


BMJ Open Sexual health promotion messages for young people in Netflix most-watched series content (2015–2020): mixed-methods analysis study

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ABSTRACT

Introduction Sexual health is a major issue for young people, and there is a need to promote it. Sexual health promotion messages may be included in Netflix series that are widely watched by young people, with important emotional dimensions in scenarios.

Objective The aim of this study is to investigate the explicit sexual health promotion messages integrated in Netflix series popular among young people, and to describe them and how they are delivered.

Methods We selected two types of Netflix series, aimed at young people: (1) series whose synopsis is mainly about sexual health and (2) all-subject series. We extracted data from 65 episodes of 6 of the most-watched Netflix series. We used a data extraction grid on EpiData. We analysed sexual health themes and sexual health promotion messages. We described the series and listed all the sexual health and other health themes discussed. For each promotion message, we described scene contents and extracted dialogues.

Results We found 62 promotion messages in the 6 analysed series. The two series that highlight sexual health in their synopsis account for 81% (n=50/62) of these identified promotion messages. Messages mainly focus on sexual harassment and violence (19%), on sexually transmitted infections protection (18%) and on contraception (15%). Messages are mainly delivered as verbal information, and mostly feature 16–18 years old characters in school. Analysis highlighted four main points concerning scenarios in these series: (1) there are different ways to deliver sexual health promotion messages; (2) there is depiction of negative value judgements and gender norms; (3) some information may be incomplete or misleading and (4) risky behaviours are represented.

Conclusion Netflix series incorporate diverse sexual health promotion messages for young people. Further research could assess how these messages are perceived and whether they increase the knowledge, skills and positive health behaviours of young people.

INTRODUCTION

Sexual health is a major theme in well-being among young people, to consider in a holistic and positive way,¹ beyond problematic indicators.^{2–6} Health promotion actions could then

Strengths and limitations of this study

- This is the first mixed-methods analysis study of sexual health promotion messages within Netflix series and targeting young people.
- It provides a rigorous, systematic and reusable methods to analyse the different types of health promotion messages, according to the different components of sexual health.
- The study covers full seasons but only analyses 65 episodes, and other topics and messages may be covered in others series.
- The study concerns series for 16 years and older as rated by Netflix, although younger people can watch them.

develop individuals knowledge and skills, in order to adopt positive behaviours, to increase health control and empowerment.⁷ For it, web-based, digital and communication tools are a promising medium to integrate health promotion content, since these can influence young people's health.^{8–10}

Media can influence attitudes and behaviours related to sexual health and young people's sexual scripts: socially shared beliefs presented in media content will impact how people should act in sexual situations.¹¹ In a health promotion perspective, media interventions that could reverse sexual risk to positive behaviours must be studied.¹¹ The sexual content media aimed at young people has been analysed in various studies,^{12–15} and these concluded that sexual health promotion was rare.

Few studies looked at sexual content with new and attractive Subscription Video on Demand (SVoD) platforms. Netflix is the most used SVoD platform in the world¹⁶ with 193 million subscribers in more than 190 countries, in 2020.¹⁷ During the COVID-19 lockdown, an unprecedented surge in new

Netflix subscribers was observed.¹⁸ In particular, SVoD series for young people offer opportunities to integrate sexual health promotion messages. Young people are likely to be more responsive to new digital formats than to institutional messages. Through their entertainment potential, these series may avoid the moralising aspect of sexual health promotion messages often perceived by young people.

A study investigates how women who identify as heterosexual are invited to view and engage with lesbian sexuality through a queer series (Netflix *Orange Is the New Black*).¹⁹ One book chapter highlights new representations of disabled gay sexualities within a Netflix series, with a critique of normativity and its hierarchies.²⁰ None of them focus only on media content for sexual health promotion.

The aim of this study is to investigate whether and how explicit sexual health promotion messages are integrated in Netflix series popular among young people, and to describe what these messages are and how they are delivered. The secondary objective is to compare promotion messages, in terms of number, ways of delivery and themes addressed, between those series whose synopsis is related to sexual health and other series.

