

BMJ Open is committed to open peer review. As part of this commitment we make the peer review history of every article we publish publicly available.

When an article is published we post the peer reviewers' comments and the authors' responses online. We also post the versions of the paper that were used during peer review. These are the versions that the peer review comments apply to.

The versions of the paper that follow are the versions that were submitted during the peer review process. They are not the versions of record or the final published versions. They should not be cited or distributed as the published version of this manuscript.

BMJ Open is an open access journal and the full, final, typeset and author-corrected version of record of the manuscript is available on our site with no access controls, subscription charges or pay-per-view fees (http://bmjopen.bmj.com).

If you have any questions on BMJ Open's open peer review process please email info.bmjopen@bmj.com

BMJ Open

Sexual Health Promotion Messages for Young People in Netflix Series Content: A Mixed Analysis of Most-Watched Series

Journal:	BMJ Open
Manuscript ID	bmjopen-2021-052826
Article Type:	Original research
Date Submitted by the Author:	06-May-2021
Complete List of Authors:	Tauty, Solenne; Institut national de la santé et de la recherche médicale, ECEVE; Université de Paris, MARTIN, Philippe; Institut national de la santé et de la recherche médicale, ECEVE; Université de Paris, Bourmaud, Aurélie; Institut national de la santé et de la recherche médicale, ECEVE; Université de Paris, Chapoton, Boris; Université de Lyon, Université de Saint-Etienne, HESPER EA7425 de La Rochebrochard, Elise; Institut National d'Etudes Démographiques (INED), UR14 – Sexual and Reproductive Health and Rights; Université Paris-Saclay, Univ. Paris-Sud, UVSQ, CESP, INSERM Alberti, Corinne; Institut national de la santé et de la recherche médicale, ECEVE; Université de Paris,
Keywords:	Public health < INFECTIOUS DISEASES, EDUCATION & TRAINING (see Medical Education & Training), Health & safety < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, PREVENTIVE MEDICINE

SCHOLARONE™ Manuscripts



I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

Sexual Health Promotion Messages for Young People in Netflix Series Content: A Mixed Analysis of Most-Watched Series

Solenne Tauty¹, Philippe Martin^{1, 2, 3}, Aurélie Bourmaud¹, Boris Chapoton⁴, Elise de La Rochebrochard^{2, 3}, Corinne Alberti¹

Contact address:

Philippe Martin,
Université de Paris, ECEVE, Inserm U1123
UFR de Médecine
10 Avenue de Verdun, 75010 Paris
+33(0)157278652
philippe.martin@inserm.fr

Authors' contribution

ST and PM wrote the protocol and methodological research documents. BC and CA contributed to the writing of these documents and to the final validation of methods. ST and PM collected and analyzed the study data. All authors (ST, PM, AB, BC, ER, and CA) participated in the analysis and interpretation of the results. All authors (ST, PM, AB, BC, ER, and CA) contributed to the writing of the article.

Extra data is available by emailing philippe.martin@inserm.fr

¹ Université de Paris, ECEVE, Inserm, F-75010 Paris, France

² Institut National d'Etudes Démographiques (INED), UR14 – Sexual and Reproductive Health and Rights, F-75020 Paris, France

³ Université Paris-Saclay, Univ. Paris-Sud, UVSQ, CESP, INSERM, Kremlin-Bicêtre, France

⁴ Université Lyon, Université Saint-Etienne, HESPER EA7425, Lyon, France

What is already known?

New media favored by young people are a promising medium to integrate health promotion content, since these media can influence adolescents' health. However, previous studies concluded that sexual health promotion content of the media was rare.

What are the new findings?

Netflix series, although very popular, remain understudied by research. Our findings highlight Netflix series incorporate diverse sexual health promotion messages for young people.

What do the new findings imply?

Further research could assess how these messages are perceived and whether they increase the knowledge, skills and positive health behaviors of young people.

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 analyzed 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 analyzed 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 to 18-year-old characters in school. Analysis highlighted four main points concerning scenarios in these series: (i) there are different ways to deliver sexual health promotion messages; (ii) there is depiction of negative value judgments and gender norms; (iii) some information may be incomplete or misleading; and (iv) risky behaviors 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 behaviors of young people.

Keywords: Health promotion; Sexual health; Young people; Netflix series; Social marketing.

Strengths and limitations of this study

- This is the first study of sexual health promotion messages within Netflix series and targeted to young people.
- This study provides a rigorous methods to analyze the different types of health promotion messages, according to the different components of sexual health.
- This study provides important insights into the reach, complementarity, and effectiveness of health promotion messages in the series
- Other health themes could be explored for content aimed at different audiences.
- Future studies should explore youth perceptions of these sexual health promotion messages.

Introduction

Transition to adulthood marks the entry into sexuality, and sexual health is a major theme in well-being among young people (1). But at present 57 per 1000 girls aged 15-19 get pregnant every year in the United States, 47 per 1000 in England and Wales, and 25 per 1000 in France (2). One in four girls and one in thirteen boys experiences sexual abuse during childhood (3). In the United States, half of new Sexually Transmitted Infections (STI) are acquired by young people aged 15-24 (4), with possible long-term consequences for individuals' health, such as infertility or cancer (5). Testimonies of LGBTI-phobic acts ("feeling or manifestation of rejection, contempt or hatred towards people perceived as lesbian, gay, bi, trans or intersex and everything that is supposed to be related to them") are on the rise in France, and 30% of these concern people under 25 years of age (6). According to the World Health Organization (WHO), sexual health should be considered in a holistic and positive way and involves notions such as pleasure, respect, safety and freedom from discrimination and violence (1).

To improve indicators of youth sexual health, health promotion interventions are essential to give young people the knowledge and skills to adopt beneficial health behaviors. Health promotion aims to enable individuals to increase control over their own health, and to improve it (7). It seeks to promote lifestyles and social, economic, environmental and personal factors that contribute to health.

The Internet and new communication tools favored by young people, especially digital ones, are a promising medium to integrate health promotion content, since these media can influence adolescents' health (8–10). The sexual health content of the media aimed at young people has been analyzed in various studies (11–14): these concluded that sexual health promotion was rare in media. However, none of them looked at new attractive media, such as Subscription Video on Demand (SVoD) platforms.

Netflix is the most used SVoD platform in the world (15) with 193 million subscribers in more than 190 countries, in 2020 (16). During the Covid-19 lockdown, an unprecedented surge in new Netflix subscribers was observed (17). In particular, Netflix 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 moralizing aspect of sexual health promotion messages often perceived by young people.

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 analysis (18) of Netflix series. The study was organized as follows:
i) definition, identification and selection of series to include; ii) systematic collection of quantitative and qualitative data; and iii) 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 analyzes 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 five years (2015 or later); 3) be labelled "teen TV shows" on Netflix; 4) be part of most-watched 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 (19). The second was posted by Médiamétrie, a company specializing in audience measurement and in the study of the uses of audiovisual and digital media in France (20). 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 (21). 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. In view of the importance of considering gender identity and sexual orientation in sexual health (22), we decided to include one series addressing LGBTQ+ topics. Using the Netflix search toolbar and the words "LGBTQ+ series" we selected the series that appeared as the first Netflix suggestion.

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 was mainly about sexual health.

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 Appendix 1). Sexual health themes were defined to reflect the key concepts listed by the WHO for sexual health programs (23), the themes covered by the SIECUS guidelines (24) and existing content analysis (11–14,25). Other health themes concerning young people were defined according to the topics addressed by the WHO and Santé Publique France (26,27).

Following the Ottawa Charter for health promotion (7) 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 favorable sexual behavior. 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 (12,14) 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 multi-episode storyline.

Following the Pariera et al (14) classification, the roles of the characters involved in the promotion messages were organized into three categories of role model: positive ("a character who is favorably depicted and models a healthy attitude or behavior"), negative ("a character who is unfavorably depicted

and models an unhealthy attitude or behavior") or transitional ("a character who shifts over the course of the storyline from modeling an unhealthy behavior or attitude to a healthy one"). We added a fourth category, "unclear", for characters who did not correspond to one of the previous categories.

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. They were both already familiar with some series, which can be seen as facilitating the understanding and interpretation of messages (11). To ensure an objective analysis, both coders coded only factual promotion messages. They collected quantitative and qualitative data through a common data extraction grid using EpiData (see Multimedia 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.

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, version 3.6.1. We qualitatively analyzed sexual health promotion messages, with script extraction, and described the themes addressed and the staging. 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: Initialization, Construction, Rectification and Finalization (28). 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 Appendix 3). Both coders were familiar with four of them. Series characteristics are presented in Table 1. We analyzed a total of 65 episodes available in March 2020. Among the series included, two have a synopsis that is mainly about sexual health (*Sex Education* selected as a most-watched series, *Tales of the City* selected as a LBGTQ+ series). These two series represent 26 episodes. The four other series are not specifically on sexual health and represent 39 episodes.

Table 1: Characteristics of series included in the study

	Sex Education	Tales of the City	The Society	Elite	13 Reasons	Stranger Things	All
					Why		
Launch year	2019	2019	2019	2018	2017	2016	
Number of analyzed 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
Sexual health series	Yes	Yes	No	No	No	No	2/6
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

^{*:} according to Netflix France

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%), 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 6 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%).

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

G 11 11	Number of all series' episodes	Sexual Health Series' Episode		Number of promotion messages	Sexual Health Series' Promotion Messages		
Sexual health themes	addressing it (n=65)	Yes (n=26)	No (n=39)	addressing it (n=62)	Yes (n=50)	No (n=12)	
	N(%)	N (%)	N (%)	N(%)	N(%)	N(%)	
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, 1st 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.

When a sexual health theme was coded, we analyzed whether it contained a promotion message. Overall, 62 sexual health promotion messages were identified (see Table 2). The three most often discussed themes in promotion messages are: sexual harassment and violence (19%), STI protection (18%) and contraception (15%). Some themes are promoted only by sexual health series, for example: self-acceptance, romantic relationship, 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 in school (58%), whereas other series mostly featured the characters at home (33%). Promotion messages are longer in sexual health series compared to non-sexual health series (median 02:07 vs 01:26) and may involve more scenes (range 1-5 vs 1-1).

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

	Total (n=62)	Sexual health series		
	N (%)	Yes (n=50/62, 81%) N (%)	No (n=12/62, 19%) N (%)	
Number 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)	
Number of scenes concerned by a message : median (range)	1 (1-5)	1(1-5)	1(1-1)	
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)	
favorable behavior depicted	22 (35)	19 (38)	3 (25)	
Place of the characters involved	ed:			
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 involve	ed*:			
16-18 years old	53 (86)	41 (82)	12 (100)	
> 18 years old	20 (32)	18 (36)	2 (17)	

Sex of the characters involve	ed*:		
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)

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

All identified sexual health promotion messages are detailed in the Multimedia Appendix 4. We selected 6 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.

Table 4: Illustration of some sexual health promotion messages

				omotion messages		jopen-2021-052826 on
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 does to know how to guide her boyfriend during intergourse, because she doesn't know what she likes. She seems disgusted with the idea of masturbation. Otis explains that there is nothing dirty or shapeful and that she should get to know herself before explaining to her boyfriend. She discovers nasturbation, takes pleasure and can guid her boyfriend. She thanks Otis for his advice.
Sex Education	1	7	04:21	Sexual violence and harassement : consent	To understand and respect when someone is not interested.	Liam is in light 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 hisr 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 mad it clear she wasn't interested. Do you understand, Liam? No means no."
Tales of the City	1	2	00:42	STI protection : condom	Normalization of the use of condoms during gay intercourse.	Close-up on 2 condoms placed on mattresses, one is open. Then 3 commout on a couple of men who are having sex.
					://bmjopen.bmj.com/site/about/guideli	having sex., 2024 by guest. Protected by copyright.

					BMJ Open	jopen-2021-052	Pa
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 new 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 contamina them because she is on treatment and that her viral load is undesectable. She is tested every 4 months.	s p
The Society	1	8	00:17	Sexual orientation: gay, bisexual	Sexuality is fluid.	At the hosp al, 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 surprise and skeptical "huh" then congratulates them and says goodbe. The 2 girls leave, the 2nd gives Gwe a disapproving look: G:"What? You know he's gay." Girl:"Sexuality is fluid, Gwen;"	
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 negative He explains to him that what he did was stalking ar that it was a crime punishable by law. C:"That's a relief. 'Cause a first-time offense is onl six months in jail, but for repeat offenders, that's a year." T:"That's not a thing." C:"Criminal invasion of a minor privacy. Look it up. I don't think they'l 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 hungiliated her." T:"I didn't mean to."	nd ly ll n

The qualitative analysis highlighted three main staging for overall sexual health themes (not promotion messages): i) depiction of negative value judgments and gender norms; ii) incomplete or misleading information and iii) depiction of risky behaviors.

Depiction of negative value judgments 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 colorful nail polish, whereas a girl has short hair and 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 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 judgment by a character concerning the behavior 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 rumors 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 contextualized.

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 behaviors

Other health themes coded (other than sexual health) are presented in Multimedia 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 behaviors. *Tales of the City* and *Elite* are the two series that trivialize this kind of behaviors 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 behaviors 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 analyzed, 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. In our selected sample, sexual health promotion messages mainly focus on sexual violence or harassment, STI protection and contraception. 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 (school and home). More generally, many sexual health themes are addressed throughout all the analyzed series. Emotional and romantic relationships feature in the scenarios of all the series analyzed. Some themes are more often highlighted in sexual health series, such as self-acceptance, discrimination, pleasure and sexual disorder.

Meaning of the results

Health promotion can be achieved in many ways: information and education are an integral part of it (7). In this study, we considered a sexual health promotion message as "factual" information or a healthy behavior portrayed in the series, focusing on different sexual health themes. We considered that the elements featured in the series (protective behaviors, educational information, advice) could reach audiences including young people, and be part of an array of methods for health promotion. These factual messages were objectively observed and recorded by coders during coding and analyzing of the video series, avoiding subjective perception by the authors. Keeping only factual content (staging and accurate information) resulted in few disagreements, thus ensuring the validity of our results (29).

However, these series could incorporate more implicit and subjective messages, which were not coded in our analyses. For example, they may promote sexual health through the overall environment of the scenarios and through characters' representations: the diversity of pleasurable sexual practices, the negative impact of sexual violence, the deconstruction of heteronormativity and gender norms (deconstruction of archaic norms of women's status and of masculinity). The consideration of these implicit messages depends on public perception. Young people may see or not see these messages. Some may integrate them positively whereas others may reinforce their stereotypes. Concerning sexual health content, the series analyzed place the emotional and affective dimensions at the core of many scenarios, with health promotion messages focused on risk prevention. Some series include sexual health promotion messages on many themes (e.g. Sex Education), whereas others focus on specific subjects (e.g. Elite and HIV). In contrast and beyond promotion messages, previous studies had highlighted that sexual health content in media was rare, with a need to develop educational storylines to promote safer sex among young people (11–13). Another study found more information about treatment, symptoms and diagnosis, but little information on prevention (14). There has thus been an evolution in content, which can be explained by the evolution over time of representations and the way in which sexual health is approached by new media, especially for young people: more easily and holistically.

It is nevertheless essential to temper the assessment of the potential of these series. They are generally not primarily intended to promote young people's sexual health. Some series depict risky behaviors (alcohol, drugs) to represent youth culture (30–33). In terms of sexual health promotion in a holistic and positive sense (1), the scenarios do not address certain of these topics (adolescent parenthood, trans identity, puberty), but some such topics may be covered in future seasons of the series. However, treating only sexual subjects or focusing on health promotion questions risks losing the attractive and entertaining aspects of the series. Moreover, while most of the information provided is accurate, some information may be incomplete or misleading. Differences between countries' healthcare politics can also affect promotion messages. For example, concerning the emergency contraceptive pill in *Sex education*, the message is not valid in every country and in different health systems: the morning after pill is shown to be paid for, with the scene taking place in the UK, whereas in France it can be delivered to a man and is free for girls under 18. This raises the question of the quality of the information transmitted and its adaptation to the audience.

To reduce the risk of delivering incorrect or incomplete messages, the series make information resources available to the public. *Sex Education* scriptwriters used a sexual health educator to ensure information quality and representativeness (34). They also produced a sex education manual (35). 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 at the end of each episode. These series with related resources are potentially a good vehicle for health promotion interventions.

Future research to use video series for health promotion

Sexual health promotion must be inclusive, comprehensive, inclusive and for all ages and specificities (36). WHO and UNESCO guidelines on sexual health promotion advise the use of new numeric tools and media to target young people (23,36). Series could then provide opportunities fo a positive approach to sexuality and relationships going beyond isolated general health institutional messages. They could be part of a favorable environment, which is essential to promoting health (7), and could be integrated into formal educational strategies as a complementary tool, if correctly deployed. In a concrete

adaptation to health promotion, series could address sexual health themes and could thus back up health strategies (education sessions in schools, institutional actions, and reliable information websites). In this complementary approach, education and sexual health professionals could, for example, step in to discuss the subjects in the series with young people, completing information and addressing any missing themes.

In order to be able to use the series for health promotion, it is necessary to have a thorough understanding of youth culture and of perceptions of the series, especially in view of the rapid evolution in preferred media and in the way youth and sexuality issues are approached. To do so, social marketing methods could be used in public health (37), to know how to "influence the voluntary behavior of target audiences to improve their personal welfare and that of the society of which they are a part" (38). For example, Netflix published a testimony of a young woman who experienced the same type of sexual assault as a character from Sex Education (39), and another of a young gay man who identified with characters from Elite (40). These two people explained how feeling represented in these series helped them, with real consequences for their own lives. Using social marketing methods for health action could then help in knowing how depicting and staging an issue in a series enables viewers to identify with the content, in particular for a health theme. The next step is to analyze whether it elicits feelings of positive support and communication, and whether it have effects on behaviors or experiences.

Further research may enable understanding of how young people perceive health promotion messages (factual or implied) and the potential to have influence on health determinants (knowledge, behavior, representations), considering different degrees of receptiveness and the interpretations of viewers. For example, one study has shown that the representation of sexuality on television can have a positive impact on sexual health behaviors, through normalization of favorable behaviors, change of attitude and increase in personal belief and commitment(10). Another study of the *ER* television series showed an increase in viewers' knowledge of health topics after watching the series, decreasing during the postepisode 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 (such as *Elite*, in the case of the subject of undetectable viral load). Additional research must be done to determine the effectiveness of such

series, in formal (series as part of institutional action) or informal (lifestyle) formats. This would then require a rigorous experimental plan, treating video series as a health intervention, with consideration of external factors (environment, conditions of viewing, actions of others).

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 mixed analysis of series content, in a vision of global sexual health. A thorough quantitative and qualitative analysis was conducted with a standardized data extraction grid and double viewing. We analyzed the most watched series with different types of scenario (not only sexual synopses). In order to select the Netflix mostwatched series, three lists were used. Two of them considered only French viewers (19,20). If we had used the Netflix US top list (41) instead, with the international list published by TV Time, the series included in our study would be the same, minus *The Society* and *Elite*.

Our study has limitations. First, this study focuses only on 65 episodes, not all episodes of the series analyzed (some of which are still in production). So other themes and promotion messages may have been found through examining future episodes. However, our study was not supposed to be exhaustive, being a first step in SVoD analysis from the health promotion perspective. This study covers only the most watched programs available on Netflix and labelled "teen TV shows". It would be interesting to see whether less watched series or other SVoD platforms take sexual health dimensions into account, including for younger audiences.

In our study, the two sexual health series providing the most sexual health promotion messages were recommended for audiences at 16 years of age or over, and younger adolescents were not represented. We did not consider health promotion messages included in series specifically aimed at young adolescents or children. Health skills develop in early childhood, and sexual health education should begin at an early age (36), so that other series with age-appropriate messages could be broadcast for adolescents aged under 16 and could be interesting to consider in future research.

Addressing sexual health also brings up the question of inclusiveness. In order to be comprehensive, series should represent all populations, and all specificities of lives having an impact on sexual health (42,43). The series show a youthful diversity, but we did not analyze some characters' specificities such as sexual orientation or gender identity, disabled and overweight people. Indeed, it was a delicate task to correctly characterize the characters presented (gay, pansexual or bi, also taking into account disability or handicap). A reflection is necessary to consider and analyze characters' characteristics in series.

Our perspective is to go further in understanding these series. Future research will need to investigate perceptions and effects of the series, which was not our focus in this study. Series should be studied taking into account their anchoring in a wider digital universe (music videos, reality TV shows, etc.). Some other series and general media could also discuss sexual health themes in a different way, with unhealthy representations and behaviors (sexism, homophobia, violence). This could deconstruct the contributions of the series that diffuse positive messages for sexual health. Also, series should be studied taking into account individuals' social skills (critical thinking, empathy) and literacy.

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.

Acknowledgments

We would like to thank the members of the research teams involved in this project. We thank Duncan Fulton, translator of this article. We thank the French National Research Agency for their financial support in the framework of the Sexpairs project (ANR-20-CE36-0008).

Declaration of interest statement

The authors declare that they have no conflict of interest.

