; promotion of sex education; affective responsibility and consent between sex partners. All of them coincide with the expert group that this should be conducted through direct, close and inclusive messages that are not orders, prohibitions or punishments. An expert admits that *in the Chilean society there has been much conservatism in public policies. We have had campaigns that are unclear, untransparent and not directed towards the target population. They do not address the concrete aspect, which are the measures that the evidence considers useful for prevention* (KI#2, physician).

Students also mention the need of including information about friendly health care spaces for young adults and adolescents, where they can access information, prevention methods, treatments and screening tests expeditiously. This should not only be limited to HIV but extended to other STIs: *Now that I study this (obstetrics), I know there are many friendly spaces for young adults and adolescents, but do they know about these spaces? What do I do? Where do I go? Who do I talk to?* (MS#8).

In turn, the experts recognize the importance of considering the opinion of young people –as target population – when designing the prevention campaigns. They indicate that campaigns should be constant over time and not limited to days and times that impede to spread the message to all the population. Experts and university students find it relevant that the protagonists or "faces" of a campaign are essentially students, common people and not famous characters or actors that do not represent university life. This is aimed to achieve identification and closeness, using scenes and resources related to everyday university life. Likewise, they believe that the most suitable dissemination means for the campaign are those closer to young people, such as social networks and institutional platforms (e-mail, institutional website). They also consider the possibility of a mobile application friendly with the university audience. A student says: *We spend here (at university) half the day, and the other half on the phone. The prevention campaign or information has to be through social networks* (MS#1).

The professionals assert that to generate a change in behavior, an essential requirement is consistency at the moment of designing the campaign. The message received by young people through different means should be similar, for example, to the message delivered in a classroom. In line with this and related to the lack of information about sexuality pointed out by both students and experts, a physician specialist in infectious diseases expresses:

Campaigns are not synonym with prevention. Prevention is conducted through preventive strategies and campaigns provide elements that help strategies get settled and be accepted. Understanding this is key. A campaign does not substitute education, and educating is not its objective but making the problem visible (KI#1, health physician).

A professional from the ministry comments: *The campaign has to motivate, has to generate awareness, position the topic in the collective* (KI#12, communicational coordinator). In agreement with the above, a student believes that *a campaign should move, strike a chord that this is real, [...] all campaigns are very distant* (MS#7).

Discussion

Normalizing sexuality topics would allow people to learn and let go of historically rooted prejudice. It is the social context that categorizes people coexisting within it by means of social mechanisms for defining what is normal, common and natural and what it is not and consequently, needs to be recognized as strange and pointed out[35]. In practice, today these mechanisms represent a barrier for safe sexual practice, as they hinder addressing sexuality, preventing young people from accessing health care centers and condoms, solving questions, getting screenings, etc. According to UNAIDS: "The stigma and discrimination that young people face, particularly adolescent girls and young women, in accessing services related to sexual and reproductive health creates barriers at various levels, including the individual, interpersonal, community and societal levels"[36].

At the same time, if we trust that problems that were not conceivable in a certain era become comprehensible in other era, it is conceivable to envision a space of possibilities that facilitate the transformation of what were considered barriers at the previous time. Nowadays, the problem is, on one hand, continuing considering sexuality a taboo, making it a complicated and difficult aspect to deal with instead of human, natural, related to pleasure and emotions; and, on the other hand, an increasingly medicalized practice, extending the medical domain to areas that are not strictly medical. Thus, sexuality has become medical, which indicates that the determining factors for "health problems" are foremost of the sociocultural order, as they need to be addressed in the classifications by health professionals, specifically of those who have the most power[37,38].

Now, together with classical arguments that explain the progressive medicalization of sexuality[39,40] it is possible that in the Chilean and Latin American case such a medicalization have been strengthened by the barrier mechanisms that impeded a more open and plural social treatment of sexuality. Medicine and its secularity concur by facilitating a socially legitimized access to addressing sexuality, access which was blocked by other social dimensions such as education, politics, religion, family and customs. Consequently, although sexuality is finally addressed at the social level, its treatment acquires a mostly medicalizing "tone".

In turn, improving the quality of STI/HIV interventions and campaigns has been a complex and permanent challenge. In Chile, different political and technical initiatives have tackled this issue, but failed to achieve significant changes in the continuous increase of STI/HIV cases, specifically in young population. To a great extent, these interventions and campaigns have been designed following traditional patterns, overlooking, or with minimum consideration of the voice of their target populations. This leads to the use of rationality frameworks that give meaning to the groups hired to design the intervention, but not to the target populations.