METHODS

This study is an exploratory content analysis²¹ of Netflix series. The study was organised as follows: (1) definition, identification and selection of series to include; (2) systematic collection of quantitative and qualitative data and (3) mixed analysis.

Patient and public involvement

Our research question was constructed with regard to the literature on youth sexual health interests and health promotion needs through new digital tools. No patients, no patient advisors and no public are involved in this study. This research only analyses series content.

Inclusion criteria

The series included had to meet the following inclusion criteria: (1) be available on Netflix; (2) have been launched in the last 5 years (2015 or later); (3) be labelled 'teen television (TV) shows' on Netflix; (4) be part of most-watched series. The language of the original version was not a criterion for inclusion of the series. Most-watched series were defined thanks to three top-lists of the most watched series on Netflix in 2019. The first list was posted by Netflix on its social network account.²² The second was posted by Médiamétrie, a company specialising in audience measurement and in the study of the uses of audiovisual and digital media in France.²³ The third was posted by TV time, an international platform for shows and movies available on mobile and web, helping viewers to track what they are watching, when and how.²⁴ In our study, a series met the criterion of 'most-watched series' if it appeared in at least two of these three lists. Using this criterion,

there was no single series addressing the specificity of the LGBTQ+community among the most-watched series and teen TV shows. In view of the importance of considering gender identity and sexual orientation in sexual health,²⁵ we decided to include one series addressing LGBTQ+ topics (Lesbian, Gay, Bisexual, Transgender, Queer and others sexual and gender minorities). Using the Netflix search toolbar and the words 'LGBTQ+series' we selected the series that appeared as the first Netflix suggestion, series which could be seen by 16 years old and more.

Definitions of outcomes and categories of analysis

A series was classified as a 'sexual health series' if its title, trailer or summary indicated that the synopsis addressed sexual health, to all or part of it (example for *Sex Education*: 'Insecure Otis has all the answers when it comes to sex advice [...] Maeve proposes a school sex-therapy clinic.').

For content analysis of the series, the authors established a list of 15 sexual health themes, plus a miscellaneous category with a free text field to complete; and a list of 14 non-sexual health themes ('other health themes') plus a miscellaneous category (see in Multimedia online supplemental appendix 1). Sexual health themes were defined to reflect the key concepts listed by the WHO for sexual health programmes,²⁶ the themes covered by the SIECUS guidelines²⁷ and existing content analysis.^{12–15 28} Other health themes concerning young people were defined according to the topics addressed by the WHO and Santé Publique France.^{29 30}

Following the Ottawa Charter for health promotion⁷ we considered that a sexual health theme is classified as a 'sexual health promotion message' if it provides factual visual or verbal educative content, with information about sexual health or the staging of favourable sexual behaviour. Importantly, a theme may be addressed without any promotion message being delivered.

To classify the storyline formats of sexual health themes, previous literature was reviewed^{13 15} and enabled us to identify six different formats: visual clue (brief action without verbal information), brief mention (little information), dialogue (contains at least three lines of text), secondary storyline, main storyline and multiepisode storyline.

Following the Pariera *et al*¹⁵ classification, the roles of the characters involved in the promotion messages were organised into three categories of role model: positive ('a character who is favourably depicted and models a healthy attitude or behaviour'), negative ('a character who is unfavourably depicted and models an unhealthy attitude or behaviour') or transitional ('a character who shifts over the course of the storyline from modelling an unhealthy behaviour or attitude to a healthy one'). We added a fourth category, 'unclear', for characters who did not correspond to one of the previous categories. Consideration of these characters is done only to describe the characters portrayed in the scenes where sexual health promotion messages are delivered. Classification was

based exclusively on factual behaviours observed during the scene in which the sexual health promotion message was delivered.

