BMJ Open

Sexual health services for adolescents on Reunion Island: results from a descriptive interview-based study

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To cite: Reynaud D, Laboureur E, Marimoutou C, *et al*. Sexual health services for adolescents on Reunion Island: results from a descriptive interview-based study. *BMJ Open* 2024;**14**:e086952. doi:10.1136/bmjopen-2024-086952

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (https://doi.org/10.1136/bmjopen-2024-086952).

Received 27 March 2024
Accepted 07 June 2024

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ABSTRACT

Objectives To describe the experiences of sexual health services available for adolescents aged 15–19 years on Reunion Island.

Design A qualitative descriptive study was conducted from 3 December 2022 to 24 October 2023. Data were analysed using the phenomenological interpretative method.

Setting Centre Hospitalier Universitaire of Reunion Island.

Participants 15 participants were recruited through convenience sampling, but 3 of them did not attend the interviews.

Interventions Face-to-face or videoconferencing open-ended individual interviews.

Primary and secondary outcome measures Barriers and facilitators to access sexual health services, relationship between adolescents and healthcare professionals when using these services and suggestions made by adolescents for improving access to care and quality of care.

Results In total, 12 adolescents were included with most being female (11 with a mean age of 18 years). Most interviewees were in a relationship, lived in urban areas and had sexual intercourse (nine, respectively). Participants attended high school, university and preparatory college (four, respectively). Most interviews were face to face (11). The mean duration of the interviews was 32 min. Two themes revealing the experiences of sexual health services emerged. Participants described maintaining sexual health as a difficult journey in their quest for information about sexual health and the available services provided. Participants demonstrated that they had the ability to cope with the consequences of unprotected sex.

Conclusions To date, sexual health services available on Reunion Island may not meet the needs of adolescents. Implementation of a strategy aimed at providing young people with skills, addressing their needs and working with them in a collaborative manner may be necessary. Appropriate teaching methods and the training of healthcare professionals should also be considered.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This is the first study to describe the experiences of sexual health services on Reunion Island where 30% of the population are young people.
⇒ Most of the adolescents taking part in the study were girls.
⇒ The use of interpretative phenomenological analysis allowed for a deep and nuanced understanding of participants' experiences.

INTRODUCTION

Sexual health of adolescents on Reunion Island, a French overseas department located in the southwest Indian Ocean, remains a major public health concern.[1] Health indicators reveal a worrying situation among those under the age of 20 years who represent 30% of the total population. In 2021, the French national institute for statistics and economic studies reported that the pregnancy rate among young females aged 15–19 years on the overseas territory (15.2 per 1000 live births) was five times higher than the rate in mainland France.[2] In addition, the abortion rate among teenagers aged 15–17 years was 2.5 times higher than in mainland France in 2022.[3] Teenage pregnancies can affect the physical, mental and emotional health of adolescents including psychological trauma during childbirth and premature delivery.[4] There is also a risk of violence linked to teenage mothers lack of autonomy in making their own decisions as well as dropping out of school.[5] In adolescents who have undergone an abortion, psychological distress such as depression may appear long term.[6] Sexually transmitted infections (STIs) also affect adolescents, with such conditions such as chlamydia showing an estimated prevalence of 14.3% in girls aged 12–17 years.[7] Moreover, STIs can have negative health repercussions, such as infertility, if not diagnosed and treated on time.[8]

The WHO has advocated sexual health promotion as an essential pillar of the well-being of an individual and the socioeconomic progress of a country.[9] Sexual health encompasses the ability to plan pregnancies, prevent STIs and combat all forms of

violence and coercion.[9] Sexual and reproductive health services, including access to information, prevention services, diagnosis, counselling, treatment and care, with accessibility for all are imperative to encourage better sexual health practices and reduce risks.[10] On Reunion Island, a dedicated sexual health pathway aligned with the national sexual health strategy[11] is available to the population. The current pathway integrates preventative care interventions and consultations to ensure continuity between preventative and curative care.[1 12] More specifically, contraceptive methods, sexual health-related consultations and screening for STIs are free of charge to young people.[13–15] However, despite the expanded offer of services and access to care, its use for adolescents is low.[16 17]

Low rates of sexual and reproductive health service use among adolescents could be attributed to several factors including lack of awareness[17] personal preferences, difficulties of access to care, lack of confidentiality, negative attitudes of healthcare professionals, as well as problems related to the quality of care.[18] In this context, the objective of this study was to explore the experiences of adolescents about the sexual health services provided in Reunion Island.