Abbreviations

AIDS: Acquired Immune Deficiency Syndrome

ER: Emergency Room

HIV: Human Immunodeficiency Virus

LGBTQ+: Lesbian Gay Bisexual Transgender Queer +

SIECUS: Sexuality Information and Education Council of the United States

STI: Sexual Transmitted Infections

SVoD: Subscription Video on Demand

WHO: World Health Organization

UNESCO: United Nations Educational, Scientific, and Cultural Organization

US: United States

Multimedia appendices list

Multimedia appendix 1: Sexual health themes definitions and other youth health themes list

Multimedia appendix 2: Quantitative and qualitative data extraction grid

Multimedia appendix 3: Flow chart of the selection of the series included in the study

Multimedia appendix 4: Qualitative description of promotion messages

Multimedia appendix 5: Other health themes addressed in series episodes, in all series and by type of series

Tables list

Table 1: Characteristics of series included in the study

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

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

Table 4: Illustration of some sexual health promotion messages

References

- 1. Sexual health [Internet]. [cité 8 juin 2020]. Disponible sur: https://www.who.int/health-topics/sexual-health#tab=tab_1
- Sedgh G, Finer LB, Bankole A, Eilers MA, Singh S. Adolescent Pregnancy, Birth, and Abortion Rates Across Countries: Levels and Recent Trends. [cité 23 juill 2020]; Disponible sur: https://reader.elsevier.com/reader/sd/pii/S1054139X14003875?token=B1DE3DFF57EF49E35085 B4FCC614E927C0EF66588D3B640844FBFBD5711DF1C41AC38AE8F09A612483781328B1A 977F9
- 3. Preventing Child Sexual Abuse |Violence Prevention|Injury Center|CDC [Internet]. 2020 [cité 23 juill 2020]. Disponible sur: https://www.cdc.gov/violenceprevention/childabuseandneglect/childsexualabuse.html
- STDs in Adolescents and Young Adults 2018 Sexually Transmitted Diseases Surveillance [Internet]. 2019 [cité 8 juin 2020]. Disponible sur: https://www.cdc.gov/std/stats18/adolescents.htm
- World Health Organization. Sexually transmitted infections (STIs) [Internet]. [cité 4 juin 2020]. Disponible sur: https://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-(stis)
- 6. SOS Homophobie. Rapport sur l'homophobie 2020 [Internet]. SOS homophobie; 2020 p. 183. Disponible sur: https://www.sos-homophobie.org/sites/default/files/rapport homophobie 2020 interactif.pdf
- 7. World Health Organization. Charte d'Ottawa [Internet]. nov 21, 1986 p. 6. Disponible sur: http://www.euro.who.int/ data/assets/pdf file/0003/129675/Ottawa Charter F.pdf
- 8. Collins RL, Elliott MN, Berry SH, Kanouse DE, Hunter SB. Entertainment television as a healthy sex educator: The impact of condom-efficacy information in an episode of Friends. Pediatrics. 2003;112(5):1115–1121.
- 9. Brodie M, Foehr U, Rideout V, Baer N, Miller C, Flournoy R, et al. Communicating health information through the entertainment media. Health Aff (Millwood). 2001;20(1):192–199.
- 10. Falconer T. Using television to enhance sexual health. J Multidiscip Res Trent. 2019;2(1):118-34.
- 11. Dillman Carpentier FR, Stevens EM, Wu L, Seely N. Sex, love, and risk-n-responsibility: a content analysis of entertainment television. Mass Commun Soc. 2017;20(5):686–709.
- 12. Kinsler JJ, Glik D, de Castro Buffington S, Malan H, Nadjat-Haiem C, Wainwright N, et al. A content analysis of how sexual behavior and reproductive health are being portrayed on primetime television shows being watched by teens and young adults. Health Commun. 2019;34(6):644–651.
- 13. Hust SJ, Brown JD, L'Engle KL. Boys will be boys and girls better be prepared: An analysis of the rare sexual health messages in young adolescents' media. Mass Commun Soc. 2008;11(1):3–23.
- 14. Pariera KL, Hether HJ, Murphy ST, de Castro Buffington S, Baezconde-Garbanati L. Portrayals of reproductive and sexual health on prime-time television. Health Commun. 2014;29(7):698–706.

- 15. Netflix Revenue and Usage Statistics (2020) [Internet]. Business of Apps. 2018 [cité 8 juin 2020]. Disponible sur: https://www.businessofapps.com/data/netflix-statistics/
- 16. Netflix. À propos de Netflix [Internet]. Netflix Media Center. [cité 8 juin 2020]. Disponible sur: https://media.netflix.com/fr/about-netflix
- 17. Gallagher D. Netflix Riding the Tiger. Wall Street Journal [Internet]. 21 avr 2020 [cité 17 juill 2020]; Disponible sur: https://www.wsj.com/articles/netflix-riding-the-tiger-11587506368
- 18. Kassarjian HH. Content analysis in consumer research. J Consum Res. 1977;4(1):8–18.
- 19. Netflix France on Twitter: « Un top par ci, un top par là, il fallait bien qu'on fasse le nôtre : voici le top de l'année des séries/films/documentaires Netflix les plus populaires en France. https://t.co/Bc2JuXURxv » / Twitter [Internet]. Twitter. [cité 3 mars 2020]. Disponible sur: https://twitter.com/netflixfr/status/1211587873524396032?ref_url=https%3a%2f%2fwww.numera ma.com%2fpop-culture%2f596453-netflix-devoile-son-top-des-series-et-films-les-plus-regardes-en-france-mais-il-ne-veut-rien-dire.html
- 20. Médiamétrie. Global SVoD 2019 [Internet]. 2019 oct [cité 13 févr 2020] p. 4. Disponible sur: https://www.mediametrie.fr/sites/default/files/2019-10/2019%2010%2003%20CP%20Global%20SVOD 0.pdf
- 21. BGR. Here are the top 20 most-watched streaming TV series of 2019 [Internet]. [cité 6 mars 2020]. Disponible sur: https://bgr.com/2020/01/15/best-shows-on-netflix-right-now-top-20-tv-shows-of-the-year/
- 22. ONU. Mettre fin à la violence et à la discrimination à l'égard des personnes lesbiennes, gays, bisexuelles, transgenres et intersexes [Internet]. 2015 sept p. 2. Disponible sur: https://www.ohchr.org/Documents/Issues/Discrimination/Joint LGBTI Statement FR.PDF
- 23. World Health Organization. Developing sexual health programmes. 2010 p. 56.
- 24. SIECUS. Guidelines for Comprehensive Sexuality Education [Internet]. 2004 [cité 2 mars 2020]. Disponible sur: https://siecus.org/resources/the-guidelines/
- 25. Pardun CJ, L'Engle KL, Brown JD. Linking exposure to outcomes: Early adolescents' consumption of sexual content in six media. Mass Commun Soc. 2005;8(2):75–91.
- 26. Enfants et jeunes [Internet]. [cité 21 sept 2020]. Disponible sur: la-sante-a-tout-age/la-sante-a-tout-age/enfants-et-jeunes
- 27. Adolescents: risques sanitaires et solutions [Internet]. [cité 21 sept 2020]. Disponible sur: https://www.who.int/fr/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions
- 28. Vaismoradi M, Jones J, Turunen H, Snelgrove S. Theme development in qualitative content analysis and thematic analysis. J Nurs Educ Pract. 2016;6(5):6–7.
- 29. Manganello JA, Henderson VR, Jordan A, Trentacoste N, Martin S, Hennessy M, et al. Adolescent judgment of sexual content on television: Implications for future content analysis research. J Sex Res. 2010;47(4):364–373.
- 30. Snyder LB, Milici FF, Slater M, Sun H, Strizhakova Y. Effects of alcohol advertising exposure on drinking among youth. Arch Pediatr Adolesc Med. 2006;160(1):18–24.
- 31. Gibbons FX, Pomery EA, Gerrard M, Sargent JD. Media as Social Influence: Racial Differences in the Effects of Peers and Media on Adolescent Alcohol Cognitions and Consumption.

- 32. Gutschoven K, Van den Bulck J. Television Viewing and Age at Smoking Initiation: Does a Relationship Exist Between Higher Levels of Television Viewing ond Earlier Onset of Smoking? Nicotine Tob Res. 2005;7(3):381–385.
- 33. Gunther AC, Bolt D, Borzekowski DL, Liebhart JL, Dillard JP. Presumed influence on peer norms: How mass media indirectly affect adolescent smoking. J Commun. 2006;56(1):52–68.
- 34. « Sex Education » Creator on Expanding Its Scope, Tackling Serious Subjects in Comedy [Internet]. The Hollywood Reporter. [cité 3 août 2020]. Disponible sur: https://www.hollywoodreporter.com/live-feed/sex-education-season-2-finale-explained-laurie-nunn-interview-1270658
- 35. Abramow C. Le petit manuel Sex Education [Internet]. 2020. 64 p. Disponible sur: https://sexeducation.fr/assets/data/le petit manuel sex education.pdf
- 36. UNESCO. International technical guidance on sexuality education [Internet]. 2018 p. 139. Disponible sur:

 https://unesdoc.unesco.org/in/documentViewer.xhtml?v=2.1.196&id=p::usmarcdef_0000260770
 &file=/in/rest/annotationSVC/DownloadWatermarkedAttachment/attach_import_d8d4de18-19d0-4a35-8eb2ab5eaa5ca5d3%3F_%3D260770eng.pdf&locale=fr&multi=true&ark=/ark:/48223/pf0000260770/
 PDF/260770eng.pdf#%5B%7B%22num%22%3A146%2C%22gen%22%3A0%7D%2C%7B%22
 name%22%3A%22XYZ%22%7D%2C0%2C842%2C0%5D
- 37. Grier S, Bryant CA. Social marketing in public health. Annu Rev Public Health. 2005;26:319–339.
- 38. Andreasen AR. Social marketing: Its definition and domain. J Public Policy Mark. 1994;13(1):108–114.
- 39. Netflix France sur Twitter: ""Je vois un homme à côté de moi faire des mouvements..." Premier épisode de Visibles consacré à Laura, qui, comme Aimee dans Sex Education 2, a subi le harcèlement sexuel dans les transports. Certains puisent leurs forces dans les séries. Et Visibles, c'est leurs histoires. https://t.co/kVMWVYViix" / Twitter [Internet]. Twitter. [cité 17 juin 2020]. Disponible sur: https://twitter.com/netflixfr/status/1234916451544371202
- 40. Xavier: « Je me persuadais que c'était un passage de ma vie » | Visibles | Netflix France [Internet]. 2020 [cité 16 juill 2020]. Disponible sur: https://www.youtube.com/watch?v=8MOkAU342zE
- 41. Andreeva N, Andreeva N. 'Murder Mystery', 'Stranger Things' Lead Netflix's List Of Most Popular Movies, TV Series & Specials Of 2019 [Internet]. Deadline. 2019 [cité 24 sept 2020]. Disponible sur: https://deadline.com/2019/12/murder-mystery-stranger-things-3-netflix-list-of-most-popular-movies-tv-series-of-2019-the-witcher-you-netflix-what-we-watched-2019-1202818337/
- 42. World Health Organization, United Nations Population Fund. Promoting sexual and reproductive health for persons with disabilities. Geneva; New York: World Health Organization; UNFPA; 2009.
- 43. Kolotkin RL, Binks M, Crosby RD, Østbye T, Gress RE, Adams TD. Obesity and Sexual Quality of Life. Obesity. 2006;14(3):472-9.

Multimedia appendix 1: Sexual health themes definitions and other youth health themes list

Sexual health themes	Definition: depiction or discussion of
Romantic relationships	All kind of relationships with feelings or sexual attraction:
	sexfriends, couple, crush, infidelity, etc.
Sexual orientation / gender identity	The LGBTQ + community.
	Physical / sexual / emotional attraction to the same sex, the
	opposite sex, or both.
	Gender expression and identity.
Sexual violence and harassment	Sexual violence and sexual harassment, potential or proven,
	including attempts. Takes into account the notion of
	consent and slut-shaming.
Discrimination / homophobia /	Unjust or prejudicial treatment of different categories of
sexism / grossophobia	people, on the grounds of sexual orientation, sex, gender,
	gender expression, skin color, body, disability.
Planned or unplanned pregnancies	Planned or unplanned pregnancy, whether risky / proven /
	kept or not.
Pleasure, masturbation	Sexual pleasure, alone or with others.
STI protection	Any method to prevent an STI, whether scientifically
	proven or not, and whether it is connected to a sexual act or
	not.
STI	STIs, from their prevention to their long-term
	consequences, including treatments and transmission.
Contraception	Any method aimed at preventing pregnancy, whether
	scientifically proven or not, and whether it is connected to a
	sexual act or not.
Sexual disorders	Difficulty experienced by one or more individuals during a
	certain stage of sexual activity, involving desire, arousal or
	orgasm.
Self-acceptance / self-esteem	Self and body image, self-esteem.
Reproductive health / biology	Menstrual cycle, conception, anatomy.
Puberty	Physical and emotional changes related to puberty. First
	menstruation, first ejaculation, nocturnal ejaculation and
	spontaneous erections.
Abortion	The termination of pregnancy, voluntary or medical, and its
	conditions, methods, physical and emotional consequences,
	implications.
Adolescent / young parenthood	Parenting among adolescents and young adults.
Other (free text field)	Sexual therapy, gay/lesbian parenting, 1st intercourse,
	pornography, virginity, feminism, sexual games,
	fantasies

Other youth health themes
Alcohol
Drugs
Parent-adolescent relationship
School harassment
Disease, disability
Tobacco
Depression, suicide
Social networks, digital

Popularity, rumors
Addiction
Abuse
Road safety
Peer pressure
Eating disorders
Other:
Friendship, religion, violence, school

problems, theft, racism, being

adopted, firearms ...

Projet PRE₩S@X-NETFLIX

1	
3 4	IDENTIFICATION
5 6 7	Coder
<i>7</i> 8 9	Series title
	Season number
	Episode number
14	
	INCLUSION
18	1) The series is available on Netflix :
	2) The series was launched in 2015 or later
22	3) The series is labelled "teen TV shows" on Netflix :
24 25	
26 27	
28	
	EXTRACTION
32 33	Series and episode characteristics
34 35	Lauricheu year
36 37	Sexual health series
38 39	Enicode duration (
41	Series genre : Comedy
42 43	Drama 🔛
44 45	
46 47	Anime
48 49	Action
50 51	Documentary
52 53	Horror
54 55	Thriller
56 57	Science-Fiction / Fantasy
58 59	Romance
60	Reality
	Biopic
	Target population For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml
	Target age groupe

	·		•	
1				
2 3				
4 5				
6 Promotion message No.1				
Number of scenes	Message duration			
Dissemination modality of the message :	Auditory			
12 13	Visual 🔠	If visual, sp	atial depiction 🔠	
14 Place of the character(s) involved				
15 Role model				
1/	10.15	46.40		
18 Age of the character(s) involved 20	10-15 yo	16-18 yo) []	
21	> 18 yo	NR	NA	
22 Sex of the character(s) involved	Man 🔛	Woman	Trans	
24 25		NR	NA L	
26 27 Setting			_	
²⁸ Other, specify:				
³⁰ Prevention type Factual information		favorable behavio	or depicted	
32 Message theme		•		
What's the issue ?				
36 What's the solution ?				
38 Vigual depiction			I	
40 Dialogues transcription				
41				
43 Coders comments (subjective)				
$^{44}_{45}$ s there a 2nd sexual health promotion mess	sage ?			
46 47				
48 49				
50 Promotion message No.2				
51 ⁵² Number of scenes [] 53	Message duration			
⁵⁴ Dissemination modality of the message :	Auditory			
56	Visual	If visual, sp	atial depiction	
57 58 Place of the character(s) involved	- 10001	-: ···oua., op		
60 Role model				
Age of the character(s) involved	10-15 yo	16-18 yo)	
	,	m/site/about/quidelines.xht		
	·			
Sex of the character(s) involved	Man	Woman	Trans	

age 33 of 61	BMJ Open	NR	NA	
Setting				
Other, specify :				
Prevention type Factual information		favorable behav	ior depicted	
Message theme				
What's the issue ?				
0 What's the solution ?				
2 Visual depiction [
4 Dialogues transcription [
6 Coders comments (subjective)				
र्थं औs there a 3rd sexual health promotion mes	sage ?			
0				
2				
3 4 Promotion message No.3				
5 6Number of scenes	Message	duration		
7 8 Dissemination modality of the message :	Auditory			
9	Visual	If visual is	patial depiction	
- 1	Visual	II Visual, s	patial depiction	
Place of the character(s) involved				
Role model				
6 Age of the character(s) involved 7	10-15 yo	16-18 y	0	
3 9	> 18 yo	NR L	NA L	
Sex of the character(s) involved	Man	Woman	Trans	
2 3		NR 🔛	NA	
⁴ Setting				
5 Other, specify: [
Prevention type $race{}{}$ Factual information $race{}{}$		favorable behav		
9 D Message theme [
1 2 What's the issue ?				
3 4 What's the solution ? [
5 6 Visual depiction				_
/				ı
8 Dialogues transcription 9 0 Codova comments (subjective)				
Ocoders comments (subjective) Labeled Is there a 4th sexual health promotion mess				

2 3

9

10 11

21 22

23

24 25

26 27

28 29

30 31

32 33

34 35 36

37

44

47

48 49

50 51 52

53

54 55

56 57 58

59

	BMJ Open		Page 34 of 61	
Promotion message No.4				
lumber of scenes	Message duration			
Dissemination modality of the message :	Auditory			
	Visual	If visual, spatial depiction		
Place of the character(s) involved				
Role model				
Age of the character(s) involved	10-15 yo	16-18 yo	o 🔛	
	> 18 yo	NR	NA	
Sex of the character(s) involved	Man	Woman	Trans	
		NR	NA L	
Setting				
Other, specify :				
Prevention type Factual information favorable behavior depicted				
Message theme				
What's the issue ?				
What's the solution ?				
Visual depiction				
Dialogues transcription				
Coders comments (subjective)		/		
there a 5th sexual health promotion mess	sage ? 🔝			

38 Is there a 5th sexual health promotion mess 39

Promotion message No.5

45 Message duration [46 Number of scenes

Dissemination modality of the message: Auditory ____

> Visual 🔠 If visual, spatial depiction ____

Place of the character(s) involved ____

Role model

Age of the character(s) involved 10-15 yo | | 16-18 yo | |

> > 18 yo ____ NR 📖 NA L

60 Sex of the character(s) involved Man | | Woman | | Trans | |

> NR 📖 NA L

For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml Setting

Other, specify:

Pag	$_{ m e}$ greyention type $_{ m e}$ Factual information $_{ m L}$	BMJ Open	favorable bel	navior depicted	
	Message theme				
2	What's the issue ?				
3 4	What's the solution ?				
5 6 7	Visual depiction				
, 8 9	Dialogues transcription				
10 11	Coders comments (subjective)				
12 I 13	s there a 6th sexual health promotion mes	sage ?			
14					
15 16					
	Promotion message No.6				
	Number of scenes	Messag	e duration		
21 22	Dissemination modality of the message :	Auditory			
23 24		Visual	If visual	, spatial depiction $igsqcup$	
25 26 27	Place of the character(s) involved				
28	Role model				
30 31	Age of the character(s) involved	10-15 yo	16-1	8 yo	
32		> 18 yo	NR	NA L	
	Sex of the character(s) involved	Man 🔛	Woman 🔃	Trans	
35 36			NR	NA 🔛	
37 38	Setting				
39 40	Other, specify :				
41 42	Prevention type Factual information		favorable beh	avior depicted	
43 44	Message theme				
45 46	What's the issue ?				
47 48	What's the solution ?				
49 50	Visual depiction				
51 52	Dialogues transcription				
	Coders comments (subjective)				
	s there a 7th sexual health promotion mess	sage ?			
57 58					
59					

Other, specify:

1	Number of scenes	Message	duration	
3 4	Dissemination modality of the message :	Auditory		
5 6		Visual	If visual, s	patial depiction
7 8	Place of the character(s) involved			
9 10	Role model			
11 12	Age of the character(s) involved	10-15 yo	16-18 y	o <u> </u>
13 14		> 18 yo	NR	NA L
15 16	Sex of the character(s) involved	Man 🔠	Woman	Trans
17			 NR	 NA
18 19 20	Setting			
21 22	Other, specify :			
23 24	Prevention type Factual information		favorable behavi	or depicted
25 26	Message theme			
27	What's the issue ?			
28 29 30	What's the solution ?			
31 32	Visual depiction			
33 34	Dialogues transcription		•	
35 36	Coders comments (subjective)			
37. 38	Is there a 8th sexual health promotion mess	sage ?		
39 40				
41 42				
43 44	Promotion message No.8			
45 46	Number of scenes	Message	duration	
47 48	Dissemination modality of the message :	Auditory		
49 50		Visual	If visual, s	patial depiction
51 52	Place of the character(s) involved			
53	Role model			
54 55 56	Age of the character(s) involved	10-15 yo	16-18 y	′O
57 58		> 18 yo	NR	NA
59 60	Sex of the character(s) involved	Man	Woman	Trans
			NR	NA L
	Setting For peer review only - h	ttp://bmjopen.bmj.co	m/site/about/guidelines.xh	tml

