THE IMPACT OF SEXUAL HEALTH EDUCATION ON SEXUAL COMMUNICATION AND CONSENT NEGOTIATION

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Abstract

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Sexual health education (SHE), specifically formal SHE, can play a key role in offering individuals the necessary information, motivation, and skills needed to maintain and improve their sexual health. This study used a survey-based approach to explore the relationship between Canadians' (*N* = 675) perceived quality of SHE and their feelings and behaviours related to sexual consent and communication, at two time points. This study was informed by two theoretical approaches: sexual script theory and the theory of planned behaviour. Hierarchical regressions were employed to determine how much the participants' education and demographics explained their attitudes, feelings, and behaviours. Perceived quality of SHE predicted consent feelings, and consent and communication behaviours during participants' first sexual experience, and only verbal communication during their most recent sexual experience. This research has furthered our understanding of the long-term impacts of SHE on feelings and behaviours related to sexual consent and communication.

Keywords: Sexual health education, sexual consent, sexual communication, sexual script theory, theory of planned behaviour, first sexual experiences

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Introduction

Issues surrounding the communication of consent are a major concern (Harris, 2018; Newstrom et al., 2021) and awareness of sexual consent has been increasingly central in Canada's public discourse (Canadian Women's Foundation, 2022; Xing, 2022). This is especially true on college and university campuses where students may not be well equipped to deal with non-consensual sexual experiences due to limited or uneven sexual health education, specifically sexual consent education (MacDougall et al., 2020). Quality and quantity of sexual health education are associated with positive consent attitudes, intentions, and communication (Richmond & Peterson, 2020) and increased sexual self-efficacy (Nurgitz et al., 2021). These positive factors may, in turn, increase sexual satisfaction (Nurgitz et al., 2021). This study will explore the relationship between one's sexual health education and the level of communication and consent negotiation at the time of first and most recent sexual experiences with a partner.

The current study is focused on sexual health education, sexual communication, and sexual consent negotiation. Sexual health education has been understood as the process of equipping "people with the information, motivation and behavioural skills needed to enhance sexual health and well-being and to prevent outcomes that can have a negative impact on sexual health and well-being" (SIECCAN, 2019, p. 22). The goals of sexual health education are to help people achieve positive outcomes and avoid negative outcomes (Public Health Agency of Canada, 2003). Sexual communication can be defined as the self-disclosure of sexual expectations and communicative dynamics behind conversations surrounding sex (Jones et al., 2017). These conversations can involve, but

are not limited to, negotiating consent and expressing one's sexual likes and dislikes. Sexual consent is a more complex topic that includes notions of consensual and non-consensual sexual experiences. Consent in this study can be understood as an internal state of willingness to engage in sexual activity and as an external behavioural act (Muehlenhard et al., 2016). This definition allows consent to be understood as more than just a behavioural act (e.g., agreeing to engage in sexual activity), but also indicates that there is an internal component of consent (e.g., willingness) that contributes to the agreement of a behaviour.

Sexual Script Theory

Sexual script theory is a long-standing theoretical framework used to understand sexual behaviour. Gagnon and Simon (1973) created sexual script theory which posits that behaviour, specifically sexual behaviours, are guided by culturally prescribed rules. This understanding of scripts is similar to how stage actors use scripts to lead their behaviour (Wiederman, 2005). In their book, Gagnon & Simon (1973) discuss how all social institutions have instructions on how one should behave and that these instructions are internalized. They further this argument by highlighting that these instructions are not inherent to a single individual, however, they are created and followed by a collective of people who have previously engaged in similar behaviours. They discuss three scripts: cultural scenarios, interpersonal scripts, and intrapsychic scripts.

Cultural scenarios are enacted in the public sphere and are guided by culturally shared routines (Gagnon & Simon, 1973). Cultural scenarios are also considered the instructional guides that exist at the level of collective life (Simon & Gagnon, 1986). Virtually all the cues that initiate sexual behaviour are embedded in the external

environment (Simon & Gagnon, 1986). For any behaviour or series of behaviours, some scripts are based on what the culture agrees is “doing” sex. Gagnon and Simon (1973) suggest that sociocultural expectations give sex its meaning and it is society’s beliefs that give it its power. An example of a cultural scenario is that men are more sexual and that they should always be in pursuit of sex while women should be idle and more reserved with their sexuality/sexual desire. This kind of script is similar to other dominant and gendered scripts including the traditional sexual script.

Interpersonal scripts are the application of specific cultural scenarios by a specific individual in a specific social context (Simon & Gagnon, 1986). Interpersonal scripting represents the actor’s response to the external environment and draws heavily upon cultural scenarios. These scripts might be defined as the representations of self and the indirect mirroring of the other that enables the occurrence of a sexual exchange (Simon & Gagnon, 1986). The script is the organization of mutually shared agreements that allows two or more people to participate in an elaborate behaviour, for example, two people kissing. The behaviours they engage in are based on their expectations of what they believe is the proper sequence (Simon & Gagnon, 1986). The two people involved share an agreement about what is expected and what will occur. This happens while also being interdependent, as they are both reliant on one another’s input but are in control of their own behaviour. Gagnon & Simon (1973) discuss that the interpersonal script falls between the cultural scenario and the intrapsychic script; it is the social behaviour that occurs in the presence of others.

The intrapsychic script deals with the internal, motivational elements that yield arousal, or at a minimum, a commitment to engaging in an activity (Gagnon & Simon,

1973). The researchers discuss intrapsychic scripting as a socially based form of mental life that can be manipulated more freely than other people (interpersonal) or the culture (cultural scenarios) but can depend on other external scripts. An example of this script would be one's reasoning for engaging in sexual behaviour. For example, one may want to have sex with their partner to increase the level of intimacy within the relationship which then motivates the person to engage in the activity at hand.

Simon and Gagnon (1986) highlighted that all three types of scripts are far from identical in all social settings and for individuals in any given setting. Any sexual behaviour involves all levels of scripting but not all three are of equivalent relevance (Simon & Gagnon, 1986). The researchers raise an issue surrounding the sexual messages that are presented to adolescents. They highlight that society often worries about adolescents' outward sexual activity and less so about the messaging adolescents receive informing those sexual behaviours. This demonstrates how important sexual health education can be and how youth interpret the information presented to them. If there is minimal focus on the content and messaging presented to youth, how these messages are understood, and how behaviours are enacted, it may be difficult to target these behaviours without understanding the underlying factors supporting them. Simon and Gagnon (1986) also discussed how scripts are most often presented and tied to the issues of youth but not those further down the life course. This re-emphasizes the importance of comprehensive and impactful sexual health education that applies not only to youth at the time of their education but how this information is consolidated for future sexual behaviours.

The Traditional Sexual Script

Sexual scripts, including the traditional sexual script, are learned through socialization (Byers, 1996). This idea of a traditional script was briefly discussed by Gagnon and Simon (1973) in which they mention a clear, hierarchical progression of sexual behaviours for American adults or adolescents (e.g., hugging, kissing, heavy petting, hand-genital contact, mouth-to-genital contact, to coitus). There are various other aspects to the traditional sexual script, which can include men being depicted as oversexed and women as undersexed, men as sexual initiators and women as recipients of the initiations, and women expected to be emotional and sensitive in interpersonal relationships and men being expected to be unemotional and self-focused (Byers, 1996). In addition, the traditional sexual script often conceives of sexual relationships as strictly heterosexual. In their summary of the literature on the traditional sexual script, Byers (1996) highlighted that the traditional sexual script may not be the normative script for dating interactions but may be one of several common and traditional scripts. Therefore, although the traditional sexual script may not be the main script people adhere to, it is one that can influence the communication and consent negotiation behaviours that people engage in if they and their partner adhere to that script.