METHODS

Study design

A qualitative phenomenological study was conducted on Reunion Island from 3 December 2022 to 24 October 2023. The study protocol was published by Reynaud *et al* and is also available in the online supplemental material.[19] The study adopted an interpretative phenomenological approach and was reported using the Consolidated criteria for Reporting Qualitative research.[20] Before the start of the study, two exploratory interviews were conducted with two young people to assess and adjust the questionnaire items in the interview. The interview guide was not modified after these tests, as their feedback confirmed that it adequately and exhaustively covered the relevant sexual health topics. Additionally, in accordance by the principles of the phenomenological method, it was crucial to preserve the openness and depth of the topics covered. The interview guidelines and outline of questions used are provided in the study protocol.

Inclusion/non-inclusion criteria

Participants were included to take the interview if they were: (1) aged between 15 and 19 years, (2) residing on Reunion Island, (3) with or without a previous history of using sexual health services or facilities and (4) providing consent to participant. Those who may have had hearing, visual or cognitive impairments, or unable to express themselves orally for the interviews were not included.

Study recruitment

Adolescents were recruited on the basis of convenience sampling. Posters were physically displayed in educational institutions and sexual health centres on Reunion Island, and digitally communicated via social media to invite the target population to participate in the study. 15 adolescents interested in taking part were first contacted by the principal investigator (PI) via email, explained of the study and confirmed to book an appointment for the interview.

Study outcomes

Outcomes included: (1) exploring the barriers and facilitators reported by adolescents who had experience with sexual health services in the past, (2) describing the interviewees experience with healthcare professionals and (3) collecting verbal suggestions for improving access to care and quality of sexual health services.

Data collection

Data were collected by means of open-ended individual interviews, conducted face to face in different locations (public gardens, meeting rooms, classrooms in educational establishments), as well as by videoconference, all conducted in French. The interviews were conducted by the PI (who was a doctoral student), and an associate investigator midwife, trained in the interview method and following an interview guide covering two axes: sexual health and sexual health services. The interviews were recorded with the consent of the participants, then transcribed in full within 24 hours of the interview. Participants were deidentified and anonymised with a pseudonym was assigned to each interview. Sociodemographic data were also collected.

Patient and public involvement

As part of patient and public involvement, two young people participated in exploratory interviews to assess and adjust the questionnaire items before the start of the study.

Data analysis

Data analysis was carried out by three researchers (DR, EL and EC) following the phenomenological interpretative analysis as described in Peat *et al*.[21] Interpretative phenomenological analysis (IPA) focuses on exploring how individuals make sense of their personal and social experiences. It is particularly suited for studies aiming to understand the depth of personal meaning and the subjective experiences of participants. IPA is pertinent for this study because it allows for a detailed examination of the lived sexual health services experiences of adolescents, emphasising their personal perceptions and interpretations. This method is not only just about identifying common themes but also about understanding the nuanced ways in which individuals perceive and make sense of their experiences.[22 23] This dynamic process involved six steps: (1) raw data extracted from the interviews with DR and EL examining the transcripts to gain an in-depth understanding of the empirical data independently, (2) initial scoring of potential themes, (3) coded themes by verbatim (line by line), (4) resulting

codes grouped into categories facilitating comparison between participant verbatims, (5) analysis of each case with DR and EL examining the recurring themes and engaging in a speculative and interrogative process to understand the different dimensions linked to each transcript during joint meetings and (6) integration/writing with three of the investigators synthesising the results concisely, ensuring that the final category labels are accurately reflected in their content.[24]

The interviews conducted during the exploratory phase were integrated into the data analysis to complete the data. EC supervised the first five interviews to control and validate the analysis process. The coding and categorisation processes were carried out separately and independently to preserve the singularity and authenticity of each testimonial. The entire analysis was carried out using Maxqda V.12 software. As the data were anonymised after the interview's transcription, the adolescents could not be contacted to share their analyses.