Pag	e 37 of 61	BMJ Open			
	Message theme				
1 2	What's the issue ?				
3 4	What's the solution ?				
5 6	Visual depiction				
7 8	Dialogues transcription				
9	Coders comments (subjective)				
	s there a 9th sexual health promotion mess	age ? 🔃			
13 14					
15					
16 17					
18	Promotion massage No 0				
19 20	Promotion message No.9				
21	Number of scenes	Message du	ration		
23 24	Dissemination modality of the message :	Auditory			
25 26		Visual	If visual, sp	atial depiction	
27 28	Place of the character(s) involved				
29 30	Role model				
	Age of the character(s) involved	10-15 yo 🔲	16-18 yo		
33		> 18 yo	NR	NA	
	Sex of the character(s) involved	Man 🔛	Woman	Trans	
36 37			NR	NA	
38 39	Setting				
40 41	Other, specify :				
42 43	Prevention type Factual information		favorable behavio		
44 45	Message theme	_			
46 47	What's the issue ?				
48 49	What's the solution ?				
50 51	Visual depiction				
52 53 54	Dialogues transcription				
	Coders comments (subjective)				
	there a 10th sexual health promotion mess	age ? 🔝			
59 60					

1	
2	
3	
4	
5	
6	
7	
8	
9	
	0
1	1
1	
1	
1	4
1	5
	6
	7
	8
	9
	0
2	1
2	
2	
2	4
2	5
2	6
	7
	8
	9
	0
3	1
3	
3	
	4
3	5
3	6
3	7
3	8
3	
4	
4	
-	-
4	
4	_
	4
4	
4	
4	
4	8
4	9
5	0
5	1
5	
5	
_	
ر	•
ر	_
5	6
5	7
5	8

Number of scenes Message duration			
Dissemination modality of the message :	Auditory		
	Visual	If visual, spa	atial depiction
Place of the character(s) involved			
Role model			
Age of the character(s) involved	10-15 yo	16-18 yo	
	> 18 yo	NR	NA L
Sex of the character(s) involved	Man	Woman	Trans
Setting Other, specify :		NR 🔛	NA
Prevention type Factual information		favorable behavio	r depicted
Message theme			
What's the issue ?			
What's the solution ?			
Visual depiction			
Dialogues transcription	1/2.		
Coders comments (subjective)			





Pag	ge 41 of 61	BMJ Open
	Sexual health themes addressed	
1		
2	Sexual orientation / Gender identity	Prominence within the episode
4 1 ≴ ∟	M2	8 M9M10 M11M12M13M14 M15
6 7	Theme addressed?	
8 9	Transgender	
10 11	Transsexual woman	
12 13 14	Transsexual man	
15 16	Transvestite	
17 18	Non binary 🔛	
19 20		
21 22	Bisexual	
23 24	Cisgender	
25 26	Cissexual	
27 28	Gay 🔛	
29 30	Queer 🔛	
31 32	Asexual	
33 34	Intersexed	
35 36	Lesbian []	
37 38	Qestioning	
39 40		
41 42	Androgyny 🔛	
43 44	Other	
45 46 47	Specify:	
48 49	Planned or unplanned pregnancy Promine	ence within the episode
50 1₫1		8 M9 M10 M11 M12 M13 M14 M15
52		

M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15

Theme addressed ?
Risk of unplanned pregnancy
Pregnancy denial
Unplanned pregnancy but kept
Unplanned pregnancy but kept

Adoption ____ For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml

Anonymous childbirth ____

Child abandonment

Planned pregnancy ____

53 54

55 56

57 58

	Othor L. J. BMJ Open	Page 42 of 61
	Other	
1	Specify:	
3	Mother's age	
4 5	Father's age	
6 7		
8 9	Abortion Prominence within the episode	
10 1 ₁		M13M14 M15
12 13	Theme addressed ? L	
14 15		
16 17		
18 19	• · · · · · · · · · · · · · · · · · · ·	
20 21		
22		
23 24		
25 26		
27 28		
29 30	The video addresses the emotional side (fear, guilt)	
31		
32 33		
34 1135	M2 M3 M4 M5 M6 M7 M8 M9M10 M11 M12 M	I13M14 M15
36 37	Theme addressed?	
38 39	Maklaada	
40 41		
42 43		
44		
45 46	Covard have coment and violences	
47 48		440. 444
М <u>Д</u> 9∟ 50		M13
51 52		
53 54		
55 56	Rape	
57	Sexual abuse	
58 59	Sexual harrassment	
60	Forced marriage	
	Female genital mutilation	
	For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml Virginity check	
	Sexual exploitation / forced prostitution	

Pag	ge 43 of 61 BMJ Open Domestic violence
1	Slut shaming
2	Consent notion
4 5	Other
6 7	Specify
, 8 9	Victim's sex
10 11	Specitify
12 13	Victim's age
14 15	Committed by : Spouse / partner
16 17	Friend
18 19	Family
20 21	Colleague
22 23	Classmate
24 25	Stranger
26 27	Hierarchy / authority
28 29	Not reported
30 31	Not applicable
32 33	Other
34 35	Specify:
36 37	
38 39	Self-acceptance / Self-esteem Prominence within the episode
м ⁴⁰ 41	M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15
42 43	Theme addressed?
44 45	Body image
46 47	Self-esteem
48 49	Relationship to puberty
50 51	Ashamed of her/his virginity
52 53	Other
54 55	Specify:
56 57	
58 59	Discrimination / homophobia / sexism / grossophobia Prominence within the episode
60 M1	M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15
	Theme addressed?
	For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml Biphobia

	Gayphobia	BMJ Open	Page 44 of 61
1	Transphobia		
2	Serophobia		
4	Sexism		
6 7	Grossophobia		
8 9	Other		
10 11	Specify:		
12 13			
	n what context / by whom was the discr	imination committed?	
16 17	Work 🔛		
18 19	Family 🔝		
20 21	Politic		
22 23	Public space		
24 25	Classmate		
26 27	Friends		
28 29	Not reported		
30 31	Not applicable		
32 33	Other		
34 35	Specify:		
36 37			
	Reproductive health / biology	Prominence within the episode	
и <mark>4</mark> 0 41	M2	M7 M8 M9 M10 M11 M12 M	M13 M14 M15 M
42 43	Theme addressed?		
44 45	Menstrual cycle		
46 47	Female anatomy		
48 49	Male anatomy		
50 51	Conception		
52 53	Other		
54 55	Specify:		
56 57			
58 59			
60			
	Contraception Prominence v	vithin the episode	
И1 [M2 M3 M4ForM5er review6only	-http://bnigeen.bmjgom/sitq/about/guidelinesmhtml	M13 M14 M15 M
	Theme addressed?		

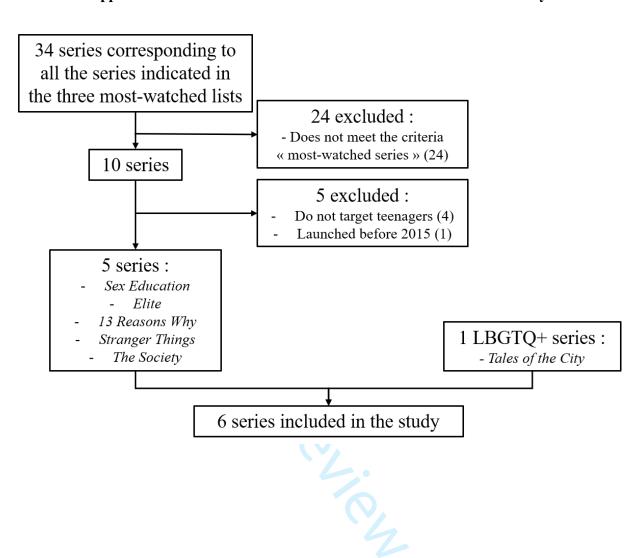
Pag	ge 45 of 61 Implant	BMJ Open
	Vasectomy	
1 2	IUS (hormonal coil)	
3 4	Female sterilisation	
5 6	IUD (coil)	
7 8	Injection	
9 10	Vaginal ring	
11 12	Patch	
13 14	Pill	
15 16	 Diaphragm []	
17 18	Male condom	
19 20	Cap	
21 22	Female condom	
23 24	Withdrawal	
25 26	Periodic abstinence	
27 28	Spermicide	
29 30	Emergency contraception	
31 32	Other	Specify:
33 34	Video gives :	pros cons brief mention
35 36		
37 38	STI protection Pro	ominence within the episode
39 1 40	M2	M7 M8 M9M10 M11M12 M13M14 M15
41 42	Theme addressed?	
43 44 45	Male condom	
46 47	Female condom	
	re-exposure prophylaxis	
50 51	Hepatitis B vaccine	
52 53	Papillomavirus vaccine	
54 55	Dental dam	
	xual Transmitted Infections	Prominence within the episode
M ⁵⁸ 1	M2 M3 M4 M5 M6	M7 M8 M9M10 M11M12 M13M14 M15
60	Theme addressed?	
	HIV / AIDS [
	For peer review o Gonorrhoea [nly - http://bmjopen.bmj.com/site/about/guidelines.xhtml
	Henatitis B	

	Genita	ıl herpes	BMJ Open			Page 46 of 61
1	Mycoplasma ge	enitalium 🔃				
2	Tricho	moniasis				
4 5	Human papillo	omavirus				
6 7		Syphilis				
8 9	С	hlamydia 🔠				
10 11	Video gives	:				
12 13	IIali	smission				
14 15	Pr	evention				
16 17	Sı	mptoms				
18 19	Г	Diagnosis				
20 21		reatment				
22	I ONG-LETTH COUSE	quences				
24 25	Brief	mention				
26 27						
28 29	Romantic relationships	Prominen	ce within the ep	oisode 🔙		
Μ <u>β1</u> 0 31		5 M6 M7 _	M8 M9	M10	_M12	M14
32 33	incine addicesca.					
34 35						
36 37						
38 39	Feeligns of love					
40 41						
42 43						
44 45	- · ·	Specify:				
46 47						
48 49	•	Prominen	ce within the ep	oisode 🔠		
1§ 10 <u>1</u> 51		M5 M6 M7 [M8 M9 _	M10	M12	M14
52 53						
	Pleasure with partner(s)					
56 57	Female masturbation					
58 59	Male masturbation					
60						
	Specify:					
	For po	eer review only - http://	/bmjopen.bmj.com	n/site/about/guideline	s.xhtml	
	Sexual disorders	Prominence within	the episode 🔠			

Ra	<u> </u>
	Theme addressed?
1	Decreased sexual desire
3 4	Sexual aversion
5 6	Female arousal disorder
7 8	Erectile dysfunction
9 10	Orgasm disorder
11 12 13	• —
14 15	Dyspareunia
16 17	Vaginismus
18 19	Other
20 21	
22 23	
24	Puberty Prominence within the episode
25 M216 27	M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15
28 29	Theme addressed?
30 31	
32	· · · · · · · · · · · · · · · · · · ·
34	
35 36	
37 38	Spontaneous erection
39 40	Modification of amotions I
41 42	
43 44	()thor
45 46	Specify:
47 48	
	Does another sexual health theme is addressed within the episode ?
51 52	
53 54	Prominence within the episode
55 M5 6	
57 58	
59 60	
	Does incomplete / misleading information is disseminated ?
	For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml
	1st:

_	BMJ Open	Page 48 of 61
3	rd:	
1 4	th :	
2		
3 5 4	th :	
5		
6		
7		
8 9		
10	Other youth health themes	
11	Peer pressure	
12		
13 14	Alcohol	
15	Device	
16	Drug []	
17	Tobacco	
18 19		
20	School bullying	
21	Abuse	
22 23		
24	Addiction	
25	Depression, suicide	
26 27		
28	Disease, disability	
29	Social network / digital	
30 31		
32	Eating disorder	
33	Parents-adolescen relationship	
34 35		
36	Popularity, rumors	
37	Road safety	
38 39		
40	Other	
41	Specify:	
42 43		
44		
45		
46 47		
48		

Multimedia appendix 3: Flow chart of the selection of the series included in the study



 BMJ Open

BMJ Open

In Sex Education, almost each episode raises a sexual health issue, which is discussed along the entire episode, from the description of the problem to its resolution, even when the associated promotion message is delivered during only one scene. Most of the time, the sexual health topic is presented from the first scene of the episode, which is not the case in other series. Some series stage main characters for scenes including sexual health promotion messages, whereas Sex Education involves second y characters who appear to highlight an issue.

Series' title	Season	Episode	Onset time	Sexual health promotion message	Theme	4 Visual depiction
13 Reasons Why	1	4	21:20	Taking pictures of a person (naked and kissing someone) without their knowledge is forbidden and punishable by law	Other: stalker	Tyler took pictures of Hagnah kissing another girl in her room, through her window, without the girleknowing. Clay, very upset, comes to talk to him at school and threatens to report him if he doesn't delete all the photos and their negatives right away. He explains that this is a crime punishable by law.
13 Reasons Why	1	7	36:50	Commenting on someone's appearance can be a form of sexual harassment	Sexual violence and harassment: sexual harassment	In communication class, we female teacher reads anonymous papers left by students. One of the papers contains a "positive" remark about her body. She explains that its not appropriate to objectify a person's body.
Elite	1	3	19:00	Anyone can be infected with HIV, regardless of social class	STI: HIV	At a party, Marina (16 years old, HIV positive) is drunk, and her brother sees her dancing without a T-spirt. He takes her aside to talk to her and lecture her. The brother says that she got HIV because she slept with the wrong person and that she has but learned from her mistakes since she continues to date "that kind of person". Marina tells him that HIV is not a disease of the poor and that the vires does not care about the size of your house, your money or your last name.
Elite	1	3	49:20	A person with HIV who is on treatment and has an undetectable viral load cannot transmit the virus (health promotion message is cited 2 times for 2 differents scenarios)	STI : HIV	Nano found out that Marina was infected with HIV. He had slept with her, so he is going to talk to her. She explains to him that her viral load is undetectable, so she cangot have infected him.
Elite	1	5	37:00	Staging the use of the condom with emphasis on the difficulty of putting it on	STI protection + contraception	Marina and Samuel are getting ready to have sex, he takes out a condom, opens it and tries to put it on, but he can't do it. She reassures him.
Elite	1	5	15:20	A person with HIV who is on treatment and has an undetectable viral load cannot transmit the virus. Explanation of HIV treatment and monitoring modalities	STI: HIV	In class, the teacher takes samuel's phone, which he used during class, and forces a classmate to read samuel's message. It said: "Marina doesn't have AIDS, you idiot, it's HIV". Since the class didn't know about it, Marina stood up and spoke to explain for situation. She explains that they don't have to worry because she is taking her treatment and testing every 4 months. Her viral load is undetectable so she cannot infect them.
Elite	1	6	28:50	When the viral load is undetectable, there is less than a 1% chance that the mother-to-be will transmit the virus to the baby	STI: HIV	Nano and Marina (16 years old, HIV positive) are in the car, coming out of the clinic where Marina was supposed to have an abortion. They decided to keep the baby but Nano sworried so Marina reassures him and explains that she has less than one percent risk of transmitting the virus to the baby.

,		
,		
)		
0		
2		
3		
4		
5		
6		
7		
8		
1 2 3 4 5 6 7 8 9 0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
1		
0123456789012345678		
3		
4		
5		
6		
7		
8		
.0		
1		
2		
3		
4		

Í		I	I		I	02
Tales of the City	1	2	52:30	Staging the use of a condom during sexual intercourse	STI protection	Two condoms are placed on a mattress, one is open. The camera zooms out on a gay couple having sex.
Tales of the City	1	2	04:45 / 16:10	Highlighting gender discrimination with regard to career plans: being a careerist does not depend on one's gender and family plans do not depend on one's gender (a woman also has the right to be professionally ambitious)	Discrimination	Scene 1: At the restaurand, Mary Ann and two friends are having brunch together and talk about Mary Ann who abandoned her family and moved to another city for her careed. She says she knows that people judge her, although men often do the same thing without anyone being shocked. MaryAnn is at an old friend's house drinking wine while discussing the situation. Her friend reasqures her about her career choices and tells her that no matter what her shoices are, there will always be people to criticize.
Tales of the City	1	3	12:50	Having an undetectable viral load and being on pre-exposure prophylaxis makes the risk of HIV infection very low: it is possible to stop using a condom	STI: HIV + STI protection	Michael sits at a doctor's lesk and looks at a pre-exposure prophylaxis leaflet while she explains o him that his viral load is still undetectable and everything is fine. They then talk about stopping condom use with his boyfriend who has been on pre-exposure prophylaxis for several weeks. The doctor explains that with this prophylaxis and Michael's undetectable viral load, there is no risk of transmitting HIV to his partner, but that it depends on whether Michael feels ready to stop or not.
Tales of the City	1	3	46:02	One must be able to consent to the cessation of condom use (if Prep and viral load undetectable) through communication with one's partner	Sexual violence and harassment: consent + STI protection	Michael is sitting on the bed, a condom in his hand, pensive. He puts it in the drawer and lies down Ben joins him in his underwear, they kiss and get ready to have sex but Michael stops him and asks him for a minute. Ben seems to understand the problem, he pulls a condom out of the drawer and reassures him that he doesn't have to rush and that they can continue to use a condom until Michael feels ready to stop.
Tales of the City	1	4	29:40	Using the term "tranny" can be offensive	Discrimination: transphobia	At a gay men's dinner party, Ben is the youngest (28 years old) and the only one to be shocked when guest uses the term "tranny". He explains that people should be called what they want to be called, for the sake of dignity and visibility. He says that using the term "tranny" as an insult is offensive. An older man gets angry and reminds him that the reason gay men have visibility and more rights today is because his generation fought for it, so they can use the words they want.
Tales of the City	1	4	36:35	Staging of a naked woman in a public place (bar) explaining her choice to show her body: it is about taking control and making your own choices (highlighting two different conceptions of feminism)	Other: feminism	A dancer does her show a queer bar and ends up topless. Mary Ann is at the bar and after the show she chats with the dancer. Mary Ann does not understand how this is past of the feminist movement and explains that in her day feminism sought for free women from objectification, not to encourage it. The dancer xplains that she does not feel objectified, that she takes control of her bedy and makes her own choices.

Tales of the City	1	7	18:25	The question of "maternal feeling" is deconstructed since the "feeling of being a parent" does not differ according to gender	Discrimination: sexism	Shawna learned that she was adopted and that her birth mother had passed away. She goes to her birth mother's brother's house. The uncle, his wife and Shawna are talking in the garden and Shawna reassures her uncle that she doesn't blame him for not taking care of her, because if she were asked to take care of a baby today she wouldn't want to. The wife replies that she doesn't think she would say no because women are more maternal. Shawna explains that she doesn't agree and that it's not a gender issue and it depends on errors.
Tales of the City	1	10	06:15	Using the term "pussies" to imply weakness is denigrated to women	Discrimination: sexism	The city's queer community gathered on the site of a house to protest its demolition. The woman who requested the demolition was angry at the female foreman who refused to start the demolition with so many people on the site. She insults here as a "pussy" and a drag queen intervenes to tell her that it is demeaning women to use this word as an insult.
Sex Education	1	1	00:30 // 33:00	Visual information on how to put on a condom	STI protection + contraception	Scene 1: Adam and Aimee are sleeping together. When Adam finishes, Adam removes the condem and Aimee asks to see it. She grabs it and holds it with her fingertips. Scene 2: In sexuality education class, students in pairs are asked to put a condom on a fake penis. Stis opens the package, "pushes" the reservoir to the right side and places the condom on the top of the penis, he tries to unroll it with his fingertips but is unable to do so, Maeva takes over, pinches the reservoir while unrolling the condom (no dialogue).
Sex Education	1	1	03:50	The age difference between two adults regarding sexual and romantic relationships is not a problem and should not be stigmatized	Romantic relationships: age difference in a relationship	Otis, his mother Jean and his partner (younger than her) are at the table. Otis makes fun of the parener by asking his age and whether he has an Oedipal complex. Jean reglies that it is perfectly normal to be attracted to an older woman and that by stigmatizing his choices, Otis is maintaining an unhealthy discourse on middle-aged manhood.
Sex Education	1	1	24:00	Cannabis use increases impotence and decreases the ability to ejaculate	Other: effect of cannabis on sexuality + sexual disorders	Otis, his mother Jean (sex logist) and Adam on the terrace. Adam and Jean smoke cannabis while discussing. Jean asks Adam if he smokes every day and then explains that new studies show a link between cannabis and impotence. She adds that he has many clients who were heavy cannabis users when they were younger and now have "trouble finishing".
Sex Education	1	1	31:05	Ringardisation of homophobia + defence of a victim	Discrimination: homophobia	In the school hallway, Ots and Eric (openly gay) are talking. Adam arrives, pushes and slams Eric against the lockers, grabbing his jaw. Another student intervenes and tells Adam that homophobia has been outdated for years. Adam lets go of Eric and leaves without saying anything.