There is recent literature to support the impact of the traditional sexual script on peoples consent behaviours. Hust et al. (2017) found that women who believed in sexual stereotypes (e.g., men are most successful in picking up women if they have ‘game’ or use sexy pick-up lines) and endorsed music that degrades women, were less likely to report sexual consent-related expectancies (i.e., to seek consent, to adhere to consent decisions, and to refuse unwanted sexual activity) to engage in healthy sexual consent negotiation. Their findings propose that women's internalization of traditional sexual

scripts (i.e., to be passive and agreeable) plays a role in their behaviours (Hust et al., 2017). This link highlights the influence sexual scripts can have on peoples' behaviours, specifically their consent behaviours. The researchers conclude with support for programs that are focused on empowering women to reject traditional sexual scripts as well as education about gendered scripts, sexual stereotypes, and sexual expectations. They suggest that this can be done by creating awareness of the connection between sexual stereotypes and consent behaviours. Hust et al.'s (2017) study recognizes the role sexual health education can have in lessening the impact of traditional sexual scripts on women's behaviours.

Although researchers recognize the role sexual health education can have on lessening the impact of the traditional script on peoples' behaviours (SIECCAN, 2023), this is not the only avenue. Conversations between parents and their children may provide more opportunities. Research on parents' communication with their children about sexual and relationship violence has found that although parents may be communicating important messages about consent, they may also be reinforcing gendered sexual scripts (Weiser et al., 2022). Weiser et al.'s sample was comprised of 438 university students who responded to three open-ended prompts about parental communication. Although women and men reported having received similar definitions of consent, women more often reported messages about how to give consent and monitoring behaviours (e.g., to travel in groups and drink responsibly), whereas men received messages about how to obtain consent and that sexual assault is wrong (Weiser et al., 2022). The researchers reported that these messages are consistent with traditional sexual scripts as it reinforces the idea of men as sexual initiators and women as recipients of those initiations, termed

sexual "gatekeepers." With this kind of messaging presented to youth from their parents and potentially formal education and the media, it is important to understand how strong this messaging is and how much of a role it plays in the youths' behaviour.

Understanding the impacts of traditional sexual scripts presented to youth is especially important as the messages may differ based on the youths' gender (or sex), potentially influencing how they follow the scripts presented to them. In a recent study, researchers found that females were more typically told to wait until they were older or married to have sex, whereas males were told to use condoms (Goldfarb et al., 2018).[1] This was found in a quantitative focus group study assessing the conversations that 74 young adults engaged in with their parents prior to their first sexual experience. They sampled undergraduate students from a Northeastern university in the United States who were on average 18.8 years of age at the time of the study. The differing messages presented to young adults reflect and reinforce traditional gendered scripts as well as the double standard that exists for men and women regarding gender roles and sexuality (Goldfarb et al., 2018). This study provides support for the predominance of the traditional sexual script in the culture and its potential influence on how people negotiate consent.

Since the traditional sexual script reinforces gendered behaviours, it is possible that the sexual scripts presented to youth may influence the gendered differences in how consent is negotiated. This is supported by Willis et al.'s (2019) study in which they conducted a cross-sectional open-ended survey where students were asked how they communicated their sexual consent. Their responses were coded into five primary

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[1] My study uses the term gender, however, when reviewing past literature, I refer to the terminology used by the researchers.

consent cue codes: explicit verbal ("I want to have sex with you"), explicit nonverbal (putting on a condom), implicit verbal ("let's go upstairs/to the bedroom"), implicit nonverbal (removing clothing), and no response (not resisting). Gendered patterns of consent communication were found, with men being more likely to use explicit verbal cues than women (during penile-vaginal intercourse). The researchers concluded with a discussion of how sexual consent is influenced by different contexts and may differ depending on gender, type of relationship, and type of sexual behaviour (Willis et al., 2019). These differences may stem from the kinds of scripts and messages the respondents were exposed to, resulting in a difference in consent communication.

The Sexual Double Standard

Sexual consent communication among college students and how sexual double standards and sexual scripts can inform their decisions to give or obtain consent continue to be of interest to researchers (Jozkowski et al., 2017). Jozkowski et al. highlighted that although people may believe that cultural/social norms do not impact young adults, the traditional sexual script (men as "initiators" and women as "gatekeepers") continues to be prevalent. The researchers conducted a qualitative investigation using in-depth interviews with 30 college students in 2013. Two themes emerged; the endorsement of a sexual double standard and the belief that obtaining sex is a conquest. The endorsement of a sexual double standard had three subthemes: the idea that "good girls" do not have sex; the belief that it is the woman's responsibility to caretake men's egos; and that men put in the effort to have sex so women, therefore "owe" men sex. College students' sexual experiences still tend to align with traditional sexual scripts (which may reinforce sexual double standards) impacting consent communication.

When focused on compliance during unwanted sexual experiences, researchers found that women who endorsed the sexual double standard, female gender role stress, and stigma virginity script were more likely to have reasons to consent to unwanted sexual advances (Quinn-Nilas & Kennett, 2018). The researchers also reported that reasons for consenting to sex acted as a pathway between the participants' sexual resourcefulness and their compliance with unwanted sex. Women who were less sexually resourceful, and who had a higher endorsement of reasons for consenting to sex, were more likely to be compliant with unwanted sex. It is possible, although not assessed, that the education these women did or did not receive from a variety of sources had an impact on their resourcefulness affecting their compliance with unwanted experiences. There is a potential that with the implementation of comprehensive sex health education, sexual resourcefulness could be strengthened, giving women the necessary tools and capacity to engage in wanted behaviours.

The Heterosexual Script

Sexual scripts may influence one's thoughts about sex which, in turn, may influence consent behaviours. Findings by Kim et al. (2007) merge sexual script theory, by Simon and Gagnon, and compulsory heterosexuality, by Rich. The researchers developed what is called the heterosexual script, a heteronormative and dominant sexual script (Kim et al., 2007). The researchers established and implemented a new coding scheme to assess the use of the heterosexual script in 25 primetime network television programs that were most frequently viewed by adolescents. They found that the male characters more frequently enacted the heterosexual script (i.e., acting on their sexual needs) than female characters, with female characters still adhering to the script at high

rates (e.g., women denying their sexual desire). With these scripts being so prominent, individuals who consume this kind of content are at risk of engaging in less positive sexual behaviours, including engaging in less open sexual communication. This may be a result of individuals using media as a source of sexual health information and internalizing these scripts. As media messages are cultural scripts and are repeated in many shows and contexts, they become socializing agents "teaching" youth what is appropriate sexual behaviour.

Adherence to certain scripts may also be dependent on the type of medium consumed. For example, people who engage in compulsory pornography consumption may endorse the heterosexual script to a greater extent (Dajches & Teran, 2021). In other words, people who compulsively consume pornography are using cultural-level scripts to guide their intrapsychic desires and their interpersonal behaviours. Dajches & Teran (2021) surveyed 458 emerging adults and suggested that the type of pornography viewed and preferred likely played a role in the type of sexual scripts viewers adhered to. The researchers further discuss that the material consumed likely portrays sexual messaging that is in accordance with the heterosexual script. Other researchers have used content analysis of 50 20-minute segments of pornography films, to uncover the various consent communication cues present in the films (Willis et al., 2020). The researchers uncovered direct and indirect support for various sexual scripts. Some of these scripts included: explicit verbal consent is not natural, women are indirect communicators whereas men are direct, and lower-order sexual behaviours do not need explicit consent (Willis et al., 2020). With this kind of messaging presented to pornography consumers, concerns about how these messages are being understood arise. The researchers concluded that sexual

health education programs could benefit by acknowledging the influence pornography use may have on people's sexual development (Willis et al., 2020). This may be a way to help provide people, especially younger people, with more media literacy and expose them to more positive and consent-supportive sexual scripts through a more formal means of sexual health education.

It is not just pornography use that has been found to be associated with addherence of the heterosexual script. Media use, specifically television use, has also been found to be associated with the endorsement of gendered sexual scripts (Seabrook et al., 2017). Seabrook et al.’s survey-based study examined whether television use predicts the endorsement of gendered sexual scripts and whether those scripts predict lower sexual agency among emerging adult heterosexual women. Seabrook et al. (2017) found that the endorsement of gendered scripts was associated with lower condom use and self-efficacy. They also found that television exposure and perceived realism were associated with increased endorsement of traditional sexual scripts which were associated with lower sexual agency. Although formal sexual health education was not the focus of their study, other relevant sources should be assessed when looking at content people are exposed to. There are different mediums that enforce different scripts, which as found by Seabrook et al., may lead to less positive health behaviours.