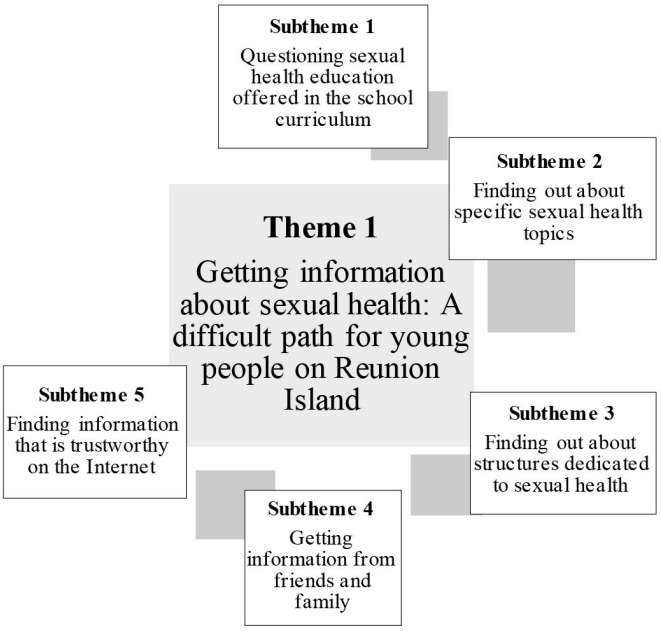

Figure 1 Theme 1 and subthemes identified during the sexual health services experience interviews of adolescents.

RESULTS

General findings

In total, 12 adolescents were included with most being female (11) and having a mean age of 18 years (min–max: 16–19). Most were in a relationship (9), lived in urban areas (9) and had previously sexual intercourse (9). The level of education was equally distributed to high school, university and preparatory college (4) (table 1). Most interviews were face to face (11) (table 1). The mean duration of the interviews was 32 min (min–max: 16–50 min).

Overall, two themes were identified from the phenomenological analysis illustrating adolescent experiences of sexual health services, with a total of 10 subthemes accompanied by verbatim excerpts (see figures 1 and 2). The two themes were: (1) getting information about sexual health: a difficult path for young people on Reunion Island and (2) coping with incidents related to risky sexual behaviour: capacity for self-efficacy among young people.

Subtheme 1: questioning sexual health education offered in the school curriculum

According to the feedback, the first exposure of information on sexual health services was provided to all adolescents at sexual education sessions in junior high school and high school. However, sexual education was suggested to be offered in places where young people meet.

Table 1 Characteristics of 12 adolescents describing their experiences of sexual health services on Reunion Island

Participant's name*	Gender (M/F)	Age (years)	Level of education	Relationship status	Sexual intercourse	Geographic area of living
Juliette	F	16–17	High school	In a relationship	Yes	Urban
Emma	F	16–17	High school	In a relationship	Yes	Urban
Angie	F	16–17	High school	In a relationship	Yes	Urban
Mae	F	>18	University	In a relationship	Yes	Urban
Nat	F	>18	University	Single	No	Urban
Ysa	F	>18	Preparatory college	In a relationship	Yes	Rural
Rafae	F	>18	Preparatory college	Single	No	Rural
Far	M	>18	Preparatory college	Single	No	Urban
Ella	F	>18	Preparatory college	In a relationship	Yes	Rural
Antha	F	>18	University	In a relationship	Yes	Urban
Amel	F	16–17	High school	In a relationship	Yes	Urban
Aure	F	>18	University	In a relationship	Yes	Urban

*Pseudonym name.

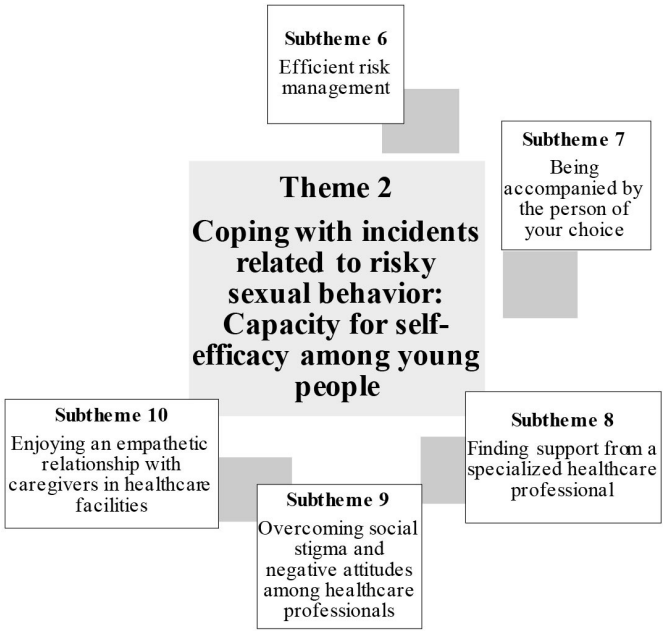

Figure 2 Theme 2 and subthemes identified during the sexual health services experience interviews of adolescents.