]		I]	02
Sex Education	1	1	33:10	Schematic and visual information on female anatomy (hymen)	Reproductive health / biology: female anatomy	In sexuality education classes, in pairs, students must complete a figure of the female anatomy (figure filmed in the foreground, legends "clitoris", "hymen" and "paraureth glands" readable) Maeve completes the figure but is mistaken and Otis greets her.
Sex Education	1	1	35:50	Erectile dysfunction may be due to low self-esteem and taking too much Viagra can lead to an erection that is too strong for too long: need to take it correctly	Sexual disorders, self-acceptance / self-esteem.	Maeve and Otis hear a scream coming from the toilet, they enter and fall on Adam, sitting, panicked, with an erection visible through his clothes. He explains that he took 3 Vergra pills for his impotence problems and that his erection doesn't go away. He explains that he ask himself a lot of questions during intercourse, that he is afraid of not being well enough, etc. Otis reassures him and explains that he has performance anxiety and that he must learn to love himself to overcome it.
Sex Education	1	2	20:00	Cranberry juice can help with vaginal yeast infections.	Other: vaginal yeast infection	A group of young people discuss at a party, sitting in the living room. Otis arrives when a boy says he likes cranberry juice. Otis, wanting to find clients for his sex therapy clinic explains that cranberry juice is good for vaginal yeast infections. No one answers. Otis leaves.
Sex Education	1	2	00:00 / 22:56 / 25:20 / 31:50 / 44:00	Active communication within the couple allows for better management of low self-esteem.	Self-acceptance / self-esteem + Romantic relationships: communication	1st scene: a couple of tee gagers are kissing on the bed, when the boy (Sam) wants to take the girl's (Kate's) shirt off, she stops him and says "no". He goes to turn off the light and tries to reach her in the dark while she is undressing. They kiss each other and while changing position she kicks him in the testicles with her kaees. When he says he is going to turn the light on again she pushes him and the two fall and hurt themselves. Scene 2: At a party, Otis walks into a bathroom where Kate is. She has a bottle of alcohol in her hands and a neck brace. The two are drinking and talking. She explains that she doesn't want Sam to see her naked because she is "disgusting". 3rd and 4th scenes: Otis, sam and Kate in the bathroom. The couple argue, Otis sits in a corner, then stands up and interrupts them saying that their communication is ineffective. He makes them talk back to back, one after the other, and Kate finally confesses her discomfort. Sam reassures her but she doesn't believe him. Stis asks her to name five things that she likes about herself and explains that if she doesn't like herself she can never believe that Sam loves her. The couple eventually reconcile and kiss. Scene 5: At the high school, the students attend the choir performance. Otis gets a paper ball on time. He unfolds it and is written on it "THANK YOU!", he turns his head and Kate and Sam smile at him while putting their thumbs up. Otis smiles and does a thumb up. Kate forms the words "thank you" on her lips.

_	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
10	
19	
20	
20 21	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
<i>,</i>	
32	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
44	

Sex Education	1	3	01:10	Condoms are not always 100% effective as a means of contraception and there are others means of contraception	Contraception: condom, pill, implant	Maeve is at a doctor's office, sitting with a female health care worker who asks her questions about Her unwanted pregnancy. Maeve says she always protects herself with a condom. The professional explains that condoms are not 100% reliable and that there are other contraceptive methods available if she wants to use them.
Sex Education	1	3	01:10 // 28:10 // 38:57	Visual and auditory information on how an abortion is performed. After an abortion, you may vomit and bleed a little. If this intensifies (bleeding), you should call the health center	Abortion + Planned or unplanned pregnancy	Scene 1: Maeve is at a doctor's appointment, sitting with a woman from the health care staff who ask her questions about her unwanted pregnancy. She explains that someous has to pick her up after the abortion is over, and that she is not allowed to leave alone. Scene 2: Maeve and two other women are sitting side by side in operating clothes, waiting for their abortion, tense. The woman in the middle, more relaxed takes the hands of the other two. They make the wave and laugh. Then Maeve is called, she is lying in a hospital bed with the nurses and doctor around. They put blood pressure monitor around her arm and an IV in her hand (explanation from the nurse that it will sting a little but that it's to put her to sleep) and when she falls asleep they put a mask on her face. Scene 3: Maeve wakes up from her abortion and a nurse comes to give her food and water. Then Maeve leaves, she's at the clinic reception, Otis is waiting for her in the waiting room. She speaks with the lady at the reception desk who explains the potential side effects and what to do. Maeve leaves with Otis.
Sex Education	1	3	08:45	Peers can create pressure that makes you feel bad about your virginity: don't rush into it	Self-acceptance : shame of one's virginity	Otis is in a high school room, seeing clients for his sex therapy clinic. An unscheduled client comes in and asks to stay for a few minutes to make others think he is sexually active. Otis says he understands and that peer pressure can be difficult, but that one should not live with regrets.
Sex Education	1	4	12:20	Herpes can be spread through kissing	Other: herpes (not sexually transmitted)	A couple kissing on a sofa Maeve needs to sit down and scares them away by saying, "Get your herpes somewhere else!"
Sex Education	1	4	41:27	As far as love relationships are concerned, a problem in a sexual relationship can be due to a relationship problem, since sexual and love attractions are not chosen - Honesty advice with your partner	Romantic relationships	Ruthie and her girlfriend sonsult Otis for problems in their sexual relationships. Later, Otis sees Ruthie with another girl (Jessica). In class he asks her if she likes another girl, and Ruthie confirms that with Jessica everything is simple and sees well, but that she feels badly about her girlfriend who was her best friend. Otis explains that you don't choose who you are attracted to and that you can't control a relationship, but that you have to be honest and she has to tell her girlfriend.
Sex Education	1	5	05:40 / 42:50	A "nude" sent over the internet or by message can be reused and disseminated against it (cyberbullying, blackmail) and can remain on the internet forever, with a major and	Sexual violence and harassment: pornographic photo distribution, blackmail	An intimate picture of a get I from the high school (Ruby) was sent to all students. Scene 1: Otis and Maeve are walking through the school hallways and discussing the situation. Otis says that Ruby should go to the police because it's a crime.

1 2 3
4 5
6
7 8
9 10
11
12 13
14
15 16
17 18
19
20 21
22 23
24
25 26
27 28
29 30
30 31
32
34
35 36 37
38 39
40 41
42
43 44
45

e 55 of 61					BMJ Open	jopen-2
				negative impact for a long time. The dissemination of naked photos against the person concerned is condemnable and punishable by law.		Scene 2: The principal speaks in front of all the students at the high school and says that not only is the release of the photo despicable behavior, but it has very serious consequences that could lead to legal action.
Sex Education	1	5	27:50	Bodies are all different and no one should be ashamed (acceptance/image of one's body)	Self-acceptance: body image	Otis Maeve Ruby and a freend are in a room. Ruby is afraid that everyone will find out that the photo they are showing is hers. Otis explains to her that there is no shame togeel, that everyone has a body and that the fact that everyone knows about the photo will only be humiliating if she sees it that way. He tries to show her his big toe that looks like a thumb to reassure her and show her that we all have different bodies.
Sex Education	1	5	20:40	Sexual rumors (started out of frustration / revenge) can lead to a bad reputation with a psychological impact	Sexual violence and harassment: slutshaming, rumors	Otis and Maeve talk about Ruby whose intimate picture was sent to the whole school. Otis doesny understand why Maeve wants to help Ruby when Ruby is mean to hele Maeve tells about the sexual rumors and harassment she has experienced. She explains that these rumors stick to the skin, that it's painful and that no one deserves it, even Ruby.
Sex Education	1	6	11:10 / 29:14	Staging the prediction of condom use in scheduled sexual intercourse	Contraception + STI protection : condom	1st scene: Otis and Lily in he school hallways. They are planning to have their first sexual intercourse together that night. She asks him to take care of the lube and tells him she is bringing the condoms. Scene 2: In Otis' bedroon Otis is shirtless and Lily is in her bra. She plays music and starts to dance in a "sexy" way while looking at Otis. She takes one of the condoms out of her purse while looking and smiling at Otis, she keeps dancing while spinging them.
Sex Education	1	6	14:10 / 27:10 / 43:15 / 46:00	A sexual intercourse is not necessarily the reproduction of a pornographic film scene and you have to be able to think about your pleasure (female masturbation is not shameful). You have to be able to communicate with your partner	Pleasure, masturbation: pleasure in couple, female masturbation + Romantic relationships: communication	Scene 1: Aimee and Otis are in high school for a sex therapy session. She tells him about her last intercourse with Steve: she offered him "daring" sexual practices that he refused. He asked her what she really want and what would make her happy, but she was unable to answer. Otis tells her that all she has to do is trank about what she does when she masturbates, but she seems shocked and tells him she never masturbates. He tells her that it would allow her toget to know herself better so she could guide her boyfriend, and that there is no shame in masturbation even if female masturbation is still a table o. Scene 2: Aimee is on her end trying to masturbate. She seems to take it as a chore at first, but then she finds what gives her pleasure and masturbates all over her room. Scene 3: In the hallway of the high school, Aimee, with her loose hair and a big smile, doesn't walk stepight and goes to thank Otis for his advice. Scene 4: Steve and Aimee on Aimee's bed are kissing and getting ready to have sex. Aimee tells Steve exactly what she wants him to do.

Sex Education	1	7	2:45 / 39:20	Consent information: a "no" means "no". Love can be unrequited and it's painful but you can't force people's interest	Sexual violence and harassment: consent	Liam is in love with a girl. He asked her to go out with him, but she politely declined, explaining that the wasn't interested. He continues to show her interest and despite all higher grand romantic gestures, she is still not interested. He doesn't unglerstand why. The girl seems frightened. He discusses it with Otis, whe explains the consent and says, "Do you understand, Liam? No, it is no."
Sex Education	1	7	20:30	Feeling oneself makes it possible to take responsibility for oneself and to strive for well-being, even if this does not necessarily correspond to the normality imposed by society	Self-acceptance / self-esteem	Eric came with his family the church. Since his aggression in the street (he was walking around is make-up, in women's clothing), he no longer dares to be himself and hides behind classic men's clothing. The priest makes a speech about love and says that love begins by loving oneself, and that if you don't love yourself you can't really love others. After that, Eric feels better and goes to the high school dance wearing make-up, jewelry and a very colorful outfit.
Sex Education	1	8	14:30 / 25:55	Vaginism can be an automatic reaction of the body due to the fear of vaginal penetration. The body and the psyche are not disconnected, which can have an impact on the course of sexual intercourse and influence the functioning of the body (beginning of explanation of vaginismus as a psychophysiological process)	Sexual disorders: vaginism	During a sex therapy sesson, Lily explains that she tried to have sex but her vagina seemed to close up and she couldn't even put a finger in it. She doesn't understand because she really wanted to and has been waiting a long time for this moments. Otis tells her about vaginismus and explains what it is.
Sex Education	1	8	25:55	Virginity is not a social or sexual problem and you have to be able to release the pressure you put on yourself to lose that virginity	Other: virginity, first intercourse + Selfacceptance	Otis doesn't understand why Lily is in such a hurry to lose her virginity. She tells him that she doesn't want to feel like she's behind the others and that she's afraid to end up aloge. He reassures her and explains that it's not a race.
Sex Education	2	1	03:28	There is no shame in masturbating (healthy and normal), but if it is done in public, it is an offence	Pleasure: male masturbation	Otis masturbated in the control in the supermarket parking lot and his mother (Jean) surprised him. Later, she told him that it is healthy and normal to masturbate, but that he should not do it in public because it is a crime.
Sex Education	2	1	07:50 / 16:30 / 26:30	The Chlamydia epidemic is not transmitted through the air but through the exchange of sexual fluids. An infected sexual fluid can transmit the disease to the eye. Chlamydia can be treated with antibiotics (+staging of defensive behavior in the face of slutshaming insults of sexual practices)	STI: chlamydia, trans mission + Sexual violence and harassment: slut- shaming	Scene 1: There is an outbreak of Chlamydia in the high school and students are running around screaming, some of them with surgical masks on their faces. Otis tells the student selling the masks that Chlamydia is not transmitted through air but through sexual contact with a carrier. Students come to him for advice and Otis gives information on the transmission of the STI. Scene 2: Fiona is fought and insulted by her two friends who accuse her of having transmitted chlamydia to her, claiming that she is having sex with several boys. Otis defends her and asks the girls to stop slut-shaming. Scene 3: Parents' meeting to discuss the chlamydia epidemic, the principal speaks up and says that the infected students must take antibiotics. Faced

_	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
43 44	
44	

7 of 61					BMJ Open	jopen-2
						with the parents' ignorance and anxiety, Jean (sexologist) speaks and explains the transmission of chlamydia.
Sex Education	2	1	19:25	Explanation of favorable behavior (condom use and testing) to protect against a sexually transmitted infection (Chlamydia)	STI protection	Otis and Eric approached ackson in high school because he seems to have transmitted chlamydia to girls. Jackson defends himself by saying that he protects himself every time and that he got tested. He shows his negative results.
Sex Education	2	1	39:55	There's no shame in having a sexually transmitted infection, but it's important to be honest and tell your partners	STI	Owen confesses to being the one who passed on chlamydia to two girls in high school. Otis asks where he didn't say anything before and Owen says he was ashamed. Otis explains that there is nothing to be ashamed of, that you can't control your body, but you have to be honest with your partners and tell them.
Sex Education	2	2	21:41 / 37:50 / 43:40 / 44 / 44:30	Listening to your partner and understanding each other's functioning allows you to better approach sexual intercourse	Pleasure + Romantic relationships	1st scene: Ola and Lily are talking and Ola admits that she doesn't dare tell Otis that she didn't like it when he fingered her. Lily repeats it to Otis. A teacher asks Otis for advice because he doesn't understand his partner. Scene 2: Otis asks for advice from a classmate at school who asks him to show what he has done with an orange. She then tells him that every orange is different, that there is no magic technique that works for everyone, and that he needs to talk about it with his girlfriend to find out what to do. Scene 3: Otis is riding his bike outside the school, catches up with the teacher about his problem and tells him to listen to his partner. Scene 4: Otis rings Ola's corbell, tells her he knows she didn't like it the first time but asks her to show him what to do. Scene 5: The teacher rings his partner's doorbell and asks him to explain his wishes.
Sex Education	2	2	40:00	Advice to use a water-based lubricant, because oil-based lubricants deteriorate the condom	STI protection	During the sexuality education session, Jean (sexologist) is at the back of the room and intervenes when the teacher does not know how to answer questions. She explains which lubricant to use when having sex with a condom.
Sex Education	2	2	40:00	Anyone can refuse sex if their partner does not wish to use a condom	Contraception + STI protection + Sexual violence and harassment: consent	During the sexuality education session, Jean (sexologist) is at the back of the room and intervenes when the teacher does not know how to answer questions. She explains that one can always say no to sex, and that this also applies in the event that one's partner refuses to use a condom.
				For peer review only - http://bm	ijopen.bmj.com/site/al	Juest. Protected by copyright.

						1-20
Sex Education	2	3	03:23 / 10:40 / 15:40 / 24:20	Friction and non-consensual ejaculation received from another person and not consented in public transports is a sexual assault and a complaint must be filed	Sexual violence and harassment: sexual assault	1st Scene: Aimee is on the bus, standing. She unintentionally pushes the man behind her and apologizes with a smile. She then realizes that he is masturbating on her and she shouts but nobody reacts. As she gets off the bus she notices semen or her jeans. Scene 2: In high school, Aimee and Maeve are talking. Aimee shows the stain left by the attacker semen on her jeans. She seems detached but Maeve insists that they go to the police station to file a complaint. Scenes 3 and 4: Aimee and Maeve are at the police station and file a complaint. At first, Aimee doesn't feel legitimate and thinks she is wasting the police officers' time because she doesn't think she has been sexually assaulted. The police officers and Maeve reassure her and explain to her the value of filing a complaint.
Sex Education	2	3	01:30 / 21:00 / 36:30	When you are ashamed of your face during an orgasm, there are ways to play it down and to help take responsibility for the whole sexual experience. It is important to explain to your partner your feelings.	Self-acceptance + Romantic relationships: communication	1st scene: Olivia and Malek are sleeping together, at orgasm she grabs a pillow and puts it over hierace. Malek goes to Jean (sexologist) and talks to him about the problem, she suggests that it may be related to a fantasy and Malek goes to Olivia to tell her to solve her fantasy problem because it makes him uncomfortable. Scene 2: Otis is leaving section on his bike when Olivia appears in front of him and explains that it's not a fantasy but just a way to prevent him from seeing her face because she thinks she's ugly when she comes. Otis reassures her and explains that it's not about looking good but about feeling good with her partner, that it's about trust and that she should talk to him about it to reassure her. He gives her advice 3rd scene: Olivia and Malek are on the bed in their underwear, tape on their faces to distort them. They seem to have talked about Olivia's blockage. The tape allows them to see themselves disfigured and to realize that even like that, they love each other and desire each other.
Sex Education	2	4	00:00 / 06:50 / 28:00	Staging of favorable behavior with a request for consent just before sexual intercourse	Sexual violence and harassment: consent	1st scene: Otis and Ola are on Otis' bed, playing a video game and kissing. Ola asks Otis if he wants to go further 2nd scene: Eric and Otis meet up at the high school and Otis tells him that he is nervous about doing his first time with Ola. Eric tells him that he doesn't have to dot it if he is not ready. 3rd scene: Ola and Otis kiss on the bed, they start to undress but Otis gets angry because he can't undo Ola's bra. Ola asks him if all is well and tells him that they can stop if ne wants to.
For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml						

1	
ว	
3	
3 4	
4	
5	
6	
7	
6 7 8	
9	
10	
11	
12	
13	
14	
15 16	
16 17	
1/	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
40	

: 59 of 61					BMJ Open	jopen-20
Sex Education	2	4	00:00 / 11:45 / 16:00 / 21:00	Staging of future sexual intercourse with explicit provision for condom use	Contraception + STI protection	Scene 1: Otis and Ola are on Otis's bed, getting ready to have sex, and Ola asks if Otis has a condomy. Scene 2: Otis and Ola are on high school. Otis tells Ola that he forgot the condoms but that he cango home and get some. Ola says that she will take care of it. Scene 3: Ola buys a box of condoms. 4th scene: Otis receives and SMS from Ola, displayed on the screen it reads "I've got the condoms, when are you coming over?". Otis answers "Be there ASAP!", the message is displayed for 6 seconds.
Sex Education	2	4	45:50	Asexuality exists it is about not having sexual attractions (in all practices), but it does not mean the absence of amorous attractions	Sexual orientation: asexuality	Jean, sexologist, in his sexuality education office in the high school. A student enters and expresses her concern because she does not want to have sex, with anyone, ever. She is afraid of being "broken" and still wants to fall in love. Jean explains to her what asexuality is and reassures her that love and sex are two different things and that she can have one without the other.
Sex Education	2	5	15:10	The notion of pleasure does not diminish with age or the absence of intercourse	Pleasure	Jean teaches a class on female pleasure to a few women, including Maureen. Jean shows a model of the female anatomy of the clitoris and talks about pleasure. Matreen asks her if after a long period without sex she will still be able to fee something. Jean reassures her that the pleasure does not diminish with age or lack of contact.
Sex Education	2	5	23:00	Staging explaining what "pansexuality" is: being attracted to a person regardless of gender or sex	Sexual orientation: pansexuality	Ola and Adam work together in a grocery store, they are alone. Ola takes an online test to find out hegsexual orientation and the answer is "pansexuality". She reads the definition and seems to recognize herself in it.
Sex Education	2	6	11:30 / 12:55	Visual (diagram) and verbal explanation of how to perform an anal enema	Other: enema before anal penetration	1st scene: in a classroomeRahim is at the blackboard, he has drawn a figure explaining the steps of the anal enema and explains them to Otis and Eric sitting in front of him. 2nd scene: following the est scene, a teacher enters the room and asks them what they are doineRand then kicks them out. When the boys leave the room, the teacher takes a picture of the board with the figure.
Sex Education	2	6	38:20 / 43:00	Counselling and staging of communication with your partner in order to have a good sexual intercourse	Romantic relationships: communication	1st scene: At a party, Anwar comes to talk to Rahim and asks him to explain how to do an anal enemage because he doesn't know how to do it and he doesn't want to tell his beyfriend. Rahim tells him that if he doesn't feel ready to talk to his boyfriend, he is not ready to have sex with him. He advises him to go and talk to him 2nd scene: same evening Anwar and his boyfriend Nick are talking and Anwar confesses to him that he doesn't know how to douche and that he is a virgin. His boyfriend reassures him and tells him that he is going to explain to him