As discussed, sexual script theory is a well-established theoretical framework used to understand sexual behaviour. Cultural scripts are the kind of scripts guided by culturally shared routines (Gagnon & Simon, 1973) that can influence the behaviours people engage in. Within cultural scripts, you will find the previously mentioned traditional sexual script, heterosexual script, and sexual double standard. Although

described as separate concepts, they are all culturally shared and can be expressed at all levels of one's life, including at the intrapsychic and interpersonal levels. The kind of messaging presented to youth regarding sexual communication and consent may be understood differently depending on the scripts that they adhere to. Whether this messaging comes from peers, parents, the media, or their formal education, the scripts that people adhere to may influence their attitudes, norms, and sexual self-efficacy, especially if they adhere to the aforementioned scripts.

Theory of Planned Behaviour

Gendered scripts are not the only factor that can influence how people communicate and consent to sex. The theory of planned behaviour would suggest that other variables must also be considered. The theory of planned behaviour suggests that there are three conceptually independent determinants of intention to engage in a behaviour (Ajzen, 1991). These determinants are attitudes toward the behaviour, subjective norms, and perceived behavioural control. Attitudes toward the behaviour refer to the positive or negative assessment of the behaviour in question, subjective norms refer to the perceived social pressure to engage or not engage in the behaviour, and perceived behavioural control refers to the perceived self-efficacy one has to engage in the behaviour as well as the perceived barriers to performing the behaviour (Ajzen, 1991).

Ajzen (1991) emphasizes that "the more favourable the attitude and subjective norm with respect to the behavior, and the greater perceived behavioral control, the stronger should be an individual's intention to perform the behavior under consideration" (p. 188). The behaviours under consideration for this study are consent negotiation and sexual communication. Attitudes toward communicating about sex and the subjective

norms surrounding sexual communication can be influenced by the sexual scripts that people follow, which have the potential of influencing their level or type of communication. One's perceived behavioural control is how one feels about their ability to successfully achieve their objective. Regarding this study, the objective is to negotiate consent and communicate clearly. An obstacle to successfully negotiating consent could include someone feeling awkward or embarrassed about asking for consent or communicating one's likes and dislikes. Obstacles to achieving a high level of perceived behavioural control could be the result of a lack of quality sex education, which could then impact an individual's intentions to communicate consent. However, there are other factors that could impact the intention to engage in sexual communication and consent negotiation such as environmental or situational factors, such as being intoxicated. These factors could influence peoples' intention to communicate even if their attitudes, the subjective norms surrounding communicating consent, and their level of sexual consent self-efficacy are positive, the extraneous factors may still play a role. Sexual health education can play an imperative role in how to navigate these experiences when faced with situations that impact the intent to communicate. Equipping youth with the necessary tools and skills to approach uncertain events (at a level they can understand) is one way in which this can be done.

Previous researchers have highlighted the importance of a theoretical foundation for educational messages to students. For example, Falcon et al. (2022) found that brief exposure to theory-informed educational consent messaging (such as meme-style formatted posters) targeting students' consent attitudes, subjective norms related to consent, and perceived behavioural control) led to more behavioural intentions to ask for

consent and subjective norms around asking for consent among the intervention group. Sexual script theory can play a role in the subjective norms surrounding negotiating consent. This may depend on if engaging in clear sexual communication is a "normal" behaviour. Education can present sexual scripts that are more sex-positive to help counter the traditional scripts and sexual double standards of the culture, potentially influencing people's attitudes and subjective norms surrounding the behaviour. The same can be said for perceived behavioural control as engaging in clear consent negotiation or sexual communication can be perceived as more difficult if one's education was of lower quality and did not equip them with the right skills to feel capable of engaging in those behaviours. These factors together can then impact behavioural intention to communicate, influencing one's ability to engage in the behaviour.

What is taught through sexual health education may influence the kinds of consent attitudes that develop as well. Hermann et al. (2018) found that men who endorsed hypermasculinity reported: more negative attitudes toward consent, a greater lack of control over asking for consent, were less likely to report intentions to ask for consent, and reported more indirect consent behaviours. The researchers provided support for the influence of gender-based norms and attitudes as influencing sexual behaviours rather than feelings of discomfort or anxiety when verbally asking for consent. This may be due to how education and norms surrounding consent were presented to this group. As suggested by Falcon et al. (2022), using behavioural theory to inform the development of educational messages may be more efficacious than the current efforts to educate youth about consent and sexual communication specifically. This emphasizes the importance of

theory-driven research on topics like sexual health education as it has the potential to influence people's experiences in a variety of ways.

Sexual Health Education

Sexual health education, specifically formal sexual health education, can play a key role in offering youth the necessary information, motivation, and skills needed to maintain and improve their sexual health (SIECCAN, 2020). That said, there have been concerns that the kind of information presented to students is most often only focused on biological aspects of sex and is not presented in a timely manner (Laverty et al., 2021). Laverty et al. highlight that Canadian students want to learn a wider range of topics related to sexual health and relationships and that they want to go beyond the one-off sexual health classes and be offered sexual health content over longer periods of time. It is not only students who highlight the current gaps in sexual health education. Youth and parents are both in support of more variety in what is taught to students, including conversations around pleasure, communication, and intimacy (Wood et al., 2021).

Sexual health education, although important, has been found to be lacking in Canada (Byers et al., 2017; MacDougall et al., 2020; Robinson et al., 2019; Walters & Laverty, 2022). Canadian university students note that proper sexual health education may have prevented the sexual violence they had experienced (Thiessen et al., 2021). These Canadian findings are also supported by American researchers who highlight that although sexual consent and sexual communication are something that continues to be discussed on university campuses, more can be done to improve education surrounding these topics (Edison et al., 2022). It is important that the sexual health education provided to youth is based on the students' concerns and is applicable to their experiences.

Corcoran et al. (2020) highlight that students heavily request honest, non-judgmental, well-educated health professionals to provide them with comprehensive sexual health content. Asking participants about their perceived quality of sexual health education may provide better insight into their experiences, and as found by Corcoran et al. (2020), can be used to present sexual health education in a way that benefits adolescents. This could include addressing the main concerns the students have and providing them with the education and tools that they need to address them.

Willis et al.'s (2021) research supports this need for providing adequate information as they found that people were more likely to actively communicate their consent if they felt safe and ready. In their study, 1020 university students aged 18 and older from Canada and the United States participated in a survey that found that participants were more likely to actively communicate their consent if they felt safe, ready, and in agreement with the other person. This highlights the importance of feeling ready for a sexual experience, and through more comprehensive sexual health education, people can be provided with the information and tools necessary to be prepared and therefore better able to clearly communicate consent. This could be done by providing students with better coverage on topics such as sexual decision-making, sexual communication, and healthy sexual behaviours (Byers et al., 2017).

Formal sexual health education is not the only avenue to discuss concerns with communicating consent. General conversations on sexual health topics may also play an important role. For example, conversations related to sexual consent are something that continues to occur on university campuses as a way of preventing sexual assault from happening (Edison et al., 2022). However, researchers find that there may be missed

opportunities in these conversations and programs to enhance sexual health communication (Edison et al., 2022). A greater emphasis needs to be made in sexual health education classes to allow individuals to not only learn about sexual consent communication, but to be able to put learned skills into practice.