Yes, we had sessions in college too, I think. And that was it… (Ysa)

It was more at high school … It's also necessary to have interventions in places of training, in care facilities. These would be reminders for the young person (Far)

In high school, we had four hours on this subject (Juliette)

Some adolescents discussed the importance of sex education courses and that they should be a systematic part of the school curriculum:

I think sexuality awareness days in schools are very important and should be systematic. So that they can target as many young people as possible (Mae)

The first encounter with sexuality education was stated to be taught in the life and earth sciences classes by teachers and mainly focused on puberty, anatomy of the reproductive system, STIs and safe sex practices. Sexual health was perceived through prevention approaches focused on reproductive and infectious risks:

Yes, lessons on sex education in the life and earth sciences class, by the life and earth sciences teacher… (Far)

It was about very physical things like how to put on a condom or how the pill works (Angie)

It was really fixed on condoms and diseases, which is important, I agree, but that was that!!! (Ysa)

According to some of the adolescents, sex education sessions were also carried out by external, sometimes untrained educators. The role of healthcare professionals, particularly nurses, who are considered a priority in this teaching role did not provide sexual health education in the school environment:

They weren't nurses…or doctors, or people trained for it. They were volunteer moms who told us about it (Juliette)

The nurse isn't at school all the time, and can't always answer my questions (Angie)

Subtheme 2: finding out about specific sexual health topics

Sexual health concepts such as individuals' rights, consent and sexuality were stated to be rarely explained, even though they wanted information on these subjects, and never from a positive or well-being angle:

Consent was not discussed at all. I find it very serious to start your sex life without knowing what consent is, which to me is such an important notion. (Mae)

I think we should say that protecting yourself also means trusting your partner (Aure)

I didn't have a course on sex, or even sexuality from start to finish of everything you needed to know about it. (Rafae)

…getting to know your own body and that of the other person, we never talk about it (Ysa)

I didn't know that the nurse could give me emergency contraception without a prescription. I didn't know if I had to pay for it… At 15, I knew absolutely nothing. I just knew it existed… (Angie)

But I don't know what it means to enjoy sex……It makes me wonder (Aure)

Participants reported that a lack of understanding of sexuality led them to engage in unprotected sexual intercourse:

What does it mean to come? Because I've never come… My friend always encourages me to try it and it frustrates me…so I have sex with boys looking for it (Aure)

My abortion when I was 16 opened my eyes to sex and sexuality. It's not trivial, it has to be something you really want and the other person has to feel the same way as you do…but we're not told that. (Ysa)

Subtheme 3: finding out about structures dedicated to sexual health

Participants felt that there was a lack of information about the sexual healthcare facilities available on Reunion Island.

Society doesn't tell us that there's this kind of information on sexuality [and that] centers [and] associations exist and talk about sexual health, quite simply. I mean, we don't get information… (Antha)

I don't think there's enough communication about sexuality services, we're not informed enough. In schools, we should find this kind of information, that's what's missing (Mae)

Participants also described the difficulty in understanding the abbreviations of care structures and services offered when in contact to sexual healthcare services:

> I went to the family planning office in the northern region. The Maternal and child protection health service (PMI), I think…I didn't even know what family planning meant… (Angie)
>
> In the center where I had the abortion, it was a center that helped young people. But I have no idea what it's called. But otherwise, it's the only one I know… (Ysa)
>
> There are houses…. I don't remember what it's called, but where you can go…There are contraception units and they can give information… (Juliette)

Three of the participants proposed advices to allow more dynamic teaching methods on sexual health, involving themselves and their peers:

> We could offer scenarios… like theater…. work with us teenagers to raise awareness of sexual health prevention. (Nat)
>
> Maybe recruit young people who might be interested in making it a career and getting involved with young people. It would be easier to relay information from teenager to teenager. (Antha)
>
> Carrying out prevention interventions by young people, animated and dynamic, that would really be very interesting. (Juliette)

Subtheme 4: getting information from friends and family

We found that school environment could be a primary source of information. In the absence of school-based information, most participants independently turned to alternative sources of information. Discussions about sexual health were usually held among friends, partners that they were in a relationship with and family. Four participants provided the following responses:

> You learn a bit on your own. (Ella)
>
> … I talk with older friends… My sister, my brother and my mother are also very open on the subject and I talk about it a lot with them. (Juliette)
>
> It's with my girlfriends, my boyfriend, my mom and one of my cousins…even my sister. (Emma)
>
> Above all, I talk about it with the people around me, my cousins and my friends who are going through pretty much the same thing as me at my age… (Ysa)

Many participants stated that they were unable to discuss sexual health with their parents or family members because it is a taboo subject. Beyond taboo, participants said that they felt embarrassed to talk about sexuality and were afraid of judgement:

> A simple example: I was at a family dinner last week and my cousin had put on a rap song…and the singer said the word 'sex'. My auntie said "turn it off! Change the music….so [just] to say how taboo it really is. (Angie)
>
> It's embarrassing and complicated to talk to your parents about it. My mother tends to judge everything I do, whether it's love, friendship, sex… (Nat)

The role of mothers was prominent for getting information from family and friends. Participants stated that their mothers played an important role in advising their children on how to prevent STIs and early pregnancy. They encouraged caution to them before entering into a sexual relationship:

> With Mom, I talk about my sex life. (Amel)
>
> My mother is free-spirited. I find it easier to talk to her about sex. She often tells me to use protection when having sex. (Far)
>
> It was my mom who advised me about contraception. She told me that if the pill doesn't work, it's better to use an IUD [as birth control]. (Ysa)

One participant stated that their mother rarely took the initiative in sexual health-related discussions, which took place mainly when adolescents were entering their sexual lives and at their request.

> Before, my mom and I never talked about sex, but when I was 16 or 17, because I had a boyfriend, she told me I had to protect myself during sex. (Rafae).

Subtheme 5: finding information that is trustworthy on the internet

Since the internet is extensively used by younger generations, participants described the use of social media platforms as a fundamental solution to improving sexual health promotion on Reunion Island. Social media was stated to play an important role in getting sexual health information. Questions or concerns were stated to be randomly researched on the internet. Teenagers noted that they trusted peer influencers who publicly provide information and talk about sexual health. Lack of accurate information from healthcare professionals was noted as a reason for getting information online:

> All teenagers use the internet, for example Facebook …I'm not the type to talk, to discuss, I prefer to go on the internet (Nat)
>
> What I've already written on the internet may seem ridiculous… for example: "Is it normal for my period to be brown?. I searched online and I read 'Yes, it's normal because it's at the end of the period that it's that color. It was reassuring to read. (Ysa)
>
> When I need information, I look it up online. For example, if I've forgotten my pill, I search what the consequences are. (Antha)
>
> Well, if I have to do any research, it's on the internet, and if my doctor doesn't help me, I'll go and look on

the Internet. For example, I look on the 'Doctissimo' site, I think that's the name of the site… (Aure)

I wanted to change contraception. My first instinct was to look on the internet for a list of hormone-free contraceptives. That's how I built up my knowledge base on sexual-related subjects. (Angie)

Specific Instagram accounts on sexuality created by young people were mentioned by many of the interviewees to obtain information. These accounts were often based on humour and personal experiences, making the subject of sexual health more accessible, less taboo and engaging to their audience:

If I come across an account about sexuality, I'm going to go and look because it interests me and I want to find out more…There are Instagram accounts about sexuality which are accounts suggested by young people who talk about sexuality with humor. It makes you want to look and listen to what they have to say about their experience. (Amel)

Subtheme 6: efficient risk management

An analysis of experiences relating to risky sexual behaviour (such as abortion, STIs and emergency contraception) showed that participants knew how to search for a solution and turn to the appropriate healthcare services. The responses made showed that they were able to develop a form of self-efficiency when facing a complex situation affecting their sexual health:

First of all, I went online and found telephone numbers for abortion facilities. I went to the family planning office, which then referred me to the specific hospital department. I saw the doctor to organize an ultrasound and then opted for a medicated procedure. A week after the abortion, I took another pregnancy test to be sure I wasn't pregnant. And it was positive. I was afraid I'd have to have another abortion. In fact, it was positive because there was still some residue left… (Antha)

I asked my doctor to order screening tests because I was having unprotected sex. I went to the medical lab because I wanted to know if I had a transmissible disease…They took blood tests, a vaginal smear and a urine test. (Aure)