In addition to the latter, unequal societies (men/women, rich/poor, youth/adults, indigenous/non-indigenous, heterosexual/homosexual, etc.), many times create insurmountable distances, with assumptions and preconceptions about the "other" being predominant in social relationships. Therefore, this study acknowledges the important and barely addressed role of economic, political, social and cultural determinants in health, in the optimal implementation of public policies, and in the need of designing comprehensive coordinated and participative prevention strategies for the different stakeholders involved.

Furthermore, we estimate that knowledge is the result of "an interpretation that emerges from our capacity of understanding. This capacity is rooted in the structure of our biological embodiment, but it is lived and experienced within a consensual action and cultural history domain"[41]. Thus, to understand human cognition and the consequent behavior, it is essential for their study to consider their position from an experiential perspective. In particular, in this study, it was fundamental to know how young people live their sexuality, eroticism and affectivity. The research and interventions addressed have failed, precisely, to adequately weigh the experiential aspects of youth sexuality, as they are based on ideal and stereotyped behavior models and discard first-person narratives about sexual experiences and their rich complexity. Respecting this is based on the phenomenological reduction exercises for observing experience [42]. Therefore, interviews are considered a communicative event in which reality not only refers to external phenomena but is a true social construction[43,44].

Finally, a virtuous interaction between theory and practice would lead to more effective interventions. This will require a permanent dialogue between research centers and direct-action teams in health. Initiatives may originate from one or another, but the important aspect will be the integration between studies and its results. In this sense, interventions mediated and co-built by all

the agents involved are highly valued. Creating balanced dialogue spaces (without the dominance or overvaluation of certain perceptions or opinions) allows for reaching mutual understanding, bridging the gaps and enabling collaboration opportunities while committed to a purpose that is truly in common.

Conclusions

Sexuality should be understood comprehensively and acknowledging its complexity, valuing it as a fundamental experience of human being along their lives, which covers sex, identities, and gender roles, sexual orientation, sexual practices, eroticism, pleasure, empathy, emotional bonds and reproduction; and is influenced by the interaction of biological, psychological, social, economic, political, cultural, ethical, religious and spiritual factors in different times and geographical contexts[45] .

Therefore, this study proposes that research efforts aimed to develop significant STI/HIV prevention and intervention programs for the young population have been hindered by the adoption of models and perspective that do not grasp the complexity of the sexual experience, particularly during youth. Instead, sexual practices have been stigmatized and punished, medicalizing them[46] by extending the medical arena to contexts that are not inherently medical, and by marking as pathological aspects that are not.

Considering the above as well as the importance of tackling the increase in the infection rates of STI/HIV in young Chileans, it is necessary to consider designing STI/HIV preventive strategies with young people, which address youth sexuality in a more complex way without stigmatizing nor medicalizing their sexual practices.

To this end, the study collected perspectives about sexuality, risk practices and prevention campaigns in its first stage. The creation of dialogue spaces as a method to approach autobiographical narratives turned out to be a tool that facilitated access to qualified information from a subjective and experiential perspective, redeeming the view the young people themselves have of the concept in order to enrichen and diversify the explanation of STI/HIV transmission.

In turn, the study proposes to use comprehension frameworks for youth sexuality and prevention that consider a coordinated effort from organizations of the civil society and of political and scientific communities to respond to the diverse scenarios and questions posed by HIV/AIDS/STI and their prevention strategies. Likewise, it is encouraged to provide young people with support, education and guidance in their own sexuality and life processes, and that the experiences of people about their sexuality be valued and play a leading role in methodological terms.

The current context of the SARS-Cov-2 pandemic reminds use of the importance of adopting desired behaviors to prevent the spread of infectious diseases; in this case, by means of masks, frequent handwashing, social distancing, etc. In addition, the pandemic has undoubtedly modified human interactions by largely restricting them. Regarding the prevention of STI/HIV, an increase in sexual encounters should be expected as physical restriction measures are lifted. Therefore, research that allows for a better understanding the strategies for adopting STI/HIV preventive measures are particularly relevant today.

The following stage of this study will be quantitative. Its results, together with those of the first stage, will help design a digital intervention -based on the Behavior Change Wheel – for the prevention of STI/HIV and the promotion of sexual health that targets the students of Universidad de Santiago de Chile.

Collaborations

G Duarte-Anselmi and E Leiva-Pino designed the interview script and questions, conducted the different focus groups with students and expert interviews, as well as contributing to the writing of the manuscript. J Vanegas-López worked on the research design. J Thomas-Lange conducted the qualitative analysis of data, wrote the results and edited the final manuscript. All the authors made significant contributions and approved the text submitted.