Sex Education	2	6	13:40 / 43:00	Consent: it is not mandatory to have sexual intercourse within the couple. Both partners have to be ready and it is possible to refuse sex in a couple	Sexual violence and harassment: consent	Scene 1: Rahim and Eric are kissing, and Eric asks him why he has never tried to have sex with him when he seems to have experience. Rahim answers that he doesn't want to pressure him and that he is waiting for Eric to feel ready. Scene 2: Anwar is standing alone in a corner, his boyfriend comes up to him and asks him to leave. Anwar refuses and his boyfriend tells him that he hopes he hasn't pressured him into having sex, and that they don't have to do anything until Anwar ig ready.
Sex Education	2	7	09:16 / 12:26 / 13:25/ 27:13	In the case of sexual intercourse between a girl and a boy with doubts about the use of contraception, there is the morning-after pill, which is delivered anonymously. There is no shame in using it and it concerns both partners	Contraception: morning after pill + Planned or unplanned pregnancy	Scene 1: Ruby and Otis and Etalking after having sex while drunk. They can't remember if they used a sondom. Scene 2: Otis and Ruby and in front of the pharmacy and Ruby asks Otis to go buy the morning-after pill for her. Scene 3: Otis is in the pharmacy and asks for the morning-after pill. The pharmacist tells him that the can't give it to him because he's a man. Otis comes out of the pharmacy to get Ruby and reassures her that this happens to everyone and that there is nothing humiliating about it. He promises to help her if she's pregnane and chooses to keep the baby. Ruby is at the pharmacy cash register with Otis who is a few meters away. The pharmacist asks Ruby questions about her menstrual cycle and history and then sells her the morning-after pill Otis pays. Scene 4: Otis and Ruby are sitting in the forest, each with a can of Coke, Ruby reads the pill instructions and takes it.
Sex Education	2	7	31:11	Staging of girl-to-girl social support to help a victim of sexual violence cope with her trauma (others can help cope) + testimonies of other girls to accompany her + stated number of women experiencing sexual assault	Sexual violence and harassment: sexual assault	Aimee, Maeve, Ola, Vivian, Olivia and Lily, in collective punishment, must find a subject that binds them as women. Finding no common ground, Ola and Maeve argue about otis. Aimee bursts into tears and tells them to stop arguing over a boy and then explains her discomfort. She explains that she doesn't dare to take the ous anymore because of her sexual assault. The girls empathize with her, support her and take turns telling about the abuse they have suffered. One one of that two-thirds of the girls experience unwanted sexual contact in public spaces before the age of 21.
Sex Education	2	8	00:00	To treat vaginismus, there are specific kit available. It is also possible to have non-vaginal sex during vaginismus	Sexual disorders	Lily and Ola kiss each other on the bed, Ola slips her hand into Lily's panties and tries to finger her, Like is in pain and Ola asks her what's wrong. Lily takes out a box, in which there are several dilators to treat the vaginismus. She explains her situation to Ola. They end up masturbating side by side.
The Society	1	2	29:43	The pill prevents unwanted pregnancies and it is recommended not to smoke when taking it	Contraception: pill	Gordie goes through Cassandra's medical records and wonders what a certain medication is for. The explains to him that it is the pill, and that it is best to be careful. He reputes that she should avoid smoking while on the pill.
The Society	1	2	42:30	Kissing someone requires consent (kissing cannot be forced) For peer review only - http://bmi	Sexual violence and harassment: consent	Will and Kelly count the goducts in the supermarket. He leans over to Kelly to give her a kiss, but she backs away and tells him to ask first.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43

e 61 of 61					BMJ Open	jopen-20
The Society	1	3	32:10	It is important for women to urinate after sex to avoid cystitis and drinking cranberry juice can help	Other: cystitis	Cassandra is putting makeup on in the bathroom when her sister, Allie, comes in in a rush to peed nd complains of burning when urinating. Her sister tells her it's probably a urinary tract infection and that she has to urinate after sex. She advises her to drink cranberry juice.
The Society	1	3	53:55	Staging the use of the condom	STI protection + Contrac eption	Campbel and Elle are in a toom and kissing. They undress and get into bed. He opens a drawer full oftondoms (the camera zooms in on it) and pulls one out. She takes it from him.
The Society	1	8	28:16	Staging of a gay boy who had sex with a girl who then became pregnant: emphasizing that sexuality is not fixed and can be fluid	Sexual orientation	At the hospital, Sam is at the bedside of Becca who is pregnant. 2 girls come to see her and ask is Sam is the father, he says yes. Gwen reacts with a surprised and skeptical thuh" then congratulates them and says goodbye. The 2 girls leave and in front of her friend's disapproving look, Gwen says "what? You know he's gag". Her friend replies that sexuality is fluid.
						ided from http://bmjopen.bmj.com/ on October 31, 2024 by guest. F

paded from http://bmjopen.bmj.com/ on October 31, 2024 by guest. Protected by copyright.

Multimedia appendix 5: Other health themes addressed in series episodes, in all series and by type of series

	Number of all series'	Sexual Health	Series' Episodes
Other youth health	episodes addressing	Yes (n=26)	No (n=39)
themes:	it (n=65)	NT (0/)	NT (0/)
A 11 -1	N (%)	N (%)	N (%)
Alcohol	44 (68)	19 (73)	25 (64)
Drugs	44 (68)	22 (85)	22 (56)
Parent-adolescent relationship	36 (55)	24 (92)	12 (31)
School harassment	23 (35)	10 (39)	13 (33)
Disease, disability	22 (34)	10 (39)	12 (31)
Tobacco	19 (29)	10 (39)	9 (23)
Depression, suicide	18 (28)	1	17 (44)
Social networks, digital	16 (25)	10 (39)	6 (15)
Popularity, rumors	16 (25)	10 (39)	6 (15)
Addiction	9 (14)	7 (27)	2
Abuse	6 (9)	0	6 (15)
Road safety	6 (9)	2	4 (10)
Peer pressure	5 (8)	4 (15)	1
Eating disorders	1 (2)	1	0
Other: Friendship, religion, violence, school problems, theft, racism, being adopted, firearms	61 (94)	24 (92)	37 (95)
adopted, firearms			

BMJ Open

Sexual Health Promotion Messages for Young People in Netflix Most-Watched Series Content (2015-2020): Mixed Methods Analysis Study

Journal:	BMJ Open
Manuscript ID	bmjopen-2021-052826.R1
Article Type:	Original research
Date Submitted by the Author:	02-Oct-2021
Complete List of Authors:	Tauty, Solenne; Institut national de la santé et de la recherche médicale, ECEVE; Université de Paris, MARTIN, Philippe; Institut national de la santé et de la recherche médicale, ECEVE; Université de Paris, Bourmaud, Aurélie; Institut national de la santé et de la recherche médicale, ECEVE; Université de Paris, Chapoton, Boris; Université Jean Monnet Saint-Etienne, UR4161 de La Rochebrochard, Elise; Institut National d'Etudes Démographiques (INED), UR14 – Sexual and Reproductive Health and Rights; Université Paris-Saclay, Univ. Paris-Sud, UVSQ, CESP, INSERM Alberti, Corinne; Institut national de la santé et de la recherche médicale, ECEVE; Université de Paris,
Primary Subject Heading :	Sexual health
Secondary Subject Heading:	Public health, Global health, Epidemiology, HIV/AIDS
Keywords:	Public health < INFECTIOUS DISEASES, EDUCATION & TRAINING (see Medical Education & Training), Health & safety < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, PREVENTIVE MEDICINE, Sexual and gender disorders < PSYCHIATRY

SCHOLARONE™ Manuscripts



I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

Sexual Health Promotion Messages for Young People in Netflix Most-Watched Series Content (2015-2020): Mixed Methods Analysis Study

Solenne Tauty¹, Philippe Martin^{1, 2, 3}, Aurélie Bourmaud¹, Boris Chapoton⁴, Elise de La Rochebrochard^{2, 3}, Corinne Alberti¹

Contact address:

Philippe Martin,
Université de Paris, ECEVE, Inserm U1123
UFR de Médecine
10 Avenue de Verdun, 75010 Paris
+33(0)157278652
philippe.martin@inserm.fr

Authors' contribution

ST and PM wrote the protocol and methodological research documents. BC and CA contributed to the writing of these documents and to the final validation of methods. ST and PM collected and analyzed the study data. All authors (ST, PM, AB, BC, ER, and CA) participated in the analysis and interpretation of the results. All authors (ST, PM, AB, BC, ER, and CA) contributed to the writing of the article.

Extra data is available by emailing philippe.martin@inserm.fr

¹ Université de Paris, ECEVE, Inserm, F-75010 Paris, France

² Institut National d'Etudes Démographiques (INED), UR14 – Sexual and Reproductive Health and Rights, F-75020 Paris, France

³ Université Paris-Saclay, Univ. Paris-Sud, UVSQ, CESP, INSERM, Kremlin-Bicêtre, France

⁴ Université Jean Monnet, Saint-Etienne, Coactis UR 4161, France

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 analyzed 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 analyzed 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 to 18-year-old characters in school. Analysis highlighted four main points concerning scenarios in these series: (i) there are different ways to deliver sexual health promotion messages; (ii) there is depiction of negative value judgments and gender norms; (iii) some information may be incomplete or misleading; and (iv) risky behaviors 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 behaviors of young people.

Keywords: Health promotion; Sexual health; Young people; Netflix series; Social marketing.

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 analyze the different types of health promotion messages, according to the different components of sexual health.
- The study covers full seasons but only analyzes 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.

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 develop individuals knowledge and skills, in order to adopt positive behaviors, 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 behaviors 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 behaviors must be studied (11). The sexual content media aimed at young people has been analyzed 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 world (16) 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 moralizing 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 analysis (21) of Netflix series. The study was organized as follows: i) definition, identification and selection of series to include; ii) systematic collection of quantitative and qualitative data; and iii) 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 analyzes 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 five years (2015 or later); 3) be labelled "teen 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 specializing 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. 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 Appendix 1). Sexual health themes were defined to reflect the key concepts listed by the WHO for sexual health programs (26), the themes covered by the SIECUS guidelines (27) 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 promotion (7) 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 favorable sexual behavior. 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 multi-episode storyline.

Following the Pariera et al (15) classification, the roles of the characters involved in the promotion messages were organized into three categories of role model: positive ("a character who is favorably depicted and models a healthy attitude or behavior"), negative ("a character who is unfavorably depicted and models an unhealthy attitude or behavior") or transitional ("a character who shifts over the course

of the storyline from modeling an unhealthy behavior 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 behaviors 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 analyzed 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 over-interpretation 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 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, version 3.6.1. We qualitatively analyzed 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: Initialization, Construction, Rectification and Finalization (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 Appendix 3). Both coders were familiar with four of them. Series characteristics are presented in Table 1. We analyzed a total of 65 episodes available in March 2020. Among the series included, two have a synopsis that is mainly about sexual health (*Sex Education* selected as a most-watched series, *Tales of the City* selected as a LBGTQ+ series). These two series represent 26 episodes. The four other series are not specifically on sexual health and represent 39 episodes.

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	
Number of analyzed 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 /						X	1
Fantastic						Λ	1

^{*:} according to Netflix France

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%), 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 6 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%).

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 Healt	h 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	20 (31)	5 (19)	15 (39)	2	2	0
pregnancies	20 (31)	3 (17)	15 (57)	_	2	· ·
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, 1st 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).

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

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)
favorable behavior depicted	22 (35)	19 (38)	3 (25)
Place of the characters involved	ved:		
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 involve	ed* :		
16-18 years old	53 (86)	41 (82)	12 (100)
> 18 years old	20 (32)	18 (36)	2 (17)
Sex of the characters involve	ed*:		
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)
Number 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)
Number 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).

All identified sexual health promotion messages are detailed in the Multimedia Appendix 4. We selected 6 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.

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

Liam? No means no."

024 by guest. Protected by copyright.

having sex.

Close-up or 2 condoms placed on mattresses, one is

open. Then zoom out on a couple of men who are

46

Tales of

the City

1

00:42

STI protection:

condom

Table 4: Illustration of some sexual health promotion messages **Episode** Diffused message(s) Scene(s) depiction Season Message Theme(s) Serie duration addressed Aimee does 't know how to guide her boyfriend 03:43 Importance of knowing your body Pleasure / Sex to guide your partner. Break the during intergourse, because she doesn't know what Education masturbation: female taboo of female masturbation. she likes. She seems disgusted with the idea of Importance of couple masturbation. Otis explains that there is nothing masturbation communication dirty or shameful and that she should get to know herself before explaining to her boyfriend. She Romantic discovers masturbation, takes pleasure and can guide relationships: her boyfriend. She thanks Otis for his advice. couple communication Liam is in leve with a girl. He asked her out but she 04:21 Sexual violence To understand and respect when Sex someone is not interested. politely refused, explaining that she was not Education and harassement: interested. He continues to show interest but despite consent all hisr 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,

Normalization of the use of

condoms during gay intercourse.

Page 14 of 60

jopen-2021-052

						Σ.
Elite	1	5	02:22	STI : HIV	Being infected with HIV does not	During class, the teacher took Samuel's phone, who
					mean having AIDS.	was typing. He asks a classmate to read the text
					An HIV-positive person who is	aloud. It says that Marina does not have AIDS but
					under treatment and monitored	HIV.
					may see their viral load become undetectable and in this case the	The class not being aware, a girl asks Marina if it is
					virus cannot be transmitted.	true that shows infected with HIV. Marina stands up
					virus cannot be transmitted.	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.
						load is undetectable. She is tested every 4 months.
7771	1		00.17	G 1		M M M M M M M M M M M M M M M M M M M
The		8	00:17	Sexual	Sexuality is fluid.	At the hosp al, Sam is at Becca's bedside who is
Society				orientation: gay, bisexual		pregnant. 2 irls come to see her and ask if Sam is the father, he says yes. Gwen reacts with a surprised
				Disexual		and skeptical "huh" then congratulates them and
						says goodby. The 2 girls leave, the 2nd gives Gwen
				4		a disapproving look :
					10,	G:"What? You know he's gay." Girl:"Sexuality is
						fluid, Gwen-"
13	1	4	02:38	Other : stalker	Taking photos of a minor in his	Tyler, a high school boy, took intimate photos of
Reasons					privacy is a crime punishable by	Hannah without her knowledge.
Why					imprisonment.	Tyler is in the high school photo lab, Clay comes
·						over to talk on him.
						He asks hing 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 arelief. 'Cause a first-time offense is only
						six months in jail, but for repeat offenders, that's a
						year." T:"Teat's not a thing." C:"Criminal invasion
						of a minor's privacy. Look it up. I don't think they'll
						let you hav a camera in prison, but maybe you can
						draw pictures." T:"I'm not a criminal." C:"You are.
						And you're gereep." T:"I just took pictures."
						C:"You hurgiliated her." T:"I didn't mean to."

The qualitative analysis highlighted three main staging for overall sexual health themes (not promotion messages): i) depiction of negative value judgments and gender norms; ii) incomplete or misleading information and iii) depiction of risky behaviors.

Depiction of negative value judgments 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 colorful nail polish, whereas a girl has short hair and 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 judgment by a character concerning the behavior 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 rumors 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 contextualized.

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 behaviors

Other health themes coded (other than sexual health) are presented in Multimedia 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 behaviors. *Tales of the City* and *Elite* are the two series that trivialize this kind of behaviors 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 behaviors 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 analyzed, 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 analyzed series. Emotional and romantic relationships feature in the scenarios of all the series analyzed. 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 behavior. 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 behavior 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 analyzed 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 behaviors 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 favorable 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 behavior 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, behavior, representations), considering different receptiveness and interpretations. One study has shown that the representation of sexuality on television can have a positive impact on sexual behaviors, through normalization of favorable behaviors, change of attitude and increase in personal belief (10). Another study of the *ER* television series showed an increase in viewers' knowledge of health topics after watching the series, decreasing during the postepisode 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-acclimatization). 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 standardized 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 programs 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 analyze some characters' specificities such as sexual orientation or gender identity, disabled and overweight people. Indeed, it was a delicate task to correctly characterize the characters presented. A reflection is necessary to consider and analyze 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.

Acknowledgments

We would like to thank the members of the research teams involved in this project. We thank Duncan Fulton, translator of this article. We thank the French National Research Agency for their financial support in the framework of the Sexpairs project.

Declaration of interest statement

The authors declare that they have no conflict of interest.

Funding statement

This study was funded by the French National Research Agency (Grant ANR-20-CE36-0008).

Ethics approval statement

This study does not involve human participants. No consent is collected, as the study only deals with media content.

Abbreviations

AIDS: Acquired Immune Deficiency Syndrome

ER: Emergency Room

HIV: Human Immunodeficiency Virus

LGBTQ+: Lesbian Gay Bisexual Transgender Queer +

SIECUS: Sexuality Information and Education Council of the United States

STI: Sexual Transmitted Infections

SVoD: Subscription Video on Demand

WHO: World Health Organization

UNESCO: United Nations Educational, Scientific, and Cultural Organization

US: United States

Multimedia appendices list

Multimedia appendix 1: Sexual health themes definitions and other youth health themes list

Multimedia appendix 2: Quantitative and qualitative data extraction grid

Multimedia appendix 3: Flow chart of the selection of the series included in the study

Multimedia appendix 4: Qualitative description of promotion messages

Multimedia appendix 5: Other health themes addressed in series episodes, in all series and by type of series

Tables list

Table 1: Characteristics of series included in the study

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

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

Table 4: Illustration of some sexual health promotion messages

References

- 1. Sexual health [Internet]. [cité 8 juin 2020]. Disponible sur: https://www.who.int/health-topics/sexual-health#tab=tab_1
- Sedgh G, Finer LB, Bankole A, Eilers MA, Singh S. Adolescent Pregnancy, Birth, and Abortion Rates Across Countries: Levels and Recent Trends. [cité 23 juill 2020]; Disponible sur: https://reader.elsevier.com/reader/sd/pii/S1054139X14003875?token=B1DE3DFF57EF49E35085 B4FCC614E927C0EF66588D3B640844FBFBD5711DF1C41AC38AE8F09A612483781328B1A 977F9
- 3. Preventing Child Sexual Abuse |Violence Prevention|Injury Center|CDC [Internet]. 2020 [cité 23 juill 2020]. Disponible sur: https://www.cdc.gov/violenceprevention/childabuseandneglect/childsexualabuse.html
- 4. STDs in Adolescents and Young Adults 2018 Sexually Transmitted Diseases Surveillance [Internet]. 2019 [cité 8 juin 2020]. Disponible sur: https://www.cdc.gov/std/stats18/adolescents.htm
- World Health Organization. Sexually transmitted infections (STIs) [Internet]. [cité 4 juin 2020]. Disponible sur: https://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-(stis)
- 6. SOS Homophobie. Rapport sur l'homophobie 2020 [Internet]. SOS homophobie; 2020 p. 183. Disponible sur: https://www.sos-homophobie.org/sites/default/files/rapport_homophobie_2020_interactif.pdf
- 7. World Health Organization. Charte d'Ottawa [Internet]. nov 21, 1986 p. 6. Disponible sur: http://www.euro.who.int/ data/assets/pdf file/0003/129675/Ottawa Charter F.pdf
- 8. Collins RL, Elliott MN, Berry SH, Kanouse DE, Hunter SB. Entertainment television as a healthy sex educator: The impact of condom-efficacy information in an episode of Friends. Pediatrics. 2003;112(5):1115-21.
- 9. Brodie M, Foehr U, Rideout V, Baer N, Miller C, Flournoy R, et al. Communicating health information through the entertainment media. Health Aff (Millwood). 2001;20(1):192-9.
- 10. Falconer T. Using television to enhance sexual health. J Multidiscip Res Trent. 2019;2(1):118-34.
- 11. Collins RL, Strasburger VC, Brown JD, Donnerstein E, Lenhart A, Ward LM. Sexual Media and Childhood Well-being and Health. Pediatrics. nov 2017;140(Suppl 2):S162-6.
- 12. Dillman Carpentier FR, Stevens EM, Wu L, Seely N. Sex, love, and risk-n-responsibility: a content analysis of entertainment television. Mass Commun Soc. 2017;20(5):686-709.
- 13. Kinsler JJ, Glik D, de Castro Buffington S, Malan H, Nadjat-Haiem C, Wainwright N, et al. A content analysis of how sexual behavior and reproductive health are being portrayed on primetime television shows being watched by teens and young adults. Health Commun. 2019;34(6):644-51.
- 14. Hust SJ, Brown JD, L'Engle KL. Boys will be boys and girls better be prepared: An analysis of the rare sexual health messages in young adolescents' media. Mass Commun Soc. 2008;11(1):3-23.