Data collection and coding

Two authors (ST and PM) collected and coded the data. To ensure reliability and reproducibility, they did the collection and coding independently. Disagreements were they discussed and resolved by consensus. Both authors had access to the series, through a Netflix subscription. They watched every episode of the series in its original version with subtitles, to ensure a better understanding and to extract dialogues. One series was in Spanish (Elite) and the others in English. Coders watched and analysed a maximum of two episodes per day, to prevent fatigue and possible coding and analysis bias. They were both already familiar with some series, which can be seen as facilitating the understanding and interpretation of messages.¹² To ensure an objective analysis, both coders coded only factual promotion messages, especially to reduce possible overinterpretation or subjectivity due to the coders' familiarity with the series. They collected quantitative and qualitative data through a common data extraction grid using EpiData (see Multimedia online supplemental appendix 2). The grid was established and then adapted after testing on the first three episodes. It included: (1) description of the series and episodes, (2) identification of themes belonging to one of the two following groups 'sexual health themes' or 'other health themes' and (3) qualitative material for sexual health promotion composed of dialogue verbatims and scene descriptions. Our data collection and coding process is near to the methodology developed by Jozkowski *et al*³¹ except that we focused on the episodes as a whole and our coding focused on sexual health promotion messages.

Analysis

We described: (1) series, (2) sexual health themes, (3) other health themes and (4) sexual health promotion messages. Themes and promotion messages were explored for all included series and depending on whether the synopsis was (yes/no) mainly about sexual health. For promotion messages the duration and number, and the number of scenes included in a promotion message were described with median and range. Number and percentage were calculated for types of themes. Quantitative analysis was carried out with R software, V.3.6.1. We qualitatively analysed sexual health promotion messages, with script extraction and described the themes addressed and the staging. For the script extraction, the coders transcribed the dialogues themselves during the scenes of interest, using English subtitles. Analysis of sexual health themes staging allowed us to describe how sexual health was addressed in general, beyond promotion messages, and what implicit messages might emerge. ST and PM followed the phases and steps recommended for theme development in terms of qualitative thematic analysis: initialisation, construction, rectification and finalisation.³² All analyses were conducted independently by the two coders before pooling and discussion of the results.

RESULTS

Six series were included in the study: Sex Education, Elite, 13 Reasons Why, Stranger Things, The Society and Tales of the City (LGBTQ+series) (see Multimedia online supplemental appendix 3). Both coders were familiar with four of them. Series characteristics are presented in table 1. We analysed a total of 65 episodes available in March 2020. Among the series included, two have a synopsis that is mainly about sexual health (Sex

Table 1 Characteristics of series included in the study

	Sex education	Tales of the city	The society	Elite	13 reasons why	Stranger things	All
Sexual health synopsis	X	X					2/6
Launch year	2019	2019	2019	2018	2017	2016	
No of analysed episodes	16	10	10	8	13	8	65
Average duration of an episode	51:20	55:25	56:30	50:11	55:36	50:38	53:23
Maturity rating*	>16	>16	>13	>16	>16	>16	
Target population	General	LGBTQ+	General	General	General	General	
Genre							
Drama		X	X		X		3
Thriller				X		X	2
Comedy	X						1
Horror						X	1
Science-fiction/fantastic						X	1

LGBTQ+ : Lesbian, Gay, Bisexual, Transgender, Queer and others sexual and gender minorities

*According to Netflix France.

Table 2 Sexual health themes addressed in series' episodes and in promotion messages, in all series and by type of series