Sexual Consent and Communication

Previous researchers have focused on how consensual heterosexual activity is negotiated, specifically in people's everyday lives. Brady et al. (2018) conducted a study in the United Kingdom between 2013 and 2014 that involved exploratory workshops (i.e., qualitative discussion), which helped create an online questionnaire (open and closed questions). The researchers were interested in how young people understand sexual consent and their decision-making (in various contexts), leading to questionnaire items asking about one’s understanding of consent in abstract and applied terms. Many of the participants understood what the term consent meant, but only one-third reported that they would use that term during sexual activities, which raises concerns about how salient consent is in young adults’ sexual scripts. The researchers highlighted that gender was an important factor and that gendered scripts were present but not universal. Participants discussed whether certain scenarios constituted rape and their reasoning as to why, and how verbal and nonverbal consent (e.g., body language) can be misunderstood potentially leading to unwanted and/or non-consensual experiences. While this understanding was present, participants recognized that although verbal consent may be the best approach to negotiating consent, it is much more complicated to do in practice. There are various reasons why this might be, including sexual consent negotiation not being prominent in people's scripts, impeding their ability or intention to

enact the behaviour.

Studying the association between sexual health education (as an influencing factor on people's sexual scripts) and communication has many benefits, including health and safety implications. As Weinstein et al. (2008) found, women's greater knowledge of sexual health was associated with their sexual assertiveness. Women who were knowledgeable on sexual health issues felt better able to communicate their needs and desires for safer sex practices to their partners. Sexual communication is also important to assess as there can be gender differences in the ways people interpret consent that may occur due to differences in their sexual scripts. Newstrom et al. (2021) discussed how gender differences dictate how signs of consent are expressed and understood, with the sexual scripts of men and women potentially contributing to gender differences in consent negotiation.

Researchers have also begun to better study peoples' understanding and interpretation of consent as well as how people communicate consent. They have discussed that these understandings are influenced by gender norms and sexual scripts which, in turn, can shape sexual expectations and behaviours (Setty, 2021). Findings from two English studies conducted in 2016 and 2018 were combined to understand the participants' meanings and norms surrounding consent. The researchers found that consent was conceptualized differently among the students. Feelings of obligation were present among girls to reciprocate sexting behaviours. Girls were seen as "gatekeepers" as they were "expected" to clearly communicate their consent/non-consent; even if boys may pressure them, the onus was on the girls. With these gender differences, there are concerns about how each gender adheres to the scripts. Scripts not only have the potential

to influence beliefs and understandings of a certain action, but how people engage in various behaviours. This raises the importance of the messages presented to youth, including the consent education that they receive.

To further this idea of messaging presented to youth, Shumlich and Fisher (2018) argue that sexual consent behaviours are often excluded from the more traditional sexual script and from peoples' sexual interactions, due to a lack of education and conversations on obtaining and giving consent. In order to remedy this, MacDougall et al. (2020) state that increasing understanding of sexual consent is the first step toward incorporating sexual consent into peoples' sexual scripts. Even if sexual health education does not explicitly address sexual consent, researchers have found that one's general sexual knowledge may positively impact consent attitudes and behaviours (Richmond & Peterson, 2020). This may be due to more awareness, specifically media awareness, on the topic of sexual consent.

(Lack of) Inclusivity in Sexual Script Research

Minimal research has been conducted on the sexual scripts that sexual and gender-minoritized populations adhere to and has rarely been explored outside of heterosexual and cis-gender relationships (Griner et al., 2021). That is not to say they are unimportant as Griner et al. highlight that sexual scripts and communication are important to study as they link sexual health behaviours to social and cultural contexts. This study aims to be inclusive, asking various demographic questions to adequately assess the experiences of people whose identities are not at the forefront of the sexual health education curriculum. Some research highlights that the sexual scripts surrounding consent and non-consent were complex among sexual and gender minority populations

but, in some cases, there were parallels with sexual scripts in cisgender, heterosexual populations (Griner et al., 2021). It is important that a sample is diverse to adequately capture the experiences of sexual and gender-minoritized populations. This may show if the messaging that the participants perceive (in the education they receive) plays a role in the scripts they adhere to, potentially leading to engagement in certain consent and communication behaviours.

It is especially necessary to capture the experiences of sexual and gender-minoritized populations as LGBTQ+ students of colour often feel unrepresented, unsupported, stigmatized and bullied in sexual health lessons and in the broader school environment (Roberts et al., 2020). With sexual health education not aimed at populations such as the LGBTQ+ and disabled community, necessary sexual health education, including but not limited to what is safe and consent-informed sexual behaviour, may not be provided (Kafer, 2003). This lack of inclusivity continues with sex often being understood as penis-vagina intercourse, which excludes various groups and hinders the recognizability of diverse sexual practices that constitute sex and sexuality (Santos & Santos, 2018). The current study wishes to assess which groups of participants do not report experiencing high-quality sexual health education as a lack of quality education may lead to less frequent positive consent feelings and consent and communication behaviours.

The Current Study

The current study explores the relationship between one’s perceived quality of sexual health education and sexual communication behaviours as well as consent feelings and behaviours. The difference between sexual communication and consent negotiation

at two-time points is also of interest (i.e., the first sexual experience compared to one's most recent experience). The participants' first sexual experiences are being assessed as this event is often memorable and can potentially contribute to the development of one's sexual self, in addition to one's identity development (Vasilenko et al., 2015). It is important to look at first sexual experiences as researchers have found that negative contexts of first sexual experiences were associated with several negative health outcomes. These include the experience of sexually transmitted infections, poorer life satisfaction, and poorer general health (Palmer et al., 2017). It is also possible for someone's first sexual experience to serve as a model for subsequent partnered experiences. Sexual scripts for one's first sexual experience may differ from one's future experiences, which could be due to the messages they receive, including conversations with their parents. It is possible that feelings and behaviours could change positively, that people who were not well educated previously, gained more confidence in communicating through formal and informal sexual health education and life experience. However, it is possible that participants could report a reduced frequency of communication, consent feelings, and behaviours, meaning that the education they received was not influential in the long term, indicating that people may need to continue to receive sexual health education across the lifespan.

This study aims to add to the current literature on sexual health education and sexual communication and consent negotiation using sexual script theory to interpret potential findings. Sexual script theory is a strong concept to help support the idea that one's sexual health education can influence sexual communication and consent negotiation. Sexual scripts can come from a variety of sources and this study is focused

on both formal sexual health education, as well as a few key topics discussed/taught from a variety of sources. Script theory highlights influences at various levels of one's experiences and the traditional sexual script, sexual double standard, and the heterosexual script present certain messages to youth (which can occur through education) that may be internalized and expressed in one's behaviours. This attitude to behaviour process is supported by the theory of planned behaviour. If scripts are gendered or do not incorporate communication and consent, people may not be equipped with the tools and skills to communicate consent verbally or nonverbally as well as feel willing and ready for sex.

Hypotheses

Based on the current literature, sexual script theory, and the theory of planned behaviour, this study hopes to answer the following research question: Will those who report receiving high-quality sexual health education engage in more positive consent negotiation and communication during their first and most recent partnered sexual experience? In this study, high-quality sexual health education is defined as education provided by an enthusiastic and encouraging teacher, that provides adequate coverage and a good understanding of various topics, alongside providing students a greater ability to engage in positive behaviours. Five main hypotheses flow from this main research question:

Hypothesis 1: People who report receiving high-quality sexual health education engage in a) more frequent verbal sexual communication, b) more nonverbal sexual initiation and pleasure, and c) more nonverbal sexual refusal behaviours during their first partnered sexual experience.

Hypothesis 2: People who report receiving high-quality sexual health education feel more willing/ready for first sex and engage in more behaviours to communicate consent during their first partnered sexual experience. That is, participants, experience feeling a) more of a physical response, b) more safe/comfortable, c) more arousal, d) more agreement/wantedness, e) more readiness, and engage in f) more external consent behaviours.

Hypothesis 3: People who report receiving high-quality sexual health education engage in a) more frequent verbal sexual communication, b) nonverbal sexual initiation and pleasure, and c) nonverbal sexual refusal behaviours during their most recent partnered sexual experience.

Hypothesis 4: People who report receiving high-quality sexual health education feel more willing/ready for sex and engage in more behaviours to communicate consent during their most recent partnered sexual experience. That is, participants, experience feeling a) more of a physical response, b) more safe/comfortable, c) more arousal, d) more agreement/wantedness, e) more readiness, and engage in f) more external consent behaviours.