- 15. Pariera KL, Hether HJ, Murphy ST, de Castro Buffington S, Baezconde-Garbanati L. Portrayals of reproductive and sexual health on prime-time television. Health Commun. 2014;29(7):698-706.
- 16. Netflix Revenue and Usage Statistics (2020) [Internet]. Business of Apps. 2018 [cité 8 juin 2020]. Disponible sur: https://www.businessofapps.com/data/netflix-statistics/
- 17. Netflix. À propos de Netflix [Internet]. Netflix Media Center. [cité 8 juin 2020]. Disponible sur: https://media.netflix.com/fr/about-netflix
- 18. Gallagher D. Netflix Riding the Tiger. Wall Street Journal [Internet]. 21 avr 2020 [cité 17 juill 2020]; Disponible sur: https://www.wsj.com/articles/netflix-riding-the-tiger-11587506368
- 19. Symes K. Orange Is the New Black: the popularization of lesbian sexuality and heterosexual modes of viewing. Fem Media Stud. 2017;17(1):29-41.
- 20. Davies A, Maich K, Belcher C, Cagulada E, DeWelles M, Rhijn T van. A critical examination of the intersection of sexuality and disability in Special, a Netflix series. In: Disability Representation in Film, TV, and Print Media. Routledge; 2021.
- 21. Kassarjian HH. Content analysis in consumer research. J Consum Res. 1977;4(1):8-18.
- 22. Netflix France on Twitter: « Un top par ci, un top par là, il fallait bien qu'on fasse le nôtre : voici le top de l'année des séries/films/documentaires Netflix les plus populaires en France. https://t.co/Bc2JuXURxv » / Twitter [Internet]. Twitter. [cité 3 mars 2020]. Disponible sur: https://twitter.com/netflixfr/status/1211587873524396032?ref_url=https%3a%2f%2fwww.numera ma.com%2fpop-culture%2f596453-netflix-devoile-son-top-des-series-et-films-les-plus-regardes-en-france-mais-il-ne-veut-rien-dire.html
- 23. Médiamétrie. Global SVoD 2019 [Internet]. 2019 oct [cité 13 févr 2020] p. 4. Disponible sur: https://www.mediametrie.fr/sites/default/files/2019-10/2019%2010%2003%20CP%20Global%20SVOD 0.pdf
- 24. BGR. Here are the top 20 most-watched streaming TV series of 2019 [Internet]. [cité 6 mars 2020]. Disponible sur: https://bgr.com/2020/01/15/best-shows-on-netflix-right-now-top-20-tv-shows-of-the-year/
- 25. ONU. Mettre fin à la violence et à la discrimination à l'égard des personnes lesbiennes, gays, bisexuelles, transgenres et intersexes [Internet]. 2015 sept p. 2. Disponible sur: https://www.ohchr.org/Documents/Issues/Discrimination/Joint LGBTI Statement FR.PDF
- 26. World Health Organization. Developing sexual health programmes. 2010 p. 56.
- 27. SIECUS. Guidelines for Comprehensive Sexuality Education [Internet]. 2004 [cité 2 mars 2020]. Disponible sur: https://siecus.org/resources/the-guidelines/
- 28. Pardun CJ, L'Engle KL, Brown JD. Linking exposure to outcomes: Early adolescents' consumption of sexual content in six media. Mass Commun Soc. 2005;8(2):75-91.
- 29. Enfants et jeunes [Internet]. [cité 21 sept 2020]. Disponible sur: la-sante-a-tout-age/la-sante-a-tout-age/enfants-et-jeunes
- 30. Adolescents: risques sanitaires et solutions [Internet]. [cité 21 sept 2020]. Disponible sur: https://www.who.int/fr/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions

- 31. Jozkowski KN, Canan SN, Rhoads K, Hunt M. Methodological Considerations for Content Analysis of Sexual Consent Communication in Mainstream Films. Sex Media Soc. 1 déc 2016;2(4):2374623816679184.
- 32. Vaismoradi M, Jones J, Turunen H, Snelgrove S. Theme development in qualitative content analysis and thematic analysis. J Nurs Educ Pract. 2016;6(5):6-7.
- 33. Manganello JA, Henderson VR, Jordan A, Trentacoste N, Martin S, Hennessy M, et al. Adolescent judgment of sexual content on television: Implications for future content analysis research. J Sex Res. 2010;47(4):364-73.
- 34. Snyder LB, Milici FF, Slater M, Sun H, Strizhakova Y. Effects of alcohol advertising exposure on drinking among youth. Arch Pediatr Adolesc Med. 2006;160(1):18-24.
- 35. Gibbons FX, Pomery EA, Gerrard M, Sargent JD. Media as Social Influence: Racial Differences in the Effects of Peers and Media on Adolescent Alcohol Cognitions and Consumption.
- 36. Gutschoven K, Van den Bulck J. Television Viewing and Age at Smoking Initiation: Does a Relationship Exist Between Higher Levels of Television Viewing ond Earlier Onset of Smoking? Nicotine Tob Res. 2005;7(3):381-5.
- 37. Gunther AC, Bolt D, Borzekowski DL, Liebhart JL, Dillard JP. Presumed influence on peer norms: How mass media indirectly affect adolescent smoking. J Commun. 2006;56(1):52-68.
- 38. « Sex Education » Creator on Expanding Its Scope, Tackling Serious Subjects in Comedy [Internet]. The Hollywood Reporter. [cité 3 août 2020]. Disponible sur: https://www.hollywoodreporter.com/live-feed/sex-education-season-2-finale-explained-laurie-nunn-interview-1270658
- 39. Abramow C. Le petit manuel Sex Education [Internet]. 2020. 64 p. Disponible sur: https://sexeducation.fr/assets/data/le_petit_manuel_sex_education.pdf
- 40. UNESCO. International technical guidance on sexuality education [Internet]. 2018 p. 139. Disponible sur: https://unesdoc.unesco.org/in/documentViewer.xhtml?v=2.1.196&id=p::usmarcdef_0000260770 &file=/in/rest/annotationSVC/DownloadWatermarkedAttachment/attach_import_d8d4de18-19d0-4a35-8eb2-ab5eaa5ca5d3%3F_%3D260770eng.pdf&locale=fr&multi=true&ark=/ark:/48223/pf0000260770/PDF/260770eng.pdf#%5B%7B%22num%22%3A146%2C%22gen%22%3A0%7D%2C%7B%22 name%22%3A%22XYZ%22%7D%2C0%2C842%2C0%5D
- 41. Strasburger VC, Brown SS. Sex Education in the 21st Century. JAMA. 9 juill 2014;312(2):125-6.
- 42. Grier S, Bryant CA. Social marketing in public health. Annu Rev Public Health. 2005;26:319-39.
- 43. Andreasen AR. Social marketing: Its definition and domain. J Public Policy Mark. 1994;13(1):108-14.
- 44. Netflix France sur Twitter: ""Je vois un homme à côté de moi faire des mouvements..." Premier épisode de Visibles consacré à Laura, qui, comme Aimee dans Sex Education 2, a subi le harcèlement sexuel dans les transports. Certains puisent leurs forces dans les séries. Et Visibles, c'est leurs histoires. https://t.co/kVMWVYViix" / Twitter [Internet]. Twitter. [cité 17 juin 2020]. Disponible sur: https://twitter.com/netflixfr/status/1234916451544371202

- 45. Xavier: « Je me persuadais que c'était un passage de ma vie » | Visibles | Netflix France [Internet]. 2020 [cité 16 juill 2020]. Disponible sur: https://www.youtube.com/watch?v=8MOkAU342zE
- 46. World Health Organization, United Nations Population Fund. Promoting sexual and reproductive health for persons with disabilities. Geneva; New York: World Health Organization; UNFPA; 2009.
- 47. Kolotkin RL, Binks M, Crosby RD, Østbye T, Gress RE, Adams TD. Obesity and Sexual Quality of Life. Obesity. 2006;14(3):472-9.



Multimedia appendix 1: Sexual health themes definitions and other youth health themes list

Sexual health themes	Definition: depiction or discussion of
Romantic relationships	All kind of relationships with feelings or sexual attraction:
-	sexfriends, couple, crush, infidelity, etc.
Sexual orientation / gender identity	The LGBTQ + community.
	Physical / sexual / emotional attraction to the same sex, the
	opposite sex, or both.
	Gender expression and identity.
Sexual violence and harassment	Sexual violence and sexual harassment, potential or proven,
	including attempts. Takes into account the notion of
	consent and slut-shaming.
Discrimination / homophobia /	Unjust or prejudicial treatment of different categories of
sexism / grossophobia	people, on the grounds of sexual orientation, sex, gender,
	gender expression, skin color, body, disability.
Planned or unplanned pregnancies	Planned or unplanned pregnancy, whether risky / proven /
	kept or not.
Pleasure, masturbation	Sexual pleasure, alone or with others.
STI protection	Any method to prevent an STI, whether scientifically
	proven or not, and whether it is connected to a sexual act or
	not.
STI	STIs, from their prevention to their long-term
	consequences, including treatments and transmission.
Contraception	Any method aimed at preventing pregnancy, whether
	scientifically proven or not, and whether it is connected to a
	sexual act or not.
Sexual disorders	Difficulty experienced by one or more individuals during a
	certain stage of sexual activity, involving desire, arousal or
	orgasm.
Self-acceptance / self-esteem	Self and body image, self-esteem.
Reproductive health / biology	Menstrual cycle, conception, anatomy.
Puberty	Physical and emotional changes related to puberty. First
	menstruation, first ejaculation, nocturnal ejaculation and
A1	spontaneous erections.
Abortion	The termination of pregnancy, voluntary or medical, and its
	conditions, methods, physical and emotional consequences,
Adologoont / young nowonth and	implications.
Adolescent / young parenthood	Parenting among adolescents and young adults.
Other (free text field)	Sexual therapy, gay/lesbian parenting, 1st intercourse,
	pornography, virginity, feminism, sexual games, fantasies
	Tantasies

Other youth health themes
Alcohol
Drugs
Parent-adolescent relationship
School harassment
Disease, disability
Tobacco
Depression, suicide
Social networks, digital

Popularity, rumors
Addiction
Abuse
Road safety
Peer pressure
Eating disorders
Other:
Friendship, religion, violence, school
problems theft racism being

adopted, firearms ...

Projet PRE₩S@X-NETFLIX

2 B ENTIFICATION
4 IDENTIFICATION
Coder
Series title
Season number
12 Episode number
14 15
16 INCLUSION
18 1) The series is available on Netflix :
20 2) The series was launched in 2015 or later
3) The series is labelled "teen TV shows" on Netflix :
4) The series is part of the most watched Netflix series in 2019 :
Does the series is included in the study ?
28 29
30 EXTRACTION
Series and episode characteristics
Launched year
Sexual health series
Episode duration
40 Series genre : 41 Comedy
Comedy
44 45 History
46 47
48 49
50 Documentary
52 53 Horror
Thriller
Science-Fiction / Fantasy
Romance
60 Reality
Biopic
Target population For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml
Target age groupe

Promotion message No.1			
Number of scenes	Message	duration	
Dissemination modality of the message :	Auditory		
	Visual	If visual, s	patial depiction
Place of the character(s) involved			
Role model			
Age of the character(s) involved	10-15 yo	16-18 y	/0
	> 18 yo	NR	NA
Sex of the character(s) involved	Man	Woman	Trans
		NR	NA L
Setting			
Other, specify :			
Prevention type Factual information		favorable behav	ior depicted
Message theme			J
What's the issue ?			
What's the solution ?		<u></u>	
Visual depiction			
Dialogues transcription		O ₂	
Coders comments (subjective)			
s there a 2nd sexual health promotion mes			
Promotion message No.2			
Number of scenes	Message	duration	
Dissemination modality of the message :	Auditory		
	Visual	If visual, s	patial depiction
Place of the character(s) involved			
Role model			
Age of the character(s) involved	10-15 yo	16-18 y	/0
For peer review only -	http://bmjopen.bmj.co	om/site/about/quidelines.x	html NA
Sex of the character(s) involved	Man	Woman	Trans

	BMJ Open	NR	NA L	Page 32 of 60
Setting				
Other, specify:				
4 Prevention type Factual information		favorable behav	vior depicted	
5 6 Message theme [
7 8 What's the issue ? [
10 What's the solution ? [
12 Visual depiction [
13 14 Dialogues transcription [
16 Coders comments (subjective)				
¹ ⁸ Is there a 3rd sexual health promotion mess ¹⁹				
20				
21 22				
23 24 Promotion message No.3				
25	>			
²⁶ Number of scenes 27	Message	duration		
28 Dissemination modality of the message :	Auditory			
30	Visual	If visual, s	patial depiction	
31		·		_
Place of the character(s) involved				
34 Role model 35				
36 Age of the character(s) involved	10-15 yo	16-18 y	′ 0	
37 38	> 18 yo	NR	NA L	I
39				
40 Sex of the character(s) involved 41	Man 🔛	Woman	Trans	
42		NR 🔛	NA L	
43 ⁴⁴ Setting				
45				
⁴⁶ Other, specify:				
48 Prevention type Factual information	_	favorable behav	ior depicted	
50 Message theme [
57 52 What's the issue ? [
54 What's the solution ?				
55 56 Visual depiction [
57 58 Dialogues transcription 59				
60 Coders comments (subjective) [
Is there a 4th sexual health promotion mess	age ? 🔝			

Pag	e 33 of 60	BMJ Open			
1	Promotion message No.4				
1 2	Number of scenes	Message	duration [
3 4	Dissemination modality of the message :	Auditory			
5 6		Visual	If vi	sual, spatial de	epiction
7 8 9	Place of the character(s) involved				
10 11	Role model 🔃				
12	Age of the character(s) involved	10-15 yo	1	6-18 yo	
13 14		> 18 yo	NR		NA L
15 16	Sex of the character(s) involved	Man	Woman	Tr	ans
17 18			NR	NA	
19 20	Setting				
21 22	Other, specify:				ı
23	Prevention type Factual information		favorablo	hohavior donic	etad
24 25			lavorable	behavior depic	.ted
26 27	Message theme				
28 29	What's the issue ?				
30 31	What's the solution ?				
32	Visual depiction				
33 34	Dialogues transcription				
35 36 37	Coders comments (subjective)		4		
38	Is there a 5th sexual health promotion mess	sage ? 🔙			
39 40					
41 42					
43 44	Promotion message No.5				
45 46	Number of scenes	Message	duration		
47 48	Dissemination modality of the message :	Auditory 🔠			
49	Dissernment modulity of the message .	,	. .		
50 51		Visual	IT VIS	sual, spatial de	piction
52 53	Place of the character(s) involved				
54 55	Role model				
56	Age of the character(s) involved	10-15 yo	1	6-18 yo	
57 58		> 18 yo	NR [NA
59 60	Sex of the character(s) involved	Man	Woman	Tra	ans 🔝
			NR	NA	I
	Setting For neer review only - htt	tn://hmionen.hmi.con	n/site/ahout/quide	lines yhtml	

Other, specify:

	Prevention type	Factual information	BMJ Open	favorable behavi	or depicted 🔃	Page 34 of 60
	Message theme					
1 2) [
3 4	What's the solution	1?				
5 6	Visual depiction					
7 8	Dialogues transcrip	otion [
	Coders comments (subjective)				
11 12 I	s there a 6th sexual	health promotion mess	age ? 🔙			
13						
14 15						
16 17	5	N. C.				
18	Promotion messa	age No.6				
19 20	Number of scenes		Message d	uration		
21 22		ality of the message :	Auditory			
23			Visual	If visual co	oatial depiction	1
24 25			Visual	ii visuai, sp	aciai depiction	
26	Place of the charact	er(s) involved				
27 28		Role model				
20	Age of the character	(s) involved	10-15 yo	16-18 yo	D	
31 32			> 18 yo	NR	NA L	
22	Sex of the character	(s) involved	Man	Woman	Trans 🔠	
34 35						
36 37				NR L	NA L	
38	Setting					
39 40	Other, specify:					
41	Prevention type	Factual information		favorable behavio	or depicted	
42 43						1
44 45						
46	what's the issue?					
47 48	What's the solution	?				
49 50	Visual depiction					
51 52	Dialogues transcrip	tion [
	Coders comments (s	subjective)				
55 56 ^{Is}	there a 7th sexual	health promotion messa	ıge ?			
57						
58 59						

Other, specify:

For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml

Setting ____

	ВМЈ Ор	en	Page 36 of 60
	Message theme		
l 2	What's the issue ?		
3 1	What's the solution ?		
5	Visual depiction		
7	Dialogues transcription		
) (1)	Coders comments (subjective)		
	Is there a 9th sexual health promotion message ?		
13			
14 15			
16 17			
18 19	Promotion message No.9		
20			
22		age duration [
23 24	, , , , , , , , , , , , , , , , , , , ,		
25 26	Visual	If visual, spatial depiction	
27 28	Place of the character(s) involved		
29	Role model		
30 31	Age of the character(s) involved 10-15 yo	16-18 yo	
32 33		NR NA	ı
34 35		Woman Trans	
36			
37 38		NR NA	
39 10			
11 12	other, specify i		
13 14	Prevention type Factual information	favorable behavior depicted	
15	Message theme		
16 17	What's the issue ?		
18 19	What's the solution ?		
50 51	Visual depiction		
52 53 54	Dialogues transcription		
55 56	Coders comments (subjective)		
ī s	s there a 10th sexual health promotion message ?		
58 59			

Pag	ge 37 of 60 Promotion message No.10	BMJ Open			
1	Number of scenes	Message o	duration [
3	Dissemination modality of the message :	Auditory			
5		Visual	If visual, s _l	patial depiction	
7	Place of the character(s) involved				
9 10	Role model				
11 12	Age of the character(s) involved	10-15 yo	16-18 y	0	
13		> 18 yo	NR	NA L	
15 16	Sex of the character(s) involved	Man	Woman	Trans	
17 18			NR	NA L	
19 20	Setting				
21 22	Other, specify :				
23 24	Prevention type Factual information		favorable behavi	or depicted	
25 26	Message theme				
27 28	What's the issue ?				
29 30	What's the solution ?				
31 32	Visual depiction				
33 34	Dialogues transcription				
	Coders comments (subjective)				
37 38					
39 40					
41 42					
43 44					
45 46					
47 48					
49 50					
51 52					
53 54					
55 56					
57 58					
59 60					
55					





Sexual health themes addressed

	Sexual nealth themes addressed
1 2 3 4	Sexual orientation / Gender identity Prominence within the episode
M 🕻 📙	M2
6 7	Theme addressed?
8	Transgender
10 11	Transsexual woman
12 13	Transsexual man
14 15	Transvestite
16 17	Non binary
18 19	Bicurious
20 21	Bisexual
22 23	Cisgender
24 25	Cissexual
26 27	Gay
28	Queer
29 30 31	Asexual
32	Intersexed
33 34	
35 36	Lesbian
37	Qestioning
38 39	Pansexual
40 41	Androgyny
42 43	Other
44	
45 46	Specify:
47 48 49	Planned or unplanned pregnancy Prominence within the episode
50	
M₫1∟ 52	M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15
53 54	Theme addressed ?
55	Risk of unplanned pregnancy
56 57	Pregnancy denial
58 59	Unplanned pregnancy but kept
60	Planned pregnancy
	Adoption
	For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml Anonymous childbirth

Pag	ge 41 of 60 BMJ Open
	Other
1	Specify:
2	Mother's age
4 5	Father's age
6 7	
8	Abortion Prominence within the episode
10 1 1₁	M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15
12 13	Theme addressed ?
14 15	Abortion
16 17	Medical termination of pregnancy
18 19	Instrumental method
20 21	Drug method
22 23	Other
24 25	Specify:
26 27 28	The video addresses the technical side (procedure, conditions)
	The video addresses the emotional side (fear, guilt)
31	
32 33	Adolescent / young parenthood Prominence within the episode
34 1135	M2 M3 M4 M5 M6 M7 M8 M9M10 M11 M12 M13M14 M15
36 37	Theme addressed?
38 39	Mother's age
40 41	Father's age
42	Parents present
44 45	
46 47	Sexual harassment and violences Prominence within the episode
48 14 ₉	M2 M3 M4 M5 M6 M7 M8 M9M10 M11 M12 M13M14 M15
50 51	Theme addressed?
52 53	Attempted rape
54 55	Rape
56 57	Sexual abuse
58 59	Sexual harrassment
60	Forced marriage
	Female genital mutilation For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml
	Virginity check
	Sexual exploitation / forced prostitution

	BMJ Open Domestic violence	Page 42 of 60
	Slut shaming	
1 2	Consent notion	
3 4		
5 6	Other	
7 8	Specify	
9 10	Victim's sex	
11	Specitify	
12 13	Victim's age	
14 15	Spouse / partner	
16 17		
18 19	Family	
20 21	Colleague	
22	Classmate	
24	Ctrongor	
25 26	Hierarchy / authority	
27 28	Not reported	
29 30		
31 32		
33 34	Other	
35 36	Specify:	
37		
38 39		
м 4 0 41) M2 M3 M4 M5 M6 M7 M8 M9M10 M11 M12	2 M13M14 M15
42 43	Inomo androcconz	
44 45	BOOV IMAGE	
46 47	Self-esteem	
48 49	Polationship to puborty	
50 51	Ashamed of her/his virginity	
52 53	()thor	
54 55	Chocify 1	
56 57	j	
58 59	Biominimation / homeonhohin / povince / proposablehin	nin the episode
60 M1) M2	2 M13M14 M15
	Theme addressed?	
	For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtn Biphobia	nl