	Sexual health themes			Sexual health promotion messages		
	Themes in all series' episodes n=65 (100%)	Sexual health series' episodes only n=26 (100%)	Others series' episodes only n=39 (100%)	All sexual health promotion messages n=62 (100%)	Sexual health series n=50 (100%)	Others series n=12 (100%)
Romantic relationships	65 (100)	26 (100)	39 (100)	7 (11)	7 (14)	0
Sexual orientation/gender identity	47 (72)	26 (100)	21 (54)	3	2	1
Sexual violence and harassment	40 (62)	16 (62)	24 (62)	12 (19)	10 (20)	2 (17)
Discrimination	26 (40)	14 (54)	12 (31)	5	5 (10)	0
Planned or unplanned pregnancies	20 (31)	5 (19)	15 (39)	2	2	0
Pleasure, masturbation	19 (29)	14 (54)	5 (13)	4	4	0
Sexually transmitted infections protection	14 (22)	11 (42)	3	11 (18)	9 (18)	2 (17)
Sexually transmitted infections	13 (20)	7 (27)	6 (15)	7 (11)	3	4 (33)
Contraception	13 (20)	9 (35)	4 (10)	9 (15)	6 (12)	3 (25)
Sexual disorders	13 (20)	11 (42)	2	4	4	0
Self-acceptance/self-esteem	12 (19)	9 (35)	3	7 (11)	7 (14)	0
Reproductive health/biology	10 (15)	7 (27)	3	1	1	0
Puberty	8 (12)	8 (31)	0	0	0	0
Abortion	4	1	3	1	1	0
Adolescent/young parenthood	3	1	2	0	0	0
Other: gay/lesbian parenting, first intercourse, pornography, virginity, thrush, feminism, sexual games, fantasies...	37 (57)	25 (96)	12 (31)	8 (13)	6 (12)	2 (17)

This table presents 15 sexual health themes plus a miscellaneous category (with different other sexual health subjects). We have described the distribution of sexual health themes and sexual health promotion messages, in series in general and by series type. A same series or a same promotion message can address several sexual health themes. All percentages are given by column (with a different denominator for each column).

Education selected as a most-watched series, Tales of the City selected as a LBG+ series). These two series represent 26 episodes. The four other series are not specifically on sexual health and represent 39 episodes.

Table 2 presents the different sexual health themes addressed by the series' episodes and by the promotion messages. The theme 'romantic relationships' was addressed in all 65 episodes. After this, the most addressed theme was 'sexual orientation and gender identity' (in 72% of the episodes), and 'sexual harassment and violence' (62%). Some themes are discussed more in series targeting sexual health than other series: pleasure (54% vs 13%), sexually transmitted infection (STI) protection (42% vs 8%), contraception (35% vs 10%), sexual disorders (42% vs 5%) and self-acceptance (35% vs 8%). Only the sexual health series raise issues surrounding puberty (31% vs 0%). In the six series, themes are discussed in multi-episode storylines in 33% of cases, in a dialogue (25%), with a brief mention (20%) or in a secondary storyline (12%).

When a sexual health theme was coded, we analysed whether it contained a promotion message. Overall, 62 sexual health promotion messages were identified (see table 2): 50 (81%) were in sexual health series and 12 (19%) in others series. The three most often discussed themes in promotion messages are: sexual harassment and violence (19%), STI protection (18%) and contraception (15%). Some themes of promotion messages are promoted only by sexual health series, for example: romantic relationship, self-acceptance, discrimination, pleasure and sexual disorder.

Characteristics of the 62 identified sexual health promotion messages are described in table 3. The series targeting sexual health include more promotion messages per episode than other series (median: 1.7 vs 0.3). Regardless of the kind of series, sexual health promotion messages are mainly delivered as factual information (81%) and via verbal sharing (95%). Most of the time, characters involved are between 16 and 18 years old (86%). Half of the time, in sexual health series, the scene takes place

Table 3 Characteristics of the 62 identified promotion messages, in all series and by type of series