Hypothesis 5: People who report receiving high-quality sexual health education a) hold more positive sexual consent attitudes, b) adhere to fewer social norms on consent assumptions, and c) report greater perceived behavioural control.

Three exploratory analyses were also employed. The first was to discover if there is a difference in consent and communication behaviours between the first partnered sexual experience and the most recent partnered sexual experience. The second exploratory analysis was to determine if there are any significant differences among the

various demographic groups assessed. The third exploratory analysis was to identify if there was a difference between people who received formal sexual health education compared to those who did not on their perception of quantity of information provided by several information sources. This was further broken down to see if there was an effect of gender and sexual orientation on the level of perceived quantity of informal sexual health education. There are various possible factors that may be associated with one's sexual health education and the communication behaviours in which they engage. This study hopes to identify those factors, taking a more inclusive approach to the behaviours assessed and the population sampled.

Method

Participants

A total of 675 participants were included in this sample who were sampled from a Canadian undergraduate student and community population. The sample was predominately female, women, straight/heterosexual, identified as white/European, and between the ages of 17 and 24. The participants' mean age was 22.81 (*SD* = 7.58). Table 1 is a breakdown of these demographics on the basis of timing of formal sexual education. Other contextual demographic information such as education level, citizenship status, and level of religiosity were also reported (see Appendix A1). Questions were also asked regarding the context of participants' first (see Appendix A2) and most recent sexual experience (see Appendix A3). The mean age of first and most recent sexual experience and relationship duration prior to those experiences was also reported (see Appendix B).

Table 1

Basic Sociodemographic Characteristics of Participants

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Sex										
Female	403	73.0	35	6.3	25	4.5	89	16.1	552	81.8
Male	88	71.5	4	3.2	6	4.9	25	20.3	123	18.2
Gender										
Women	391	73.8	32	6.0	23	4.3	84	15.8	530	78.5
Trans Women	—	—	—	—	—	—	—	—	—	—
Men	87	71.3	4	3.3	6	4.9	25	20.5	122	18.1
Trans man	—	—	1	33.3	—	—	2	66.7	3	.4
Non-binary	3	50.0	1	16.7	—	—	2	33.3	6	.9
Agender	1	50.0	—	—	1	50.0	—	—	2	.3
Gender fluid	4	100.0	—	—	—	—	—	—	4	.6
Gender queer	3	100.0	—	—	—	—	—	—	3	.4
Two-spirit	1	33.3	—	—	1	33.3	1	33.3	3	.4
Prefer not to answer	—	—	1	100.0	—	—	—	—	1	.2
Missing	1	100.0	—	—	—	—	—	—	1	.2
Sexual Orientation										
Asexual	9	64.3	1	7.1	2	14.3	2	14.3	14	2.1
Bisexual	84	76.4	8	7.3	2	1.8	16	14.5	110	16.3
Straight/ Heterosexual	347	72.9	22	4.6	22	4.6	22	17.9	476	70.5
Gay/Lesbian	9	52.9	2	11.8	1	5.9	5	29.4	17	2.5
Pansexual	15	62.5	2	8.3	3	12.5	4	16.7	24	3.6
Queer	6	60.0	2	20.0	—	—	2	20.0	10	1.5

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Questioning	18	90.0	2	10.0	—	—	—	—	20	3.0
Prefer to self-describe	1	100.0	—	—	—	—	—	—	1	.2
Prefer not to answer	1	50.0	—	—	1	50.0	—	—	2	.3
Missing	1	100.0	—	—	—	—	—	—	1	.2
Ethnicity										
White/European	390	77.8	27	5.4	15	3.0	60	13.8	501	74.2
Indigenous	3	60.0	1	20.0	—	—	1	20.0	5	.7
Black/African /Caribbean	17	53.1	4	12.5	3	9.4	8	25.0	32	4.7
Southeast Asian	14	63.6	—	—	2	9.1	6	27.3	22	3.3
Arab	3	50.0	1	16.7	—	—	2	33.3	6	.9
South Asian	17	48.6	1	2.8	2	5.7	15	42.8	35	5.2
Latin American	9	53.0	—	—	2	11.7	6	35.3	17	2.5
West Asian	—	—	—	—	1	100	—	—	1	.2
Mixed	37	67.3	5	9.1	6	11.0	7	12.7	55	8.2
Age										
15-24	370	73.5	31	6.2	20	4.0	82	16.3	503	74.5
25-34	61	66.3	7	7.6	8	8.7	16	17.4	92	13.6
35-44	41	77.3	—	—	2	3.8	10	18.9	53	7.9
45-54	5	62.5	—	—	—	—	3	37.5	8	1.2
55-64	2	33.3	1	16.7	1	16.7	2	33.3	6	.9
Missing	12	92.3	—	—	—	—	1	7.7	13	1.9

Note. * Total sample percentages are in reference to a breakdown of the baseline characteristic. The percentages are not additive across the rows

For all analyses, unless otherwise stated, the gender, sexual orientation, and ethnicity groups were collapsed in the following ways. As the ethnicity question allowed people to select more than one ethnicity, a mixed-race category was created. In the analyses, ethnicity was broken down into White/Caucasian (n = 501), Mixed (n = 55), and Diverse ethnicity (n = 119). Diverse ethnicity includes those who identify as any sole ethnicity, not including White/Caucasian. The gender category was collapsed into women (n = 530), men (n = 122), and those of diverse genders (n = 22). This was done as women and men made up the two largest groups. Gender was used in all analyses instead of sex. This was also done to get a more accurate understanding of people's educational experiences, as gender may provide more nuance than someone's sex assigned at birth. Lastly, sexual orientation was collapsed into straight/heterosexual (n = 476), pansexual and bisexual (n = 134), and diverse orientations (n = 64). This was done as sexual health education is often presented through a heterosexual lens, meaning that education would be mainly targeted to people who identify as straight/heterosexual, but could also apply to those who identify as pansexual and bisexual.

Paired samples t-tests were conducted to examine the differences in the participants' gender, partner's gender, sexual orientation, and relationship context between different time points. A Bonferroni correction was used for the comparisons of gender between the various time points (.05/3=.017). In this study, 19 (2.8%) participants reported a change in their gender between their first sexual experience and their most recent sexual experience ($t(672)$= -1.295, p = .196), 13 (1.19%) participants reported a change in their gender between their most recent sexual experience and the time in which the study was completed ($t(672)$= -1.806, p = .071), and 21 (3.1%) participants that

reported a change between their gender during their first sexual experience and the time in which the study was taken ($t(672)= 2.506$, $p = .012$). These results highlight that the gender identity of some participants in this study changed over time, specifically between their first sexual experience and the time in which they took the survey. This information was captured to provide more context on people's gender identities. In all regression analyses, the participant's gender at the time the study was taken was used. This was done as there was a significant difference found between this time point and the participants' first experience. In doing this, we wanted to ensure that we were accurately capturing people's perceptions of sexual health education, meaning that if we used people's gender at their first sexual experience in the regression, we could have potentially drawn incorrect conclusions. It is important to note that separate regression analyses were run to include a dummy variable for change in gender in the model, which did not affect the variable of interest.

As for partners' gender, 33 (4.9%) participants reported a change between their partners' gender from the time of their first sexual experience and their most recent sexual experience ($t(674)= 2.607$, $p = .009$). This means that some of the participants reported that their partner's gender was not the same for their first experience as it was for their most recent sexual experience. Two hundred and seventy-nine participants (41.3%) reported a change in the context of the relationship between their first and most recent sexual experience ($t(674)= 2.351$, $p = .019$). The participant's relationship context (e.g., whether the experience was with a friend or stranger) was not the same for their first and most recent sexual experience. Lastly, 121 (17.9%) participants reported a change in their sexual orientation between their first sexual experience and when the study was

completed($t(673) = -1.617$, $p = .106$). The participants' partners' gender differed between the two-time points, but the participant's sexual orientation remained the same.