Lochophobia

Page	e 43 of 60 Gayphobia	BMJ Open
1	Transphobia	
2	Serophobia	
4 5	Sexism	
6 7	Grossophobia	
8 9	Other	
10 11	Specify:	
12		
13 14In	what context / by whom was the discrimination	on committed?
15 16	Work	
17 18		
19	Family 🔃	
20 21	Politic 🔛	
22 23	Public space	
24 25	Classmate	
26 27	Friends	
28 29	Not reported	
30 31	Not applicable	
32 33	Other	
34 35	Specify:	
36 37		
39	eproductive health / biology P	rominence within the episode
410 41	M2	」M8
42 43	Theme addressed?	
44 45	Menstrual cycle	
46 47	Female anatomy	
48 49	Male anatomy [
50 51	Conception	
52 53	Other	
54 55	Specify:	
56 57		
58 59		
60		
(Contraception Prominence within t	ha anisada I
√1	Prominence within t	ne episode bmiopen.bmicom/site/about/guidelinesmhtml M13 M14 M15 N8
.IT [

Theme addressed? |

	Implant []	BMJ Open	Page 44 of 60
1	Vasectomy		
1 2	IUS (hormonal coil)		
3 4	Female sterilisation		
5 6	IUD (coil)		
7 8	Injection		
9 10	Vaginal ring		•
11 12	Patch		
13 14	Pill		
15 16	 Diaphragm		
17 18	Male condom		
19 20	Cap		
21 22	Female condom		
23 24	Withdrawal		
25 26	Periodic abstinence		
27 28	Spermicide		
29 30	Emergency contraception		
31 32	Other	Specify:	
33 34	Video gives :	pros cons	s brief mention
35 36			
37 38 39	STI protection Pro	minence within the episode	
9 <u>0</u> 41 41	M2 M3 M4 M5 M6	M7 M8 M9M10 M1	1M12M13M14 M15
42 43	Theme addressed?		
44 45	Male condom		
46 47	Female condom		
4 թ 49	re-exposure prophylaxis		
50 51	Hepatitis B vaccine		
52 53	Papillomavirus vaccine		
54 55	Dental dam 🔠		
5 56 57	exual Transmitted Infections	Prominence within the ep	isode
м <u>5</u> 8 59	M2	M7 M8 M9M10 M1	1M12M13M14 M15
60	Theme addressed?		
	HIV / AIDS		;
	For peer review on Gonorrhoea	y - http://bmjopen.bmj.com/site/about/guid	delines.xhtml
	Henatitis B	ı	

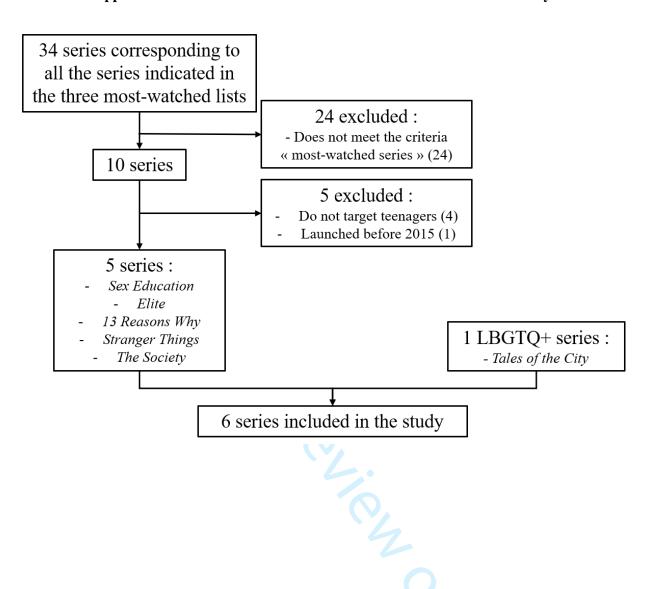
Pag	e 45 of 60 Genital herpes BMJ Open	
1	Mycoplasma genitalium	
2	Trichomoniasis	
3 4 5	Human papillomavirus	
6	Syphilis	
7 8	Chlamydia	
9	Video gives :	
11 12	Transmission []	
13 14	Prevention	
15 16	Symptoms	
17 18	Diagnosis	
19 20	Treatment	
21 22	Long-term consequences	
23 24	Brief mention	
25 26		
	omantic relationships Prominence within the episode	
29 Μ <u>β</u> ΙΟ	M2 M3 M4 M5 M6 M7 M8 M9M10 M11 M12 M13M14 M15	L
31 32 33	Theme addressed?	
34 35	Sexfriends	
36 37	Couple	
38 39	Feeligns of love	
40 41	Infidelity	
42	One night adventure	
44 45	Other Specify :	
46 47		
48 49	Pleasure, masturbation Prominence within the episode	
1 5 101	M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15	L
52 53	Theme addressed?	
	easure with partner(s)	
56 57	Female masturbation	
58 59	Male masturbation	
60	Other	
	Specify:	
	For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml	
	Sexual disorders Prominence within the episode	

Prominence within the episode ____

M	1M2 M3 M4 M5 M6 M7 PM8 OpenM9M10 M11M12 M13 M P4ge 46Mf169 _
	Theme addressed?
1 2	Decreased sexual desire
3 4	Sexual aversion
5 6	Female arousal disorder
7 8	Erectile dysfunction
9 10	Orgasm disorder
11 12	Premature ejaculation
13 14	Dyspareunia
15 16	Vaginismus
17 18	Other
19 20	Specify:
21 22	
	Puberty Prominence within the episode
25 M21 5	M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15
27 28	Theme addressed?
29 30	Woman's physical change
31 32	Man's physical change
33 34	1st ejaculation
35 36	Nocturnal ejaculation
37 38	Spontaneous erection
39 40	Modification of emotions
41 42	1st menstruation
43 44	Other
45 46	Specify:
47 48	
	Does another sexual health theme is addressed within the episode ?
51 52	Theme:
53 54	Prominence within the episode
55 M5 16	M2 M3 M4 M5 M6 M7 M8 M9M10 M11 M12 M13M14 M15
57 58 59	
60	
	Does incomplete / misleading information is disseminated ?
	For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml

Page 47	of 60	BMJ Open	ı
1 4th 2	:		
3 5th	:		
4			
5			
6 7			
8			
9		health themes	
10	mer youth	health themes	
11 12		Peer pressure	
13		Alcohol	
14		Alcohol	
15		Drug	
16 17			
18		Tobacco	
19			
20		School bullying	
21		Abuse	
22 23			
24		Addiction	
25		Depression, suicide	
26		Depression, suicide	
27 28		Disease, disability	
29			
30		Social network / digital	
31		Eating disorder	
32 33		Eating disorder	
34	Paren	nts-adolescen relationship	
35		Domitarity www.and.	
36		Popularity, rumors	
37 38		Road safety	
39			
40		Other	
41		Specify:	
42		epecity t	
43 44			
45			
46			
47			
48			

Multimedia appendix 3: Flow chart of the selection of the series included in the study



 49 of 60
BMJ Open
BMJ Open
In Sex Education, almost each episode raises a sexual health issue, which is discussed along the entire episode, from the description of the problem to its resolution, even when the associated promotion message is delivered during only one scene. Most of the time, the sexual health topic is presented from the first scene of the episode, which is not the case in other series. Some series stage main characters for scenes including sexual health promotion messages, whereas Sex Education involves secondary characters who appear to highlight an issue.

			Onset	9		
Series' title	Season	Episode	time	Sexual health promotion message	Theme	Visual depiction
13 Reasons Why	1	4	21:20	Taking pictures of a person (naked and kissing someone) without their knowledge is forbidden and punishable by law	Other: stalker	Tyler took pictures of Hamah kissing another girl in her room, through her window, without the girl knowing. Clay, very upset, comes to talk to him at school and threatens to report him if he doesn't delete all the photos and their negatives right away He explains that this is a crime punishable by law.
13 Reasons Why	1	7	36:50	Commenting on someone's appearance can be a form of sexual harassment	Sexual violence and harassment: sexual harassment	In communication class, we female teacher reads anonymous papers left by students. One of the papers contains a "positive" remark about her body. She explains that its not appropriate to objectify a person's body.
Elite	1	3	19:00	Anyone can be infected with HIV, regardless of social class	STI: HIV	At a party, Marina (16 years old, HIV positive) is drunk, and her brother sees her dancing without a T-spirt. He takes her aside to talk to her and lecture her. The brother says that she got HIV because she slept with the wrong person and that she has but learned from her mistakes since she continues to date "that kind of person". Marina tells him that HIV is not a disease of the poor and that the vires does not care about the size of your house, your money or your last name
Elite	1	3	49:20	A person with HIV who is on treatment and has an undetectable viral load cannot transmit the virus (health promotion message is cited 2 times for 2 differents scenarios)	STI : HIV	Nano found out that Marina was infected with HIV. He had slept with her, so he is going to talk to her. She explains to him that her viral load is undetectable, so she cangot have infected him.
Elite	1	5	37:00	Staging the use of the condom with emphasis on the difficulty of putting it on	STI protection + contraception	Marina and Samuel are getting ready to have sex, he takes out a condom, opens it and tries to put it on, but he can't do it. She reassures him.
Elite	1	5	15:20	A person with HIV who is on treatment and has an undetectable viral load cannot transmit the virus. Explanation of HIV treatment and monitoring modalities	STI: HIV	In class, the teacher take Samuel's phone, which he used during class, and forces a classmate to read Samuel's message. It said: "Marina doesn't have AIDS, you idiot, it's HIV". Since the class didn't know about it, Marina stood up and spoke to explain for situation. She explains that they don't have to worry because she is taking her treatment and testing every 4 months. Her viral load is undetectable so she cannot infect them.
Elite	1	6	28:50	When the viral load is undetectable, there is less than a 1% chance that the mother-to-be will transmit the virus to the baby	STI: HIV	Nano and Marina (16 years old, HIV positive) are in the car, coming out of the clinic where Marina was supposed to have an abortion. They decided to keep the baby but Nano was worried so Marina reassures him and explains that she has less than one percent risk of transmitting the virus to the baby.

Tales of the City	1	2	52:30	Staging the use of a condom during sexual intercourse	STI protection	Two condoms are placed on a mattress, one is open. The camera zooms out on a gay couple having sees.
Tales of the City	1	2	04:45 / 16:10	Highlighting gender discrimination with regard to career plans: being a careerist does not depend on one's gender and family plans do not depend on one's gender (a woman also has the right to be professionally ambitious)	Discrimination	Scene 1: At the restaurand, Mary Ann and two friends are having brunch together and talk about Mary Ann who abandoned her family and moved to another city for her careed. She says she knows that people judge her, although men often do the same thing without anyone being shocked. MaryAnn is at an old friend's house drinking wine while discussing the situation. Her friend reasques her about her career choices and tells her that no matter what her there will always be people to criticize.
Tales of the City	1	3	12:50	Having an undetectable viral load and being on pre-exposure prophylaxis makes the risk of HIV infection very low: it is possible to stop using a condom	STI: HIV + STI protection	Michael sits at a doctor's less and looks at a pre-exposure prophylaxis leaflet while she explains o him that his viral load is still undetectable and everything is fine. They then talk about stopping condom use with his boyfriend who has been on pre-exposure prophylaxis for several weeks. The doctor explains that with this prophylaxis and Michael's undetectable viral load, there is no risk of transmitting HIV to his partner, but that it depends on whether Michael feels ready to stop or not.
Tales of the City	1	3	46:02	One must be able to consent to the cessation of condom use (if Prep and viral load undetectable) through communication with one's partner	Sexual violence and harassment: consent + STI protection	Michael is sitting on the ded, a condom in his hand, pensive. He puts it in the drawer and lies down Ben joins him in his underwear, they kiss and get ready to have sex but Michael stops him and asks him for a minute. Ben seems to understand the problem, he pulls a condom out of the drawer and reassures him that he doesn't have to rush and that they can continue to use a condom until Michael feels ready to stop.
Tales of the City	1	4	29:40	Using the term "tranny" can be offensive	Discrimination: transphobia	At a gay men's dinner party, Ben is the youngest (28 years old) and the only one to be shocked when guest uses the term "tranny". He explains that people should be called what they want to be called, for the sake of dignity and visibility. He says that using the term "tranny" as an insult is offensive. An older man gets angry and reminds him that the reason gay men have visibility and more rights today is because his generation fought for it, so they can use the words they want.
Tales of the City	1	4	36:35	Staging of a naked woman in a public place (bar) explaining her choice to show her body: it is about taking control and making your own choices (highlighting two different conceptions of feminism)	Other: feminism	A dancer does her show a queer bar and ends up topless. Mary Ann is at the bar and after the show she chats with the dancer. Mary Ann does not understand how this is part of the feminist movement and explains that in her day feminism sought for free women from objectification, not to encourage it. The dancer xplains that she does not feel objectified, that she takes control of her bedy and makes her own choices.

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
44 45	
41	

51 of 60					BMJ Open en -2		
Tales of the City	1	7	18:25	The question of "maternal feeling" is deconstructed since the "feeling of being a parent" does not differ according to gender	Discrimination: sexism	Shawna learned that she was adopted and that her birth mother had passed away. She goes to her birth mother's brother's house. The uncle, his wife and Shawna are talking in the garden and Shawna reassures her uncle that she doesn't blame him for not taking care of her, because if she were asked to take care of a barby today she wouldn't want to. The wife replies that she doesn't think she would say no because women are more maternal. Shawna explains that she doesn't agree and that it's not a gender issue and it depends on egeryone's plans.	
Tales of the City	1	10	06:15	Using the term "pussies" to imply weakness is denigrated to women	Discrimination: sexism	The city's queer community gathered on the site of a house to protest its demolition. The woman who requested the demolition was angry at the female foreman who refused to start the demolition with so many people on the site. She insults here as a "pussy" and a drag queen intervenes to tell her that it is demeaning women to use this word as an insult.	
Sex Education	1	1	00:30 // 33:00	Visual information on how to put on a condom	STI protection + contraception	Scene 1: Adam and Aimee are sleeping together. When Adam finishes, Adam removes the condem and Aimee asks to see it. She grabs it and holds it with her fingertips. Scene 2: In sexuality education class, students in pairs are asked to put a condom on a fake penis. Stis opens the package, "pushes" the reservoir to the right side and places the condom on the top of the penis, he tries to unroll it with his fingertips but is unable to do so, Maeva takes over, pinches the reservoir while unrolling the condom (no dialogue).	
Sex Education	1	1	03:50	The age difference between two adults regarding sexual and romantic relationships is not a problem and should not be stigmatized	Romantic relationships: age difference in a relationship	Otis, his mother Jean and his partner (younger than her) are at the table. Otis makes fun of the partner by asking his age and whether he has an Oedipal complex. Jean reglies that it is perfectly normal to be attracted to an older woman and that by stigmatizing his choices, Otis is maintaining an unhealthy discourse on redddle-aged manhood.	
Sex Education	1	1	24:00	Cannabis use increases impotence and decreases the ability to ejaculate	Other: effect of cannabis on sexuality + sexual disorders	Otis, his mother Jean (sexplogist) and Adam on the terrace. Adam and Jean smoke cannabis while discussing. Jean asks Adam if he smokes every day and then explains that new studies show a link between cannabis and impotence. She adds that he has many clients who were heavy cannabis users when they were younger and now have "trouble finishing".	
Sex Education	1	1	31:05	Ringardisation of homophobia + defence of a victim	Discrimination: homophobia	In the school hallway, Ots and Eric (openly gay) are talking. Adam arrives, pushes and slams Eric against the lockers, grabbing his jaw. Another student intervenes and tells Adam that homophobia has been outdated for years. Adam lets go of Eric and leaves without saying anything.	
						by	

1	
2	
3	
4	
_	
5 5 7	
5	
7	
3 9	
`	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
٦.	
26	
27	
0	
28	
29	
20	
30	
31	
วา	
33	
24	
30 31 32 33 34 35 36 37	
35	
36	
3/	
38	
39	
40	
41	
42	
43	
44	

]		I]	02
Sex Education	1	1	33:10	Schematic and visual information on female anatomy (hymen)	Reproductive health / biology: female anatomy	In sexuality education classes, in pairs, students must complete a figure of the female anatomy (figure filmed in the foreground, legends "clitoris", "hymen" and "paraureth glands" readable) Maeve completes the figure but is mistaken and Otis greets her.
Sex Education	1	1	35:50	Erectile dysfunction may be due to low self-esteem and taking too much Viagra can lead to an erection that is too strong for too long: need to take it correctly	Sexual disorders, self-acceptance / self-esteem.	Maeve and Otis hear a scream coming from the toilet, they enter and fall on Adam, sitting, panicked, with an erection visible through his clothes. He explains that he took 3 Vergra pills for his impotence problems and that his erection doesn't go away. He explains that he ask himself a lot of questions during intercourse, that he is afraid of not being well enough, etc. Otis reassures him and explains that he has performance anxiety and that he must learn to love himself to overcome it.
Sex Education	1	2	20:00	Cranberry juice can help with vaginal yeast infections.	Other: vaginal yeast infection	A group of young people discuss at a party, sitting in the living room. Otis arrives when a boy says he likes cranberry juice. Otis, wanting to find clients for his sex therapy clinic explains that cranberry juice is good for vaginal yeast infections. No one answers. Otis leaves.
Sex Education	1	2	00:00 / 22:56 / 25:20 / 31:50 / 44:00	Active communication within the couple allows for better management of low self-esteem.	Self-acceptance / self-esteem + Romantic relationships: communication	1st scene: a couple of tee gagers are kissing on the bed, when the boy (Sam) wants to take the girl's (Kate's) shirt off, she stops him and says "no". He goes to turn off the light and tries to reach her in the dark while she is undressing. They kiss each other and while changing position she kicks him in the testicles with her kaees. When he says he is going to turn the light on again she pushes him and the two fall and hurt themselves. Scene 2: At a party, Otis walks into a bathroom where Kate is. She has a bottle of alcohol in her hands and a neck brace. The two are drinking and talking. She explains that she doesn't want Sam to see her naked because she is "disgusting". 3rd and 4th scenes: Otis, sam and Kate in the bathroom. The couple argue, Otis sits in a corner, then stands up and interrupts them saying that their communication is ineffective. He makes them talk back to back, one after the other, and Kate finally confesses her discomfort. Sam reassures her but she doesn't believe him. Stis asks her to name five things that she likes about herself and explains that if she doesn't like herself she can never believe that Sam loves her. The couple eventually reconcile and kiss. Scene 5: At the high school, the students attend the choir performance. Otis gets a paper ball on time. He unfolds it and is written on it "THANK YOU!", he turns his head and Kate and Sam smile at him while putting their thumbs up. Otis smiles and does a thumb up. Kate forms the words "thank you" on her lips.

Page	53	of	60
------	----	----	----

3 of 60					BMJ Open	pen-20
Sex Education	1	3	01:10	Condoms are not always 100% effective as a means of contraception and there are others means of contraception	Contraception: condom, pill, implant	Maeve is at a doctor's office, sitting with a female health care worker who asks her questions about her unwanted pregnancy. Maeve says she always protects herself with a condom. The professional explains that condoms are not 100% reliable and that there are other contraceptive methods available if she wants to use them.
Sex Education	1	3	01:10 // 28:10 // 38:57	Visual and auditory information on how an abortion is performed. After an abortion, you may vomit and bleed a little. If this intensifies (bleeding), you should call the health center	Abortion + Planned or unplanned pregnancy	Scene 1: Maeve is at a doctor's appointment, sitting with a woman from the health care staff who ask her questions about her unwanted pregnancy. She explains that someone has to pick her up after the abortion is over, and that she is not allowed to eave alone. Scene 2: Maeve and two other women are sitting side by side in operating clothes, waiting for their abortion, tense. The woman in the middle, more relaxed takes the hands of the other two. They make the wave and laugh. Then Maeve is called, she is lying in a hospital bed with the nurses and doctor around. They put of blood pressure monitor around her arm and an IV in her hand (explanation from the nurse that it will sting a little but that it's to put her to sleep) and when she falls asleep they put a mask on her face. Scene 3: Maeve wakes up from her abortion and a nurse comes to give her food and water. Then Maeve leaves, she's at the clinic reception, Otis is waiting for her in the waiting room. She speaks with the lady at the reception desk who explains the potential side effects and what to do. Maeve leaves with Otis.
Sex Education	1	3	08:45	Peers can create pressure that makes you feel bad about your virginity: don't rush into it	Self-acceptance : shame of one's virginity	Otis is in a high school room, seeing clients for his sex therapy clinic. An unscheduled client comes in and asks to stay for a few minutes to make others think he is sexually active. Otis says he understands and that peer pressure can be difficult, but that one should not live with regrets.
Sex Education	1	4	12:20	Herpes can be spread through kissing	Other: herpes (not sexually transmitted)	A couple kissing on a sof a Maeve needs to sit down and scares them away by saying, "Get your herpes somewhere else!"
Sex Education	1	4	41:27	As far as love relationships are concerned, a problem in a sexual relationship can be due to a relationship problem, since sexual and love attractions are not chosen - Honesty advice with your partner	Romantic relationships	Ruthie and her girlfriend sonsult Otis for problems in their sexual relationships. Later, Otis sees Ruthie with another girl (Jessica). In class he asks her if she likes another girl, and Ruthie confirms that with Jessica everything is simple and sees well, but that she feels badly about her girlfriend who was her best friend. Otis explains that you don't choose who you are attracted to and that you can't control a relationship, but that you have to be honest and she has to tell her girlfriend.
Sex Education	1	5	05:40 / 42:50	A "nude" sent over the internet or by message can be reused and disseminated against it (cyberbullying, blackmail) and can remain on the internet forever, with a major and For peer review only - http://bm	Sexual violence and harassment: pornographic photo distribution, blackmail	An intimate picture of a first from the high school (Ruby) was sent to all students. Scene 1: Otis and Maeve are walking through the school hallways and discussing the situation. Otis says that Ruby should go to the police because it's a crime.