Acknowledegments

Concurso Apoyo a la Investigación Clínica DICYT/Facultad de Ciencias Médicas, code 021903 DA_MED, Vicerrectoría de Investigación, Desarrollo e Innovación. Universidad de Santiago de Chile, Usach.

References

1. Organización Mundial de la Salud (OMS). *Report on global sexually transmitted infection surveillance*. Ginebra: OMS; 2018.
2. Programa conjunto de las Naciones Unidad sobre el VIH/sida (ONUSIDA). *Trend of new HIV infections* [Internet]. 2019. [cited 2020 Oct 6]. Available from: http://aidsinfo.unaids.org/
3. Cáceres K. Informe: Situación epidemiológica de las infecciones de transmisión sexual en Chile, 2017. *Rev Chilena Infectol* 2019; 36(2):221-233.
4. Newman L, Rowley J, Vander Hoorn S, Wijesooriya NS, Unemo M, Low N. Global estimates of the prevalence and incidence of four curable sexually transmitted infections in 2012 based on systematic review and global reporting. *PLoS ONE* 2015; 10(12):e0143304.
5. Organización Mundial de la Salud (OMS). *VIH Sida* [Internet]. 2020. [cited 2020 Oct 6]. Available from: https://www.who.int/es/news-room/fact-sheets/detail/hiv-aids
6. Ahlemeyer HW, Ludwig D. The sexual behaviour of adolescents and HIV risk. *Sociologický ćasopis* 1999; 35(3):267-267.
7. Ministerio de Salud de Chile (MINSAL). *Encuesta Nacional de Salud 2016-17 (ENS)*. Santiago: Subsecretaría de Salud Pública; 2018.
8. Arnett JJ. *Emerging Adulthood: The winding road from the late teens through the twenties.* Oxford: Oxford University Press; 2014.
9. Pound P, Langford R, Campbell R. What do young people think about their school-based sex and relationship education? A qualitative synthesis of young people"s views and experiences. *BMJ Open* 2016; 6(9):e011329.
10. Silva-Segovia J, Méndez-Caro L, Barrientos-Delgado J. Discursos sobre normas relativas a sexualidad en jóvenes del norte de Chile. *Converg Rev Ciencias Soc* 2015; 67:13-33.
11. Obach A, Sadler M, Jofré N. Saud sexual y reproductiva del adolescente en Chile. *Rev Salud Publica* 2017; 19(6):848-854.
12. Baez J, González del Cerro C. Políticas de Educación Sexual: tendencias y desafíos en el contexto latinoamericano. *Rev del IICE* 2015; 0(38):7-24.
13. Biblioteca Nacional del Congreso de Chile (BCN). Ley 20.418 [Internet]. 2010. [cited 2020 Oct 6]. Available from: https://www.bcn.cl/leychile/navegar?idNorma=1010482&idVersion=2010-02-02&idParte=
14. Figueroa E. Política pública de educación sexual en chile: actores y tensión entre el derecho a la información vs la libertad de. *Rev Chil Adm Pública* 2012; 19:105-131.
15. Morán J. Feminsmo y la Iglesia Católica. *Rev Estud Fem* 2013; 21(2):485-508.
16. Romancini R. Do "Kit Gay" ao "Monitor da Doutrinação": a reação conservadora no Brasil. *Rev Contracampo* 2018; 37(2):87-108.
17. Olivera Júnior IB, Braga ERM. Diversidade sexual e homofobia: a cultura do "desagendamento" nas políticas públicas educacionais. *Prax Educ* 2015; 10(1):35-53.
18. Silva ZP. "Bafao/confusión" del kit gay: análisis del discurso de la militancia LGBT (lésbicas, gays, bisexuales y travestis, transgénero). *Rev Científica Educ y Comun* 2011; 3:27-43.
19. Jepson RG, Harris FM, Platt S, Tannahill C. The effectiveness of interventions to change six health behaviours: a review of reviews. *BMC Public Health* [Internet]. 2010. [cited 2020 Oct 6];10:538. Available from: https://doi.org/10.1186/1471-2458-10-538
20. Michie S, Prestwich A. Are interventions theory-based? Development of a theory coding scheme. *Health Psychol* 2010; 29(1):1-8.
21. Davies P, Walker AE, Grimshaw JM. A systematic review of the use of theory in the design of guideline dissemination and implementation strategies and interpretation of the results of rigorous evaluations. *Implement Sci* 2010; 5(1):1-6.
22. Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implement Sci* 2011; 6:42.
23. Gould GS. Exploring the barriers and enablers to smoking cessation in pregnant Aboriginal and Torres Strait Islander women with the behaviour change wheel. *Australas Epidemiol* 2014; 21(2):31-34.
24. Carney R, Bradshaw T, Yung AR. Physical health promotion for young people at ultra-high risk for psychosis: An application of the COM-B model and behaviour-change wheel. *Int J Ment Health Nurs* 2016; 25(6):536-545.
25. Michie S, Abraham C, Eccles MP, Francis JJ, Hardeman W, Johnston M. Strengthening evaluation and implementation by specifying components of behaviour change interventions: a study protocol. *Implement Sci* 2011; 6:10.
26. Fishbein M, Triandis HC, Kanfer FH, Becker M, Middlestadt SE, Eichler A. *Factors influencing behavior and behavior change. Handbook of health psychology*. Mahrwah: Erlbaum; 2001.
27. Cohen DA, Scribner R. An STD/HIV prevention intervention framework. *AIDS Patient Care STDS* 2000; 14(1):37-45.
28. Organización Mundial de la Salud (OMS). *Infecciones de transmisión sexual* [Internet]. 2019. [cited 2020 Oct 6]. Available from: https://www.who.int/es/news-room/fact-sheets/detail/sexually-transmitted-infections-(stis)
29. Ministerio de Salud de Chile (MINSAL). *Estrategia nacional de salud para el cumplimiento de los objetivos sanitarios de la década 2011-2020*. Santiago: Gobierno de Chile; 2011.
30. Moura LR, Lamounier JR, Guimarães PR, Duarte JM, Beling MT, Pinto JA, Goulart EMA, Grillo CFC. The gap between knowledge on HIV/AIDS and sexual behavior: a study of teenagers in Vespasiano, Minas Gerais State, Brazil. *Cad Saude Publica* 2013; 29(5):1008-1018.
31. Morse J. The significance of saturation. *Qual Health Res* 1995; 5(2):147-149.
32. Denzin NK. Moments, mixed methods, and paradigm dialogs. *Qual Inq* 2010; 16(6):419-427.
33. Mayan MJ. *Essentials of qualitative inquiry*. New York: Routledge; 2016.
34. Guba EG, Lincoln YS. *Effective evaluation: improving the usefulness of evaluation results through responsive and naturalistic approaches*. San Francisco: Jossey-Bass; 1981.