Measures

Participants were asked a variety of demographic questions including sex, gender, sexual orientation, age, ethnicity, education level, birthplace, annual household income, citizenship status, generational status, disability status, type of high school attended, religiosity, type of religion, political view, and if they have received more sex education since leaving high school.

Verbal and Nonverbal Sexual Communication Questionnaire

Sexual communication was assessed using the Verbal and Nonverbal Sexual Communication Questionnaire by Santos-Iglesias and Byers (2020). This 28-item scale assessed verbal sexual communication (13 items), nonverbal sexual initiation and pleasure (8 items), and nonverbal sexual refusal (7 items). Participants were asked to indicate the frequency in which they have engaged in a communication behaviour on a seven-point Likert scale from never (1) to always (7), with higher scores indicating more frequent sexual communication (Santos-Iglesias & Byers, 2020). A sample item from this questionnaire is "I started to kiss my partner when I wanted to have sex." In their initial validation of the scale, Santos-Iglesias and Byers (2020) reported good reliability for all subscales for men and women. The verbal subscale had Cronbach alpha scores of .87 (men) and .89 (women), .75 (men) and .85 (women) for the nonverbal initiation and pleasure, and .85 (men) and .78 (women) for the refusal subscale (Santos-Iglesias & Byers, 2020). As these questions were presented to the participants twice, the reliabilities were run for both time points. The Cronbach alphas for responses regarding one's first

sexual experience were: .93 for verbal communication, .87 for nonverbal sexual initiation and pleasure, and .77 for nonverbal sexual refusal. For responses regarding the participants' most recent sexual experience, the Cronbach's alphas were: .93 for verbal communication, .84 for nonverbal sexual initiation and pleasure, and .83 for nonverbal sexual refusal.

The Internal and External Consent Scales

The Internal and External Consent Scales by Jozkowski et al. (2014) were used to assess the feelings that contribute to one's decision to consent to sex as well as the external verbal and behavioural indicators used to communicate consent. The internal consent scale (ICS) is 25 items that assess five different factors. These factors include physical response, safety/comfort, arousal, agreement/want, and readiness. Participants were asked to indicate the extent to which they agree that they experienced a certain feeling during their first and most recent sexual encounter on a 4-point Likert scale from strongly disagree (1) to strongly agree (4). A sample item from this scale is "I felt ready." Mean scores were calculated for each subscale, with each subscale representing a set of feelings related to consent. Higher scores on this scale indicate more agreement.

In Jozkowski et al.'s (2014) development of the ICS they reported an overall Cronbach alpha of .95. For the subscales, they reported excellent Cronbach alpha values (physical response: $a = .91$, safety/comfort: $a = .94$, arousal: $a = .93$, agreement/want: $a = .93$, and readiness $a = .90$). For this study, the ICS was presented twice. The Cronbach alpha values regarding the participants' first sexual experience responses were good (physical response: $a = .85$, safety/comfort: $a = .94$, arousal: $a = .87$, agreement/want: $a = .90$, and readiness $a = .84$). The Cronbach alpha values regarding

the participants' most recent sexual experience responses were also good (physical response: $a = .90$, safety/comfort: $a = .94$, arousal: $a = .93$, agreement/want: $a = .93$, and readiness $a = .87$).

The external consent scale (ECS) is an 18-item scale assessing cues used to communicate consent. The ECS factors are nonverbal behaviour, passive behaviour, communication/initiator behaviour, borderline pressure, and no-response signals. This scale is dichotomous, and participants can respond yes or no to indicate whether they engaged in a consent behaviour. A sample item from this scale is "I shut or closed the door." Higher scores on the ECS indicate an increased number of cues used to indicate consent. In Jozkowski et al.'s (2014) development of the ECS, they reported a total Cronbach alpha of .84. For the subscales they reported very good Cronbach alpha scores for (nonverbal behaviour $a = .78$, passive behaviour $a = .81$, communication/initiator behaviour $a = .79$, borderline pressure $a = .75$ and no response signals $a = .67$).

Like the ICS, the ECS was also presented twice. The Cronbach alpha values regarding the participants' first sexual experience responses varied (nonverbal behaviour: $a = .73$, passive behaviour: $a = .61$, communicator/initiator behaviour: $a = .64$, borderline pressure: $a = .59$, and no-response signals: $a = .41$). The Cronbach alpha values regarding the participants' most recent sexual experience responses also varied (nonverbal behaviour: $a = .74$, passive behaviour: $a = .67$, communicator/initiator behaviour: $a = .64$, borderline pressure: $a = .60$, and no-response signals: $a = .47$). With the low reliabilities for borderline pressure and no-response signals, for both time points, the remaining three subscales were merged to create new subscales (external consent behaviours). The reliability of this new subscale was .82 for responses regarding the

participant's first sexual experience responses and .84 regarding the participant's most recent sexual experience responses.

Sexuality Education Program Feature/Program Outcome Inventory

To assess the perceived quality of formal sexual health education, the Sexuality Education Program Feature/Program Outcome Inventory by Klein was used, which is an extension of Kirby et al.'s analysis of U.S sex education programs (Kirby et al., 1979; Klein, 1998). This scale is comprised of 69 items with six subscales. These include Program Characteristics (12 items), Knowledge (12 items), Understanding of Self (4 items), Values (7 items), Interaction Skills (8 items) and Curriculum Topics (24 items). Two items (40 and 41) in the scale are not included in any of the subscales; they assess a decrease in fear of sex-related activities and changes in self-esteem (Klein, 1998). Participants responded on a five-point Likert scale from strongly disagree (1) to strongly agree (4) with the additional response option of don't know (0) for all subscales except for curriculum topics which participants responded to on an adapted five-point Likert scale of not at all covered (1) to thoroughly covered (5). The language in this questionnaire regarding "the human sexuality course taken" was rephrased more broadly as "the formal sexual health education the participant received in high school". A sample item from this questionnaire is "I was encouraged to ask questions about my sexuality in class" (Klein, 1998). Two new items were added to the end of the curriculum topics section on sexual diversity (LGBTQ+ identities/orientation) and safer sex for LGBTQ+ people as there were no questions of this kind in the original scale.

For the current study, scoring was performed by totalling the participants' responses to reveal their overall perceived quality of their formal sexual health education.

The range for the total scale (including the two new items) is zero to 284 with a median score of 142.

For the entire scale, Klein reported a Cronbach alpha of .88. For the subsections, Cronbach's alpha varied (Program Characteristics: a =.50, Changes in Knowledge: a =.80, Understanding of Self: a =.89, Changes in Values: a =.79, Changes in Interaction Skills: $a = .53$, and Curriculum Topics $a = .83$). Other researchers have used this measure in their dissertation and reported high reliability for each of the subscales except for curriculum topics as it was omitted from their study (Meaney, 2009; Rye et al., 2015). The Cronbach alpha level reported for the entire scale was .97. Cronbach alpha's were high for each subscale (Program Characteristics: $a = .89$, Changes in Knowledge: $a = .92$, Understanding of Self: $a = .93$, Changes in Values: $a = .92$, and Changes in Interaction Skills: $a = .91$) (Meaney, 2009; Rye et al., 2015). The Cronbach alpha levels for this study were also high (Program Characteristics: $a = .96$, Changes in Knowledge: $a = .97$, Understanding of Self: $a = .94$, Changes in Values: $a = .96$, and Changes in Interaction Skills: $a = .96$, and Curriculum Topics: $a = .97$). This study only used total education scores for all analyses (including the two new items) and the Cronbach alpha was also .97.