1	
3	
4	
5	
6 7	
8	
9	
10	
2 3 4 5 6 7 8 9 10 11	
12	
1 <i>3</i>	
15	
12 13 14 15 16 17	
17	
18	
19	
20	
18 19 20 21 22 23 24 25 26 27 28 29 30	
23	
24	
25	
26	
28	
29	
29 30	
31	
32	
32 33 34 35 36	
35	
36	
37	
38	
39	
40 41	
42	

				negative impact for a long time. The dissemination of naked photos against the person concerned is condemnable and punishable by law.		Scene 2: The principal speaks in front of all the students at the high school and says that not only is the release of the photo despicable behavior, but it has very serious consequences that could lead to legal action.
Sex Education	1	5	27:50	Bodies are all different and no one should be ashamed (acceptance/image of one's body)	Self-acceptance: body image	Otis Maeve Ruby and a freend are in a room. Ruby is afraid that everyone will find out that the photo they are showing is hers. Otis explains to her that there is no shame togeel, that everyone has a body and that the fact that everyone knows about the photo will only be humiliating if she sees it that way. He tries to show her his big toe that looks like a thumb to reassure her and show her that we all have different bodies.
Sex Education	1	5	20:40	Sexual rumors (started out of frustration / revenge) can lead to a bad reputation with a psychological impact	Sexual violence and harassment: slutshaming, rumors	Otis and Maeve talk about Ruby whose intimate picture was sent to the whole school. Otis doesny understand why Maeve wants to help Ruby when Ruby is mean to hele Maeve tells about the sexual rumors and harassment she has experienced. She explains that these rumors stick to the skin, that it's painful and that no one deserves it, even Ruby.
Sex Education	1	6	11:10 / 29:14	Staging the prediction of condom use in scheduled sexual intercourse	Contraception + STI protection : condom	1st scene: Otis and Lily in the school hallways. They are planning to have their first sexual intercourse together that night. She asks him to take care of the lube and tells him she is bringing the condoms. Scene 2: In Otis' bedroon Otis is shirtless and Lily is in her bra. She plays music and starts to dance in a "sexy" way while looking at Otis. She takes one of the condoms out of her purse while looking and smiling at Otis, she keeps dancing while spinging them.
Sex Education	1	6	14:10 / 27:10 / 43:15 / 46:00	A sexual intercourse is not necessarily the reproduction of a pornographic film scene and you have to be able to think about your pleasure (female masturbation is not shameful). You have to be able to communicate with your partner	Pleasure, masturbation: pleasure in couple, female masturbation + Romantic relationships: communication	Scene 1: Aimee and Otis are in high school for a sex therapy session. She tells him about her last intercourse with Steve: she offered him "daring" sexual practices that he refused. He asked her what she really want and what would make her happy, but she was unable to answer. Otis tells her that all she has to do is transit about what she does when she masturbates, but she seems shocked and tells him she never masturbates. He tells her that it would allow her toget to know herself better so she could guide her boyfriend, and that there is no shame in masturbation even if female masturbation is still a tableo. Scene 2: Aimee is on her ged trying to masturbate. She seems to take it as a chore at first, but then she finds what gives her pleasure and masturbates all over her room. Scene 3: In the hallway of the high school, Aimee, with her loose hair and a big smile, doesn't walk stablight and goes to thank Otis for his advice. Scene 4: Steve and Aimee on Aimee's bed are kissing and getting ready to have sex. Aimee tells Steve exactly what she wants him to do.

Sex Education	1	7	2:45 / 39:20	Consent information: a "no" means "no". Love can be unrequited and it's painful but you can't force people's interest	Sexual violence and harassment: consent	Liam is in love with a girl. He asked her to go out with him, but she politely declined, explaining that the wasn't interested. He continues to show her interest and despite all his grand romantic gestures, she is still not interested. He doesn't unglerstand why. The girl seems frightened. He discusses it with Otis, who explains the consent and says, "Do you understand, Liam? No, it spno."
Sex Education	1	7	20:30	Feeling oneself makes it possible to take responsibility for oneself and to strive for well-being, even if this does not necessarily correspond to the normality imposed by society	Self-acceptance / self-esteem	Eric came with his family the church. Since his aggression in the street (he was walking around in make-up, in women's clothing), he no longer dares to be himself and hides behind classic men's clothing. The priest makes a speech about love and says that love begins by loving oneself, and that if you don't love yourself you can't really love others. After that, Eric feels better and goes to the high school dance wearing make-up, jewelry and a very colorful outfit.
Sex Education	1	8	14:30 / 25:55	Vaginism can be an automatic reaction of the body due to the fear of vaginal penetration. The body and the psyche are not disconnected, which can have an impact on the course of sexual intercourse and influence the functioning of the body (beginning of explanation of vaginismus as a psychophysiological process)	Sexual disorders: vaginism	During a sex therapy sesson, Lily explains that she tried to have sex but her vagina seemed to close up and she couldn't even put a finger in it. She doesn't understand because she really wanted to and has been waiting a long time for this moment. Otis tells her about vaginismus and explains what it is.
Sex Education	1	8	25:55	Virginity is not a social or sexual problem and you have to be able to release the pressure you put on yourself to lose that virginity	Other: virginity, first intercourse + Selfacceptance	Otis doesn't understand why Lily is in such a hurry to lose her virginity. She tells him that she doesn't want to feel like she's behind the others and that she's afraid to end up aloge. He reassures her and explains that it's not a race.
Sex Education	2	1	03:28	There is no shame in masturbating (healthy and normal), but if it is done in public, it is an offence	Pleasure: male masturbation	Otis masturbated in the car in the supermarket parking lot and his mother (Jean) surprised him. Later, she told him that it is healthy and normal to masturbate, but that he should not do it in public because it is a crime.
Sex Education	2	1	07:50 / 16:30 / 26:30	The Chlamydia epidemic is not transmitted through the air but through the exchange of sexual fluids. An infected sexual fluid can transmit the disease to the eye. Chlamydia can be treated with antibiotics (+staging of defensive behavior in the face of slutshaming insults of sexual practices)	STI: chlamydia, trans mission + Sexual violence and harassment: slut- shaming	Scene 1: There is an outbreak of Chlamydia in the high school and students are running around screaming, some of them with surgical masks on their faces. Otis tells the student selling the masks that Chlamydia is not transmitted through air but through sexual contact with a carrier. Students come to him for advice and Otis gives information on the transmission of the STI. Scene 2: Fiona is fought and insulted by her two friends who accuse her of having transmitted chlamydia to her, claiming that she is having sex with several boys. Otis defends her and asks the girls to stop slut-shaming. Scene 3: Parents' meeting to discuss the chlamydia epidemic, the principal speaks up and says that the infected students must take antibiotics. Faced

						with the parents' ignorance and anxiety, Jean (sexologist) speaks and explains the transmissions of chlamydia.
Sex Education	2	1	19:25	Explanation of favorable behavior (condom use and testing) to protect against a sexually transmitted infection (Chlamydia)	STI protection	Otis and Eric approached lackson in high school because he seems to have transmitted chlamydia to girls. Jackson defends himself by saying that he protects himself every time and that he got tested. He shows his negative results.
Sex Education	2	1	39:55	There's no shame in having a sexually transmitted infection, but it's important to be honest and tell your partners	STI	Owen confesses to being the one who passed on chlamydia to two girls in high school. Otis asks when he didn't say anything before and Owen says he was ashamed. Otis explains that there is nothing to be ashamed of, that you can't control your body, but you have to be honest with your partners and tell them.
Sex Education	2	2	21:41 / 37:50 / 43:40 / 44 / 44:30	Listening to your partner and understanding each other's functioning allows you to better approach sexual intercourse	Pleasure + Romantic relationships	1st scene: Ola and Lily are talking and Ola admits that she doesn't dare tell Otis that she didn't like it when he fingered her. Lily repeats it to Otis. A teacher asks Otis for advice because he doesn't understand his partner. Scene 2: Otis asks for advice from a classmate at school who asks him to show what he has done with an orange. She then tells him that every orange is different, that there is no magic technique that works for everyone, and that he needs to talk about it with his girlfriend to find out what to do. Scene 3: Otis is riding his hike outside the school, catches up with the teacher about his problem and tells him to listen to his partner. Scene 4: Otis rings Ola's corbell, tells her he knows she didn't like it the first time but asks her to show him what to do. Scene 5: The teacher rings his partner's doorbell and asks him to explain his wishes.
Sex Education	2	2	40:00	Advice to use a water-based lubricant, because oil-based lubricants deteriorate the condom	STI protection	During the sexuality education session, Jean (sexologist) is at the back of the room and intervenes when the teacher does not know how to answer questions. She explains which lubricant to use when having sex with a condom.
Sex Education	2	2	40:00	Anyone can refuse sex if their partner does not wish to use a condom	Contraception + STI protection + Sexual violence and harassment: consent	During the sexuality education session, Jean (sexologist) is at the back of the room and intervenes when the teacher does not know how to answer questions. She explains that one can always say no to sex, and that this also applies in the event that one's partner refuses to use a condom.
For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml						

		i				, <u>'</u>
Sex Education	2	3	03:23 / 10:40 / 15:40 / 24:20	Friction and non-consensual ejaculation received from another person and not consented in public transports is a sexual assault and a complaint must be filed	Sexual violence and harassment: sexual assault	1st Scene: Aimee is on the bus, standing. She unintentionally pushes the man behind her and apologizes with a smile. She then realizes that he is masturbating on her and her shouts but nobody reacts. As she gets off the bus she notices semen on her jeans. Scene 2: In high school, Aimee and Maeve are talking. Aimee shows the stain left by the attacker semen on her jeans. She seems detached but Maeve insists that they bus to the police station to file a complaint. Scenes 3 and 4: Aimee and Maeve are at the police station and file a complaint. At first, Aimee doesn't feel legitimate and thinks she is wasting the police officers' time because she doesn't think she has been sexually assaulted. The police officers and Maeve reassure her and explain to her the value of filing a complaint.
Sex Education	2	3	01:30 / 21:00 / 36:30	When you are ashamed of your face during an orgasm, there are ways to play it down and to help take responsibility for the whole sexual experience. It is important to explain to your partner your feelings.	Self-acceptance + Romantic relationships: communication	1st scene: Olivia and Malek are sleeping together, at orgasm she grabs a pillow and puts it over hierace. Malek goes to Jean (sexologist) and talks to him about the problem, she suggests that it may be related to a fantasy and Malek goes to Olivia to tell her to solve her fantasy problem because it makes him uncomfortable. Scene 2: Otis is leaving section on his bike when Olivia appears in front of him and explains that it's not a fantasy but just a way to prevent him from seeing her face because that it's not about looking good but about feeling good with her partner, that it's not about looking good but about feeling good with her partner, that it's about trust and that she should talk to him about it to reassure her. He gives her advice 3rd scene: Olivia and Malek are on the bed in their underwear, tape on their faces to distort them. They seem to have talked about Olivia's blockage. The tape allows them to see themselves disfigured and to realize that even like that, they love each other and desire each other.
Sex Education	2	4	00:00 / 06:50 / 28:00	Staging of favorable behavior with a request for consent just before sexual intercourse	Sexual violence and harassment: consent	1st scene: Otis and Ola are on Otis' bed, playing a video game and kissing. Ola asks Otis if he wants to go further 2nd scene: Eric and Otis meet up at the high school and Otis tells him that he is nervous about doing his first time with Ola. Eric tells him that he doesn't have to dot it if he is not ready. 3rd scene: Ola and Otis kess on the bed, they start to undress but Otis gets angry because he can't undo Ola's bra. Ola asks him if all is well and tells him that they can stop if fie wants to.
For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml						

	l	l	ı		I	02
Sex Education	2	4	00:00 / 11:45 / 16:00 / 21:00	Staging of future sexual intercourse with explicit provision for condom use	Contraception + STI protection	Scene 1: Otis and Ola are on Otis's bed, getting ready to have sex, and Ola asks if Otis has a condomy. Scene 2: Otis and Ola are on high school. Otis tells Ola that he forgot the condoms but that he cango home and get some. Ola says that she will take care of it. Scene 3: Ola buys a box ocondoms. 4th scene: Otis receives and SMS from Ola, displayed on the screen it reads "I've got the condoms, when are you coming over?". Otis answers "Be there ASAP!", the message is deplayed for 6 seconds.
Sex Education	2	4	45:50	Asexuality exists it is about not having sexual attractions (in all practices), but it does not mean the absence of amorous attractions	Sexual orientation: asexuality	Jean, sexologist, in his sexiality education office in the high school. A student enters and expresses her concern because she does not want to have sex, with anyone, ever. She is afraid of being "broken" and still wants to fall in love. Jean explains to her what asexuality is and reassures her that love and sex are two different things and that she can have one without the other.
Sex Education	2	5	15:10	The notion of pleasure does not diminish with age or the absence of intercourse	Pleasure	Jean teaches a class on female pleasure to a few women, including Maureen. Jean shows a model of the female anatomy of the clitoris and talks about pleasure. Matter en asks her if after a long period without sex she will still be able to fee something. Jean reassures her that the pleasure does not diminish with age or lack of contact.
Sex Education	2	5	23:00	Staging explaining what "pansexuality" is: being attracted to a person regardless of gender or sex	Sexual orientation: pansexuality	Ola and Adam work together in a grocery store, they are alone. Ola takes an online test to find out hegsexual orientation and the answer is "pansexuality". She reads the definition and seems to recognize herself in it.
Sex Education	2	6	11:30 / 12:55	Visual (diagram) and verbal explanation of how to perform an anal enema	Other: enema before anal penetration	1st scene: in a classroomeRahim is at the blackboard, he has drawn a figure explaining the steps of the anal enema and explains them to Otis and Eric sitting in front of him. 2nd scene: following the 4st scene, a teacher enters the room and asks them what they are doine and then kicks them out. When the boys leave the room, the teacher takes a picture of the board with the figure.
Sex Education	2	6	38:20 / 43:00	Counselling and staging of communication with your partner in order to have a good sexual intercourse	Romantic relationships: communication	1st scene: At a party, Anwar comes to talk to Rahim and asks him to explain how to do an anal enema because he doesn't know how to do it and he doesn't want to tell his be friend. Rahim tells him that if he doesn't feel ready to talk to his boyfriend, he is not ready to have sex with him. He advises him to go and talk to him 2nd scene: same evening Anwar and his boyfriend Nick are talking and Anwar confesses to him that he doesn't know how to douche and that he is a virgin. His boyfriend reassures him and tells him that he is going to explain to him

age	59	of	60
-----	----	----	----

BMJ (Open
-------	------

e 59 of 60					BMJ Open	jopen-2
Sex Education	2	6	13:40 / 43:00	Consent: it is not mandatory to have sexual intercourse within the couple. Both partners have to be ready and it is possible to refuse sex in a couple	Sexual violence and harassment: consent	Scene 1: Rahim and Eric ask kissing, and Eric asks him why he has never tried to have sex with him when he seems to have experience. Rahim answers that he doesn't want to pressure him and that he is waiting for Eric to feel ready. Scene 2: Anwar is standing alone in a corner, his boyfriend comes up to him and asks him to leave. Anwar refuses and his boyfriend tells him that he hopes he hasn't pressured him into having sex, and that they don't have to do anything until Anwar gready.
Sex Education	2	7	09:16 / 12:26 / 13:25/ 27:13	In the case of sexual intercourse between a girl and a boy with doubts about the use of contraception, there is the morning-after pill, which is delivered anonymously. There is no shame in using it and it concerns both partners	Contraception: morning after pill + Planned or unplanned pregnancy	Scene 1: Ruby and Otis are talking after having sex while drunk. They can't remember if they used a condom. Scene 2: Otis and Ruby are in front of the pharmacy and Ruby asks Otis to go buy the morning-after pill for her. Scene 3: Otis is in the pharmacy and asks for the morning-after pill. The pharmacist tells him that she can't give it to him because he's a man. Otis comes out of the pharmacy to get Ruby and reassures her that this happens to everyone and that there is nothing humiliating about it. He promises to help her if she's pregnang and chooses to keep the baby. Ruby is at the pharmacy cash register with Otis who is a few meters away. The pharmacist asks Ruby questions about her menstrual cycle and history and then sells her the morning-after pill Otis pays. Scene 4: Otis and Ruby are sitting in the forest, each with a can of Coke, Ruby reads the pill instructions and takes it.
Sex Education	2	7	31:11	Staging of girl-to-girl social support to help a victim of sexual violence cope with her trauma (others can help cope) + testimonies of other girls to accompany her + stated number of women experiencing sexual assault	Sexual violence and harassment: sexual assault	Aimee, Maeve, Ola, Viviag, Olivia and Lily, in collective punishment, must find a subject that binds them as women. Finding no common ground, Ola and Maeve argue about otis. Aimee bursts into tears and tells them to stop arguing over a boy and then explains her discomfort. She explains that she doesn't dare to take the sus anymore because of her sexual assault. The girls empathize with her, support her and take turns telling about the abuse they have suffered. One sirl said that two-thirds of the girls experience unwanted sexual contact in public spaces before the age of 21.
Sex Education	2	8	00:00	To treat vaginismus, there are specific kit available. It is also possible to have non-vaginal sex during vaginismus	Sexual disorders	Lily and Ola kiss each other on the bed, Ola slips her hand into Lily's panties and tries to finger her, Lig is in pain and Ola asks her what's wrong. Lily takes out a box, in which there are several dilators to treat the vaginismus. She explains her situation to Ola. They end up masturbating side by side.
The Society	1	2	29:43	The pill prevents unwanted pregnancies and it is recommended not to smoke when taking it	Contraception: pill	Gordie goes through Casandra's medical records and wonders what a certain medication is for. The explains to him that it is the pill, and that it is best to be careful. He replies that she should avoid smoking while on the pill.
The Society	1	2	42:30	Kissing someone requires consent (kissing cannot be forced) For peer review only - http://bm	Sexual violence and harassment: consent	

The Society The Society	1 1	3 3	32:10 53:55 28:16	It is important for women to urinate after sex to avoid cystitis and drinking cranberry juice can help Staging the use of the condom Staging of a gay boy who had sex with a girl who then became pregnant: emphasizing that sexuality is not fixed	Other: cystitis STI protection + Contrac eption Sexual orientation	Cassandra is putting makeup on in the bathroom when her sister, Allie, comes in in a rush to peed and complains of burning when urinating. Her sister tells her it's probably a urinary tract infection and that she has to urinate after sex. She advises her to drink cranberry juice. Campbel and Elle are in a coom and kissing. They undress and get into bed. He opens a drawer full of condoms (the camera zooms in on it) and pulls one out. She takes it from him and puts it on him. At the hospital, Sam is at the bedside of Becca who is pregnant. 2 girls come to see her and ask it sam is the father, he says yes. Gwen reacts with a surprised and skeptical thuh" then congratulates them and says goodbye. The 2 girls leave and in front of her friend's disapproving look, Gwen says	
				and can be fluid		"what? You know he's gag". Her friend replies that sexuality is fluid.	
	om http://bmjope						
model from http://bmjopen.bmj.com/ on October 31, 2024 by guest. Protec							
1, 2024 by guest. Prote							

Multimedia appendix 5: Other health themes addressed in series episodes, in all series and by type of series

	Number of all series'	Sexual Health Series' Episodes			
Other youth health	episodes addressing	Yes (n=26)	No (n=39)		
themes:	it (n=65) N (%)	N (%)	N (%)		
Alcohol	44 (68)	19 (73)	25 (64)		
THEORIOI	11 (00)	17 (73)	23 (01)		
Drugs	44 (68)	22 (85)	22 (56)		
Parent-adolescent relationship	36 (55)	24 (92)	12 (31)		
School harassment	23 (35)	10 (39)	13 (33)		
Disease, disability	22 (34)	10 (39)	12 (31)		
Tobacco	19 (29)	10 (39)	9 (23)		
Depression, suicide	18 (28)	1	17 (44)		
Social networks, digital	16 (25)	10 (39)	6 (15)		
Popularity, rumors	16 (25)	10 (39)	6 (15)		
Addiction	9 (14)	7 (27)	2		
Abuse	6 (9)	0	6 (15)		
Road safety	6 (9)	2	4 (10)		
Peer pressure	5 (8)	4 (15)	1		
Eating disorders	1 (2)	1	0		
Other : Friendship, religion,		1			
violence, school problems, theft, racism, being adopted, firearms	61 (94)	24 (92)	37 (95)		