	Total messages (n=62, 100%)	Sexual health series messages (n=50, 100%)	Other series messages (n=12, 100%)
Diffusion modality*			
Verbal	59 (95)	49 (98)	10 (84)
Visual	14 (23)	11 (22)	3 (25)
Prevention type*			
Factual information	50 (81)	41 (82)	9 (75)
Favourable behaviour depicted	22 (35)	19 (38)	3 (25)
Place of the characters involved			
Main and minor	43 (69)	37 (74)	6 (50)
Main only	10 (16)	6 (12)	4 (33)
Minor only	9 (15)	7 (14)	2 (17)
Age of the characters involved*			
16–18 years old	53 (86)	41 (82)	12 (100)
>18 years old	20 (32)	18 (36)	2 (17)
Sex of the characters involved*			
Male	52 (83)	42 (84)	10 (83)
Female	50 (81)	39 (78)	11 (92)
Role model			
Positive	35 (56)	28 (56)	7 (58)
Transitional	14 (23)	13 (26)	1
Unclear	9 (15)	8 (16)	1
Negative	4	1	3 (25)
Setting*			
School/college/university	30 (48)	27 (54)	3 (25)
Home	23 (37)	19 (38)	4 (33)
Party/bar	7 (11)	6 (12)	1
Care facility	6 (10)	5 (10)	1
Other (street, grocery store...)	13 (21)	10 (20)	3 (25)
No of messages per episode: median (range)	0.6 (0–2.6)	1.7 (0.8–2.6)	0.3 (0–0.6)
Duration of a message in minutes: median (range)	01:50 (00:02–06:29)	02:07 (00:19–06:29)	01:26 (00:02–02:38)
No of scenes concerned by a message: median (range)	1 (1–5)	1 (1–5)	1 (1–1)

All percentages are given by column (with a different denominator for each column).

*Total >100%, non-exclusive variables. For example, the same message can be conveyed both verbally and visually.

in school (58%), whereas other series mostly featured the characters at home (33%). Promotion messages are longer in sexual health series compared with non-sexual health series (median 02:07 vs 01:26) and may involve more scenes (range 1–5 vs 1–1).

All identified sexual health promotion messages are detailed in the Multimedia online supplemental appendix 4. We selected six of them (at least one in each series including sexual health promotion, addressing different themes by different ways of delivery) to be presented in [table 4](#), with the delivered message and a depiction of the scene.

The qualitative analysis highlighted three main staging for overall sexual health themes (not promotion messages): (1) depiction of negative value judgements and gender norms; (2) incomplete or misleading information and (3) depiction of risky behaviours.

Depiction of negative value judgements and gender norms

In an explicit way, Sex Education and Tales of the City depict characters who adopt gender norms commonly associated with the opposite biological sex. In Sex Education, a main male character wears heels, make-up and colourful nail polish, whereas a girl has short hair and

Table 4 Illustration of some sexual health promotion messages

Serie	Season	Episode	Message duration	Theme(s) addressed	Diffused message(s)	Scene(s) depiction
Sex education	1	6	03:43	Pleasure/masturbation: female masturbation Romantic relationships: couple communication	Importance of knowing your body to guide your partner. Break the taboo of female masturbation. Importance of couple communication.	Aimee doesn't know how to guide her boyfriend during intercourse, because she doesn't know what she likes. She seems disgusted with the idea of masturbation. Otis explains that there is nothing dirty or shameful and that she should get to know herself before explaining to her boyfriend. She discovers masturbation, takes pleasure and can guide her boyfriend. She thanks Otis for his advice.
Sex education	1	7	04:21	Sexual violence and harassment : consent	To understand and respect when someone is not interested.	Liam is in love with a girl. He asked her out but she politely refused, explaining that she was not interested. He continues to show interest but despite all his great romantic gestures, she is still not interested and he does not understand why. He does not seem mean but he scares the girl. He talks about it with the main character, who replies : "It would have been inappropriate if Jackson had continued to make grand gestures to a girl who made it clear she wasn't interested. Do you understand, Liam? No means no."
Tales of the city	1	2	00:42	STI protection : condom	Normalisation of the use of condoms during gay intercourse.	Close-up on two condoms placed on mattresses, one is open. Then zoom out on a couple of men who are having sex.
Elite	1	5	02:22	STI : HIV	Being infected with HIV does not mean having AIDS. An HIV-positive person who is under treatment and monitored may see their viral load become undetectable and in this case the virus cannot be transmitted.	During class, the teacher took Samuel's phone, who was typing. He asks a classmate to read the text aloud. It says that Marina does not have AIDS but HIV. The class not being aware, a girl asks Marina if it is true that she is infected with HIV. Marina stands up and speaks. She explains that she was infected a little over a year ago but that she cannot contaminate them because she is on treatment and that her viral load is undetectable. She is tested every 4 months.
The society	1	8	00:17	Sexual orientation: gay, bisexual	Sexuality is fluid.	At the hospital, Sam is at Becca's bedside who is pregnant. 2 girls come to see her and ask if Sam is the father, he says yes. Gwen reacts with a surprised and sceptical 'huh' then congratulates them and says goodbye. The two girls leave, the second gives Gwen a disapproving look : G:'What? You know he's gay.' Girl:'Sexuality is fluid, Gwen.'