Sources of Sexual Health Education

To assess sources of sexual health education, an adapted measure, based on Byers et al.'s study (2017) was used. Participants were asked to indicate how much they felt they learned about six topics from a list of seven sources when they were in high school. Participants responded on a five-point Likert Scale from nothing (0) to almost all (4). A sample item from this questionnaire is sexual consent and an example of a source is

family which includes mothers, fathers, aunts, uncles, grandparents, siblings, and cousins. Mean scores represent how much the participants felt they learned from each source during high school, with higher scores representing more perceived information learned. The reliability of this scale was not reported. For the current study, Cronbach alphas were high for each subscale (Family: $a = .88$, Internet $a = .90$, Friends/Peers: $a = .87$, Partners: $a = .89$, Community: $a = .91$, School: $a = .90$, Books/Magazines: $a = .93$)

The Sexual Consent Scale, Revised

To assess attitudes toward sexual consent, the Sexual Consent Scale, Revised (SCS-R) (Humphreys & Brousseau, 2010) was used. This scale assessed participants' beliefs, attitudes, and behaviours regarding how sexual consent should be negotiated between partners (Humphreys & Brousseau, 2010). The SCS-R is a 39-item scale with five subscales. For this study, three of the five subscales were used. These included: (Lack of) perceived behavioural control (11 items), Positive attitudes toward establishing consent (11 items), and Sexual consent norms (7 items). Participants respond on a seven-point Likert scale that ranges from strongly disagree (1) to strongly agree (7). Five items in this scale are reverse coded. A sample item from this scale is “I believe it is enough to ask for consent at the beginning of a sexual encounter”. Scores are averaged for each subscale. The (lack of) perceived behavioural control subscale was reverse coded and used as a measure of people's level of perceived behavioural control. For the subscales, the reliability scores are as follows: (lack of) perceived behavioural control (α= .86), positive attitudes toward establishing consent (α= .84), and sexual consent norms (α= .67) (Humphreys & Brousseau, 2010). In the current study, the Cronbach alphas were as follows: α= .92 for perceived behavioural control, α= .88 for positive attitudes toward

establishing consent, and α= .79 for sexual consent norms.

Qualitative Questions

As sexual consent and communication feelings and behaviours were asked at two-time points, the first and most recent sexual experience, a qualitative question asking about the participants' sexual experiences were included prior to each section. The two qualitative questions asked the participants to describe their sexual experiences in detail to help them better remember the experience. Following this question, the participants were asked more detailed quantitative questions about their experiences, which would be used in the analyses. As mentioned previously, there were several measures used in this study.

Two other qualitative questions were asked at the end of the survey to get a more in-depth understanding of the participant's experience with the sexual health education that they received. The first qualitative question asked what the participants felt was missing from their sexual health education. The second question asked if there was anything else the participant wished to say about the subject matter. This was done in the survey to allow the participants the opportunity to express any issues or concerns they had about what was or was not included in the study. This section provided valuable information as to what should be included in sex education as well as what future items could be added to the survey. This question also provided an outlet for self-reflection prior to reviewing the debriefing form.

Procedure

Student participants were recruited from the undergraduate Psychology Participant Pool at Trent University (SONA system) and community participants were

recruited from Amazon's Mechanical Turk (MTurk) crowdsourcing marketplace. To be eligible for the study, participants were required to have had at least two consensual sexual experiences with a partner. As part of the recruitment, only those who were between the ages of 17 and 35 (18 to 35 for the MTurk sample) were considered eligible to participate as questions were retrospective, and memory of their high school sex education, as well as first partnered sexual experience, was a key component of the study. However, participants only needed to be over the age of 17/18 to enter the study (i.e., those who were over 35 were still able to complete the survey). After analyzing the data, no significant differences were found between those over the age of 35 and the rest of the sample. Participants of all genders and sexual identities were eligible. All participants were presented with the same questionnaire. However, those who reported not receiving formal sex education did not complete the Sexuality Education Program Feature/Program Outcome Inventory and were automatically directed to the sources of sexual health education questions.

Ethics approval was provided by Trent University’s Research Ethics Board (File #: 27913). All participants were provided with a brief advertisement of the proposed study in the SONA or MTurk system (see Appendix C). Those who chose to participate clicked on a link taking them to the Qualtrics survey. Participants were initially presented with a consent form they were required to read and acknowledge before completing the survey. The SONA consent form (see Appendix D1) and MTurk consent form (see Appendix D2) differed only with respect to the compensation arrangements for each group (credit versus payment). The survey included several sections; including demographic questions (e.g., age, sex, gender, sexual orientation), questions regarding

the participant's previous sexual health education, their sexual communication (including how comfortable they were discussing various topics during their first and latest sexual experience), their sexual consent negotiation (during their first and latest sexual experience), and their attitudes towards consent negotiation (see Appendix E).

Once participants completed the survey, they were presented with a debriefing form. Like the consent form, the SONA debriefing form (see Appendix F1) and MTurk debriefing form (see Appendix F2) differed. This was done to provide the participants with appropriate resources if they felt they needed to speak with someone after completing the survey. The survey was completed online at one time. The survey took approximately 45 minutes to complete. Data from participants who did not complete more than 50% of the survey were not included in the study. In addition, if participants left the study before completing a minimum of 50% of the survey, they did not receive compensation (i.e., credit/payment). Participants who completed more than 50% of the survey were allocated the full bonus credit or payment assigned to this study. This allocation was clearly articulated to participants in the consent form. The data was reviewed once a week after participants completed the study to assess credit/payment allocation. The SONA research ID and MTurk ID numbers were used within the respective systems to allocate credit/payment.

Prior to the cleaning process, the two datasets (i.e., SONA and MTurk) were assessed for similarities and statistical differences. As the two datasets were sampled in Canada, and the analyses did not present significant differences that we believed would affect the data, the two datasets were merged. Merging the data helped make the sample more generalizable and allowed us to have statistical power, as the MTurk sample would

not have been sufficiently powered for all analyses. Prior to cleaning the data, the sample comprised 968 people (SONA: 721, MTurk: 247).

Data Cleaning

The data were cleaned using various criteria to ensure the integrity of the findings (see Table 2). This included checking how long participants took to complete the survey. Anyone completing the survey in less than 15 minutes was removed from the dataset. Participants who were missing responses to more than two subscales were removed. There were check questions implemented in the survey that were used to identify if the participants were not paying attention or did not fit within the confines of the study (i.e., not having had a consensual experience). Any participants that reported that their first or most recent experience was non-consensual were removed. If the participants responded incorrectly to more than two check questions they were also removed from the analyses. One of these checks included comparing the number of months since the participant's first sexual experience and the age they reported they were at the time of their first sexual experience subtracted from their current age.

Table 2

Number of Participants Removed During the Cleaning Process

Group	SONA	MTurk
Completed survey < 15 minutes	30	97
Significant missing data	6	10
Straight line responding	41	6
Strike-questions	19	—
Non-consensual first experience	55	9
Non-consensual most recent experience	1	—
Completed multiple times	7	6
Total	159	128

All subscales were assessed for straight-line responding and participants were removed accordingly. Responses were also checked (using the provided survey codes) for people who completed the survey more than once. Entries that were similar demographically and who reported the same first and most recent sexual experiences were removed. After cleaning the data there were 681 participants (SONA: 562, MTurk: 119). All subscales were checked for outliers once the data was cleaned. Entries that had more than five outliers in total were removed. A total of six entries were removed. After removing the outliers, the final sample was 675 participants (SONA: 559. MTurk: 116). As mentioned, people over the age of 35 were originally meant to be excluded; however, they were included provided they met the other inclusion criteria as their data was not significantly different from the other age groups with respect to their perceived quality of sexual health education.

Data Analysis

The data were analyzed using SPSS statistical software (Version: 28.0.1.0 [142]). There were some participants who had missing data, but in the total dataset, there was less than one percent missing. All missing data for the education scales were replaced with zeros. This was done to be consistent with the data that anyone who did not know the answer would be assigned a value of zero for that item (as per the scale's anchoring). For the outcome variables (i.e., communication, internal and external consent, and consent attitudes) the missing data were replaced with series means. All subscales/scales that were replaced had less than five percent of missing data.

Before running analyses, assumptions of normality, linearity, homogeneity of variance, and homoscedasticity of residuals and multicollinearity were examined.