Subtheme 7: being accompanied by the person of your choice

Making your own choices about sexual health may confirm the acquisition of new responsibilities and marks the transition to adulthood. The interviewees noted that when making sexual health decisions, they took the steps alone or with their partner or friends. The willingness to involve family in managing risky sexual behaviour was described as being dependent on the relationship between themselves and their parents:

… I was 12 weeks without my period… I did not tell my parents, but it was my ex-boyfriend's mother who was by my side at the doctors and who helped me with everything (Ysa)

I had a consultation with my doctor in the presence of my grandmother. (Aure)

Subtheme 8: finding support from a specialised healthcare professional

Pharmacists appear to play an important role in the provision of sexual health services. They are seen as accessible and reliable healthcare professionals. Participants explained that they went to a pharmacist for pregnancy tests, condoms and emergency contraception. In most cases, pharmacists were called in when young people were engaged in risky behaviour.

I went to the pharmacy on my own to take a pregnancy test because my period was late and I felt I had some symptoms, but I was not pregnant. (Juliette)

My boyfriend, at the start of our relationship, would go to the pharmacy to get condoms, to avoid sexual diseases… (Ella)

I didn't know anything about sex. We didn't have intercourse but I knew some of his semen entered near my vagina and I was scared. I had no information; I didn't know what to do…I was losing my mind. I went to the pharmacy after looking on the internet with a friend…I took the morning-after pill. (Rafae)

Because I had unprotected sex, I told myself to be on the safe side and take the morning-after pill, so I went to the pharmacy. (Emma).

One participant in the study mentioned the need to see a psychologist after having an abortion:

It was a medically induced abortion, and it upset me for a year and a half, or even 2 years. Now I feel a bit better. (Ysa)

Subtheme 9: overcoming social stigma and negative attitudes among healthcare professionals

Interviewees emphasised the sociocultural influence on sexual health. Social influences and religious prejudices, combined with feelings of embarrassment about discussing sexuality, hindered participants from communicating and seeking access to information about sexual health services. Feeling embarrassed or intimidated, participants described that they feared being judged and treated in an infantilizing way. Participants noted that negative attitudes of healthcare professionals led them to delay or avoid seeking help relating to sexual health:

On Reunion Island, religion is very present and there's a certain awkwardness around the body and around topics of sexuality… It's really hard to talk about it. (Angie)

Out of shyness, I do not know how to explain to doctors even though they're professionals. At worst, if there's nothing serious, I'll reassure myself. If you've

been raped, you might feel ashamed and we pretend it never happened. (Emma)

I asked the gynecologist at the family planning clinic if it was possible to have contraception that didn't contain hormones. But she lectured me…It really put me off and I didn't go back (Angie)

…there are places where the caregivers are tactless and judgmental…It's not very pleasant. (Antha)

One of the participants reported that during a medical consultation relating to confirm having an STI (HPV, Papillomavirus Humain), the attending physician was not reassuring:

…he had already explained the treatment to me during the first consultation… I didn't understand a thing… I was a bit shocked. As soon as my grandmother asked a question, he was brutal and didn't want to repeat what he'd already told me. It was quite disturbing. (Aure)

In particular, participants expressed the need for warm and friendlier assistance and an empathetic attitude from a healthcare professional, especially when faced with emergency or uncomfortable situations in primary care:

The atmosphere was super cold in the pharmacy. The lady huffed and puffed. I asked for the morning-after pill, it wasn't gentle…I was stressed and in front of me, there was a cold person…A compassionate smile would have eased my anxiety. (Emma)

I'd like to be really comfortable with the person…I need openness and clarity, and for their advice to be crisp and clear! (Nat)

Subtheme 10: enjoying an empathetic relationship with caregivers in healthcare facilities

Regarding abortions, participants said that they were satisfied with the reception, responsiveness and closeness they experienced with staff. Effective support from healthcare professionals enables young people to strengthen their autonomy and their ability to influence their sexual health. The attentive listening and availability of a gynaecologist encouraged greater acceptance of contraception, contributing to more appropriate choices:

They welcomed me very well, took care of me quickly and did all the tests. I didn't have my parents, so they stayed with me. I didn't feel alone. (Ysa)

For me, the treatment went very well. Frankly, the team was top notch, they listened to me. It met my expectations. I got the follow-up I wanted. That is, before, during and after the abortion. I was afraid of meeting people who were still judgmental. They were gentle. (Antha)

She explained all the contraceptive options to me, and at the second appointment I went in for my implant (Ysa).