Continued

Table 4 Continued

Serie	Season	Episode	Message duration	Theme(s) addressed	Diffused message(s)	Scene(s) depiction
13 Reasons Why	1	4	02:38	Other : stalker	Taking photos of a minor in his privacy is a crime punishable by imprisonment.	Tyler, a high school boy, took intimate photos of Hannah without her knowledge. Tyler is in the high school photo lab, Clay comes over to talk to him. He asks him to delete the photos and their negatives. He explains to him that what he did was stalking and that it was a crime punishable by law. C: 'That's a relief. 'Cause a first-time offence is only 6 months in jail, but for repeat offenders, that's a year.' T: 'That's not a thing.' C: 'Criminal invasion of a minor's privacy. Look it up. I don't think they'll let you have a camera in prison, but maybe you can draw pictures.' T: 'I'm not a criminal.' C: 'You are. And you're a creep.' T: 'I just took pictures.' C: 'You humiliated her.' T: 'I didn't mean to.'

STI, sexually transmitted infection.

wears a suit for the prom (season 1 episode 7). A scene between two friends talking about their future first sexual intercourse depicts their romantic expectations (Sex Education, season 1 episode 3). The boy, romantic, imagines that it must be wonderful with someone you love, whereas the girl says 'I just want a dick in my vagina' and is depicted throughout the series as openly and actively searching for a sexual partner. Tales of the City portrays an LGBTQ +community, and only this series includes transgender people and drag queens. The roles of women and men in society are discussed: a female character has left her husband and child to pursue her career and is annoyed to receive criticism, highlighting that men often do this without people objecting (season 1 episode 2).

Some scenes depict a negative value judgement by a character concerning the behaviour of another. For example, a nurse working in an abortion clinic is unpleasant to a woman who is known to have had several abortions and comments about her next one (Sex Education, season 1 episode 3). The next scene depicts a main character, also having an abortion, supporting the woman, who seems sensitive and likeable. The same episode depicts an anti-abortion protest. However, protesters are portrayed as having sexual health issues of their own, and the main character helps them even if he does not agree with their values. Maeve, the female main character of Sex Education, is slut-shamed from the first episode by her classmates, and all kind of rumours surround her sex life: multiple partners at the same time, her surname is 'cock biter'. Maeve is portrayed as a 'knowledgeable' character when it comes to sexuality. In Tales of the City, a woman says that a real family is composed of a mother, a father

and a child (season 1 episode 3). In the same episode her son, a transsexual man, and his girlfriend discuss this and do not agree with the woman.

In Tales of the City, a character assumes that a woman who works as a foreman is lesbian, even though he does not know her (season 1 episode 9). In this example, no one contradicts him.

Incomplete or misleading information

Some of the information transmitted in the series is incomplete or misleading. In Elite, a young woman is HIV infected and explains that her viral load is undetectable so she cannot transmit the virus, but then has unprotected sex with a male partner because this is 'safe', disregarding the risk of unplanned pregnancy and other STIs. In the same way, in Sex Education, after unprotected intercourse, both partners are concerned about the risk of pregnancy but do not talk about the STI risk (season 2 episode 7).

In Sex Education a character explains that radiation from mobile phones can lead to testicular cancer (season 1 episode 5) although this is not a scientifically verified fact. In the same series, a sex therapist explains the female anatomy using a model and shows the clitoris which is poorly represented, with only the external part and not the full structure (season 2 episode 5).