35. Goffman E. *Estigma. La identidad deteriorada*. Buenos Aires: Amorrortu; 2008.
36. Programa conjunto de las Naciones Unidad sobre el VIH/sida (ONUSIDA) [Internet]. 2021. [cited 2021 Feb 6]. Available from: https://www.unaids.org/es/taxonomy/term/798
37. Castro R. De cómo la sociología construye sus objetos: el carácter problemático de los "determinantes" sociales de la salud-enfermedad. *Ideias* 2013; 4(1):15-40.
38. Foucault M. *The archaeology of knowledge*. Londres: Tavistock; 1972.
39. Conrad P. The shifting engines of medicalization. *Underst Deviance Connect Class Contemp Perspect* 2014; 46:185-196.
40. Clarke AE, Mamo L, Fishman JR, Shim JK, Fosket JR. Biomedicalization: technoscientific transformations of health, illness, and U.S. biomedicine. *Am Sociol Rev* 2003; 68(2):161-194.
41. Varela F, Thompson E, Rosch E. *De cuerpo presente: las ciencias cognitivas y la experiencia humana*. Barcelona: Gedisa; 2011.
42. Husserl, E. *La idea de la fenomenología*. Barcelona: Herder; 2012.
43. Guber R. Nacionalismo reflexivo. La entrevista como objeto de análisis. *Rev Investig Folclóricas* 1994; 9:30-40.
44. Briggs C. *Learning How to Ask?* Cambridge: Cambridge University Press; 1986.
45. Vance C. La antropología redescubre la sexualidad: un comentario teórico. *Estud Demogr Urbanos* 1997; 12(1/2(34/35):101-128.
46. Conrad P. *The medicalization of society: on the transformation of human conditions into treatable disorders*. Baltimore: John Hopkins University Press; 2007.

Article submitted 12/10/2020
Approved 26/03/2021
Final version submitted 28/03/2021

Chief editors: Romeu Gomes, Antônio Augusto Moura da Silva