DISCUSSION

This study described adolescent experiences of sexual health services on Reunion Island. Our results showed that the accessibility of sexual health information may be difficult for young people. Despite a negative perception of healthcare professionals in primary care settings, the adolescents were nonetheless able to find appropriate solutions to emergency situations arising from risky sexual behaviour. Our findings may provide an overview of sexual health information provided in schools. It is widely recognised that sexuality education, delivered through dedicated lessons, plays a key role in raising awareness. However, the French educational curriculum[25] may not respond adequately to the needs of adolescents in real-life settings and may not be in line with the WHO recommendations for comprehensive sexuality education (CSE).[26] Forcadell-Díez *et al* also recommended introducing sexuality education into the mandatory curriculum in Spain.[27]

School teachers may insist on the importance of teaching the anatomy and physiology of genital organs in school settings, and its priority has also been echoed in the literature.[28] However, educators advocate a holistic approach to sexuality education, viewing sexuality as a fundamental human right. Plaza-del-Pino *et al* reported that this approach embraces notions such as diversity, respect and consent, as well as emphasises communication which includes interpersonal relationships, safe sexual experiences and emotional aspects such as pleasure.[29] A CSE allows the cognitive, affective, physical and social aspects of sexuality and can enable adolescents to develop respectful relationships, understand their rights and make informed decisions for a safe and fulfilling life.[26]

Participants in this study suggested the use of digital tools for sexual health services to match their generation and encourage interactive learning on topics related to sexuality. In China, Ma *et al* showed that a sexual and reproductive educational programme integrating various interactive activities such as quizzes, group discussions and videos demonstrated effectiveness in improving knowledge, attitudes and self-efficacy skills in sexual and reproductive health.[30]

Younger generations may prefer to seek information about sexual health via social media, which have become influential channels for promoting sexual health. To date, the literature supports that peer education via social networks on sexual health is both feasible and well accepted. In France, Nuttall *et al* reported that an educational programme named '*Service Sanitaire*', delivered by tertiary healthcare students to teenagers, considerably improved their knowledge of sexual and reproductive health compared with the standard educational programme.[31] Other studies have demonstrated the impact of social networking on health-related behaviours, such as increased condom use and testing for STIs, as well as reduced rates of infections. These findings have been supported by a scoping review conducted by Gabarron and Wynn reporting that in 45% of the included studies,

social media was at the heart of and the main channel used for sexual health promotion. Platforms, such as Facebook, Twitter, Flickr, YouTube and Grindr, were among the most widely used.[32] The need for peer learning models was a common topic in our study. Interventions focusing on STIs and sexuality education, which are widely deployed in many countries, have demonstrated their effectiveness in acquiring sexual health knowledge and attitudes.[33] In a pilot study, Mitchell *et al* showed that 72% of adolescent peers felt confident in their role as sex educators.[34] Similarly, Hirvonen *et al* clarified that sexual health messages were shared peer to peer on social networks.[35]

The attitude of healthcare professionals seems to play a key role in adolescents use of sexual health services. Literature indicates that young people trust healthcare professionals in matters of sexual health[36] and consider nurses as competent professionals to provide related courses in schools.[37] However, school-based nurses may feel uncomfortable and hesitant broaching this subject in their practice. It may also be imperative to develop training programmes aimed at strengthening nurses' ability to communicate effectively with adolescents. Ramjan *et al* demonstrated that educational interventions aimed at nurses in charge of caring for adolescents led to a significant improvement in their knowledge and skills. These findings may underline the importance of investing in adapted training programmes to foster open and constructive communication with this specific age group.[38] Training of healthcare professionals may be needed to provide sexual health education to patients. In a literature review, Verrastro *et al* reported that there is consistent evidence for training in the reception and care of those who are involved in the healthcare system and delegating sexual health issues to specialists should be avoided since every patient has their own sexuality.[39] Massae *et al* also suggested the need for sexual health clinical training for healthcare students and professionals to optimise quality sexual health delivery in Tanzania.[40] Ahn and Kim reported that educational programmes for healthcare professionals should focus on improving comfort and potentially adapting mixed attitudes for providing sexual healthcare for oncology patients.[41] However, it is possible to relate the attitudes of healthcare professionals, particularly nurses and the mixed experience of adolescents with sexual health services to Nola Pender's theory of health promotion, which comprises of three interacting spheres influencing health behaviour. These spheres are personal characteristics and experiences, knowledge and effects of specific behaviours, and behavioural outcomes. The theory highlights that the outcome of a health promotion intervention depends not only on the intervention itself, but also on the influence exerted by components of the various spheres on an individual. Pender *et al* argues that the elements of these spheres need to be assessed in order to create a personalised intervention plan.[42]