Sex Education shows a female character who needs the emergency contraceptive pill (or morning after pill); the pharmacist is not allowed to deliver it to her partner and charges the 16-year-old girl £25. Such dispensing constraints correspond to the British context and not to other countries, but the scene is not contextualised.

Adolescent characters are sometimes misled by their significant relatives. For example, a 16-year-old boy talks to his dad about his virginity and explains that he feels way behind his peers (Sex Education, season 1 episode 6). The father, a therapist, advises him to ‘rip that band-aid right off’ because first times are often bad, and compares the first sexual intercourse with skydiving, explaining that at some point you just have to jump. The boy then tries to have sex for the first time with a girlfriend but has a panic attack and cannot go through with the act.

Depiction of risky behaviours

Other health themes coded (other than sexual health) are presented in Multimedia online supplemental appendix 5. Alcohol and drugs are addressed in the majority of the 65 episodes (68%) regardless of the type of series. Parent-adolescent relationships are mostly tackled in sexual health series (92% vs 31%). Depression and suicide is a theme less addressed in sexual health series (4%) than in other series (44%).

Heavy drinking, drug use and tobacco consumption are among the most depicted unhealthy behaviours. Tales of the City and Elite are the two series that trivialise this kind of behaviours the most. In Sex Education, hard drug addiction is portrayed as having serious consequences for family relations and work and as being difficult to get out of. This series also links cannabis consumption with sexual health. A sex therapist explains to a young man who is known for smoking weed on a daily basis, that it might lead to early onset impotence (season 1 episode 1). In The Society, the drug issue is discussed with a young man who cuts himself off from the world because of opioid addiction. Moreover, 13 Reasons Why shows risky behaviours as consequences of trauma following sexual violence. A boy rapes two classmates; the first one becomes alcoholic, and the second one kills herself. In the episodes analysed, the boy is rich, popular and not punished for his actions.

DISCUSSION

Principal results

This study showed that Netflix series popular among young people include sexual health promotion messages that are, as expected, mainly seen in series with sexual health trailers. Messages mainly focus on sexual violence or harassment, STI protection and contraception. Although all series addressed romantic relationships theme in each episode, promotion messages on this theme were only present in sexual health series. Promotion messages were most often found in material for older adolescents (16–18 years old), and were conveyed through factual information, in settings in their usual places of life. More generally, many sexual themes are addressed throughout all the analysed series. Emotional and romantic relationships feature in the scenarios of all the series analysed. Some themes are more often highlighted in sexual health

series, such as self-acceptance, discrimination, pleasure and sexual disorder.

Meaning of the results

Messages featured in the series could reach young people, and be part of an array of health promotion methods: that notably include information and education.⁷ In this study, we considered a sexual health promotion message as ‘factual’ information, concrete advice or a healthy behaviour. There was few coders disagreements, ensuring the validity of our results.³³ However, series could incorporate more implicit messages, through the overall environment of the scenarios or through characters’ representations, especially for sexual health (pleasure, impact of violence and deconstructed gender norms). Differences in interpretation of sexual content are likely due to selective perception, individual experiences and biases, and level of involvement in the content (socio-demographic factors, view of behaviour and attitudes).³³ It will also depend on the type of content observed.³³ Some may integrate them positively whereas others may reinforce their stereotypes.

Concerning sexual content, the series analysed address emotional dimensions, but promotion messages were mainly focused on risk prevention. Previous studies highlighted that sexual health promotion content in media was rare, with a need to develop educational storylines to promote safer sex among young people.^{12–14} Another study found information about treatment, symptoms and diagnosis, but little information on prevention.¹⁵ Therefore, there is a content evolution, which can be explained by the progression of representations, or the way in which sexual health is approached by new media.

Nevertheless, we temper the potential of series for health promotion. They are generally not primarily intended to do so, and treating only health promotion questions risks losing series entertainment. Some series also depict risky behaviours to represent youth culture.^{34–37} Regarding sexual health definition,¹ series’ scenarios do not address certain topics (adolescent parenthood, trans identity). Moreover, while most of the information provided is accurate, some information may be incomplete or misleading (as shown in results part concerning different countries’ politics for pills administration).