In practice, to improve sexual health services on Reunion Island with reference to Pender's theory, healthcare professionals including nurses must create favourable conditions for young people to behave positively towards sexual health services. A holistic educational approach could be introduced using social networking, documentary research training combined with peer education. Sexuality education programmes should be standardised and systematically integrated into the school curriculum with defined timetables with specific content to meet adolescents needs and their dedicated teachers. Improving the scientific knowledge of sexuality among healthcare professionals[43] and receiving training in sexology may be options to address this in the future.

To increase the visibility of sexual health services, the creation of an online map listing available structures and resources could also be considered and could be actively promoted by healthcare professionals specialised in the field. Nurses, teachers, parents and student associations responsible for sexual health promotion need to acquire skills regarding sexual health. They also may need to develop a positive culture around sexual health, adopting a pedagogy that fosters a diverse, non-normative understanding of the topic. To ensure that the needs of young people on Reunion Island are addressed, actively involving them in the development of sexual health policy could be proposed. Direct participation could help better respond to the specific expectations and concerns of this population.

Strengths and limitations

The originality of this research lies in its direct interest in the experience of young people living in a context in which local culture influences health outcomes. Another strength was the interdisciplinary collaboration of the researchers, reinforcing the quality and reliability of the study. Regarding limitations, recruitment focused mainly on adolescents still engaged in school, which may have endured recruitment bias. To mitigate this, participation was open to adolescents through postings in sexual health centres, social networks and in schools and not to have limited it to individuals who had already accessed sexual health services. Despite the voluntary engagement, some adolescents displayed reticence during the interviews, resulting in potentially underdeveloped responses, particularly on intimate subjects. Future research could use focus groups to reach adolescents that are reluctant to be interviewed individually.

One limitation of this study is the high prevalence of girls in the sample. While this reflects the composition of our target population at that specific time and provides valuable insights into the experiences of girls in the context of sexual health services, it may influence the findings and limit their applicability to a broader population. Future research should aim to include a more balanced gender distribution to enhance the generalizability of the results. While our study did not specifically focus on sexual orientation and gender identity, we acknowledge that these factors could have influenced the participants' perspectives and experiences. This limitation underscores the

need for future research to explicitly explore the experiences of lesbian, gay, bisexual, trans youth to better understand their unique needs and challenges about sexual health services.

Another limitation is the small sample size of 12 participants. It is important to recognise that a larger sample size could provide a more comprehensive understanding of the phenomena studied.

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Acknowledgements The authors would like to thank the Reunion Island University Hospital for their funding of the study, Lucie Auzanneau for administrative procedures, Clémence Allombert (midwife), Dr Thore Emmanuelle, Dr Diallo Kevin, Olivier Maho and the professionals from the CeGIDD at the CHU de La Réunion south site, Laurie Kichenapanaidou, Ana Maria Ebro, as well as Sarina Yaghobian and Marty Brucato from AcaciaTools for their reviewing and proofreading services.

Contributors DR, EC and EL developed the research project concept and design. DR obtained funding and managed the research project with professionals working in school and sexual health services. DR, EL and EC analysed data. DR, EL, EC and CM revised the manuscript. All authors approved the final manuscript. DR is the guarantor.

Funding This work was supported by Reunion Island University Hospital and received a grant under the European Regional Development Fund (ERDF). Grant/award number: N/A.

Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Consent obtained directly from patient(s).

Ethics approval This study involves human participants. Participants were given oral and written information about the study prior. Interviews were conducted with oral consent of participants and they were given pseudonym names for the purpose of publication. By French legislation, expressed oral consent is authorised for this study type and participants over the age of 15 years are not subject to parental authorisation. Informed consent from a legal guardian/parent for minor participants is not mandatory. This study was approved by the ethics committee of the Centre Hospitalier Universitaire de Bordeaux (CER-BDX-2022-55). Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available on reasonable request.

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