To reduce this risk, the series make information resources available. Sex Education scriptwriters used a sexual health educator to ensure information quality and representativeness.³⁸ They produced a sex education manual.³⁹ Each season of 13 Reasons Why begins with actors explaining the issues involved and the value of asking for help, with links to find resources. These series with related resources are potentially a good vehicle for health promotion.

Future research to use video series for health promotion

Sexual health promotion must be inclusive, comprehensive, inclusive and for all ages and specificities, and guidelines advise the use of new numeric tools and media to

target young people.^{26 40} Series could be studied as part of a favourable environment to promote health,⁷ and could be integrated into formal education as a complementary tool.⁴¹ For example, educational professionals could step in to discuss series subjects with young people, completing information and addressing missing themes.

In order to use the series for health promotion, it is necessary to have a thorough understanding of youth culture and perceptions. To do so, social marketing methods could be used,⁴² to know how to 'influence the voluntary behaviour of target audiences to improve their personal welfare and that of the society of which they are a part'.⁴³ For example, Netflix published a testimony of a young woman who experienced the same type of sexual assault as a character from *Sex Education*,⁴⁴ and another of a young gay who identified with characters from *Elite*.⁴⁵ These two people explained how feeling represented in these series helped them, with real consequences for their own lives. Moreover, series should be studied taking into account their anchoring in a wider digital universe (music, TV shows). Some other media could discuss sexual themes in a different way, with unhealthy representations (sexism, homophobia, violence), counterbalancing series that diffuse positive messages.

Further research may enable understanding of how young people perceive health promotion messages and the potential to influence health determinants (knowledge, behaviour, representations), considering different receptiveness and interpretations. One study has shown that the representation of sexuality on TV can have a positive impact on sexual behaviours, through normalisation of favourable behaviours, change of attitude and increase in personal belief.¹⁰ Another study of the ER TV series showed an increase in viewers' knowledge of health topics after watching the series, decreasing during the post-episode period.⁹ It indicated that message repetition was necessary for retention in the longer term, which may be possible in the storylines of multi-episode series.

Also, audience' initial awareness of sexual health content (eg, 'Sex education') could influence the perception, understanding, and integration of health promotion messages (audience self-acclimatisation). Further research could investigate the relationship between this initial awareness and the appropriation of messages in the series (expect or not to receive promotion messages related to message assimilation). This would require to consider video series as a health intervention, with taking into account of external factors (environment, conditions of viewing and others actions).

Strengths and limitations

Our study is the first to examine sexual health promotion messages aimed at youth audiences and within the most used SVoD platforms. It offers an innovative methodology for a standardised data extraction and mixed analysis of series content, in global vision of sexual health.

Our study has limitations. First, this study focuses only on 65 episodes. So other themes and promotion messages

may have been found through examining future series episodes. Our study was not supposed to be exhaustive but a first step in SVoD analysis for health promotion.

This study covers only the most watched programmes available on Netflix and labelled 'teen TV shows', with different scenarios, and the two series providing the most of messages were for audiences at 16 years of age or over. Considering sexuality education should begin at an early age,⁴⁰ it would be interesting to see less watched series or others platforms, and also including younger audiences,

To be inclusive, series should represent all populations and specificities of lives which have an impact on sexual health.^{46 47} The series show a youthful diversity, but we did not analyse some characters' specificities such as sexual orientation or gender identity, disabled and overweight people. Indeed, it was a delicate task to correctly characterise the characters presented. A reflection is necessary to consider and analyse characters' characteristics in series.

CONCLUSION

The series have the potential to disseminate sexual health promotion messages, especially for young people. Consideration of these preferred media as health promotion tools must, therefore, be part of a comprehensive and complex health promotion landscape. In addition, understanding how individuals integrate these messages should help to determine whether or not the series are effective in promoting the health of young people.

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