Multicollinearity (i.e., variables that are very highly correlated, .90 and above), were not found between the predictor variables (Tabachnick & Fidell, 2007). As there were concerns with normality, all exploratory comparisons between groups were completed with non-parametric analyses. For the five main hypotheses, regression analyses were still conducted as regression analyses have been found to be fairly robust to some deviations in normality, when the sample size is large (Schmidt & Finan, 2018). Frequencies and descriptive statistics were generated for all categorical and continuous variables. Two main types of analyses were conducted to assess the various hypotheses regarding sexual health education, sexual consent, and sexual communication. These analyses included correlations to assess associations between perceived quality of education, sexual willingness, behaviours to communicate consent, communication behaviours, and sexual consent beliefs and attitudes.

Where significant correlations were found, hierarchical regressions were run to predict willingness and behaviours to communicate consent and communication behaviours based on the participants' perceived quality of their education. Hierarchical regressions were employed to determine how much the participants' demographics (i.e., age, gender, sexual orientation, and ethnicity) and education explained their willingness and behaviours to communicate consent and their communication behaviours. The models were tested sequentially starting with demographic factors to see how much of the variance in communication and consent were attributed to the participants' identities. The second model controlled for demographic factors and included education in the analysis. Hierarchical regressions tested the five hypotheses.

For the first exploratory analysis, identifying differences between first and most

recent sexual experiences, several Wilcoxon matched-pairs signed rank tests were employed to look at differences between scores on the verbal and nonverbal communication scale, the ICS, and the ECS at two-time points. To help reduce the chance of obtaining false-positive results, the Bonferroni correction was used for each set of tests. The second exploratory analysis, looking at differences between the various demographic groups, was assessed via several Kruskal-Wallis tests when comparing the participants' perceived quality of sexual health education. Lastly, Man-Whitney U tests were run to look at the differences in the reported quantity of education from seven sources between people who reported receiving formal sexual health education in high school and those who did not. From there, Kruskal-Wallis tests were run to see if the perceived quantity of education from the various sources differed between people of different genders and sexual orientations.

Results

When presenting the means and percentages, the data was broken down into groups and reported alongside the total sample. This was done to highlight trends in the participants responses depending on whether they received formal sexual health education or not. Participants received formal sexual health education either before their first sexual experience (FSE), after their first sexual experience (FSE), or were unsure of when they received their education in regard to their first sexual experience (FSE). Again, the total sample (or combined sample) includes all education groups in the study together.

Sexual Health Education

Perceived Quality of Formal Sexual Health Education

Mean scores for the perceived quality of formal sexual health education were reported in relation to when participants received their education (see Table 3). The range of this scale is zero to 284 and the median is 142.

Table 3

Mean Formal Sexual Health Education Scores

Group	*M*		*SD*
Received Education Before FSE	171.96	*	43.40
Received Education After FSE	145.64		39.54
Unsure	155.45		39.19
Combined sample	169.22		43.50

Note. FSE = first sexual experience. * = $p < .001$.

An analysis of variance was run to examine if there was a significant difference between participants who received formal sexual health education (before, after, or unsure) their first sexual experience. The results indicated a significant difference between groups ($F(2, 558)=8.48$, $p < .001$). Tukey's HSD reports the significant difference was between people who received their sexual health education prior to their first sexual experience compared to those who received it after ($p < .001$). Those who received their sexual health education prior to their first sexual experience perceived it to be of higher quality.

Informal Sexual Health Education

Mean informal sexual health education scores were reported by when the participant received their formal sexual health education. The mean of those who did not get formal sexual health education was also run. These results are presented by the source of the education (see Table 4) and the topic taught (see Table 5).

Table 4

Mean Informal Sexual Health Education Scores by Source of Information

Variables	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample*	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Family	1.25	.93	1.10	.85	.98	.97	.97	.90	1.18	.93
Internet	2.17	1.05	2.07	1.06	2.08	1.00	2.28	1.07	2.18	1.05
Friends/Peers	2.11	.94	2.08	1.10	1.95	.93	2.18	1.02	2.11	.96
Partners	2.14	1.02	2.26	1.03	1.97	1.13	2.05	1.12	2.12	1.05
Community	.52	.78	.26	.44	.55	.74	.42	.70	.49	.75
School	1.55	.98	1.03	.65	1.48	.94	.64	.78	1.36	.99
Books/Magazines	1.02	.96	.50	.66	1.25	1.26	1.07	1.08	1.01	.99

Note. FSE = first sexual experience. The subscales are on a five-point Likert scale from zero to four.

Table 5

Mean Informal Sexual Health Education Scores by Topic

Variables	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample*	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Sexual Coercion	1.62	.66	1.45	.51	1.42	.71	1.56	.67	1.60	.66
Sexual Consent	1.74	.73	1.59	.57	1.60	.79	1.57	.73	1.70	.73
Sexual Communication	1.51	.69	1.30	.59	1.55	.72	1.34	.66	1.47	.68
Sexual Decision Making	1.49	.69	1.19	.61	1.38	.80	1.26	.66	1.43	.69
Sexual Pleasure	1.43	.63	1.30	.58	1.37	.57	1.26	.60	1.39	.62
Sexual Orientation	1.43	.73	1.13	.60	1.47	.89	1.23	.77	1.38	.74

Note. FSE = first sexual experience. The subscales are on a five-point Likert scale from zero to four.

Participants were asked if they received any informal sexual health education before their first sexual experience (see Table 6). The data is reported for the whole sample as well as broken down by the different formal sexual health education groups. Participants were also asked if they received any additional sexual health education since leaving high school (see Table 7). Regardless of when or whether the participant received formal sexual health education, it seems as though a small majority suggested they received more sexual health education since leaving high school.

Outcome Variable Descriptives and Correlations

Sexual Communication During First Sexual Experience

Mean sexual communication scores were reported for one's first sexual experience (see Table 8). A significant positive association between formal sexual health education and verbal communication, $r(492)=.30$, $p < .001$, nonverbal sexual initiation and pleasure, $r(491)=.21$, $p <.001$, and nonverbal sexual refusal, $r(491)=.10$, $p = .029$ was found (See Appendix G1). With greater perceived quality of sexual health education, participants reported engaging in more verbal communication behaviours, nonverbal sexual initiation and pleasure behaviours, and nonverbal sexual refusal behaviours during their first sexual experience.

Internal and External Consent During First Sexual Experience

Mean internal and external sexual consent scores were reported for one's first sexual experience and one's most recent sexual experience (see Table 9). The overall trend, although not significant, is that internal and external consent scores are higher for those who received their formal sexual health education before their first sexual experience.

Table 6

Percentage of People Who Received Informal Sexual Health Education

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Yes	394	80.0	23	4.6	12	2.4	64	13.0	493	73.0
No	68	45.3	13	4.7	5	21.9	32	28.1	118	17.5
Unsure	29	45.3	3	4.7	14	21.9	18	28.1	64	9.5

Note. FSE = first sexual experience. * Total sample percentages are in reference to a breakdown of the baseline characteristic. The percentages are not additive across the rows.

Table 7

Percentage of People Who Learned/Received More Sexual Health Education Since Leaving Highschool

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Yes	266	73.0	22	6.0	16	4.4	60	16.5	364	53.9
No	197	71.6	17	6.2	11	4.0	50	18.2	275	40.7
I do not know	28	77.8	—	—	4	11.1	4	11.1	36	5.3

Note. FSE = first sexual experience. * Total sample percentages are in reference to a breakdown of the baseline characteristic. The percentages are not additive across the rows.

Table 8

Mean Sexual Communication Scores During One's First Sexual Experience

Variables	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample*	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Verbal Communication	53.83	18.18	46.28	21.07	48.77	18.39	53.21	19.61	53.06	18.67
Nonverbal Sexual Initiation and Pleasure	39.02	10.34	32.54	12.96	37.16	9.88	37.91	11.15	38.37	10.71
Nonverbal Sexual Refusal	23.78	8.11	23.00	9.58	26.35	8.24	24.30	8.91	23.94	8.35

Note. FSE = first sexual experience. Scores for verbal communication range from 13 to 91. Scores for nonverbal sexual initiation and pleasure range from eight to 56. Scores for nonverbal sexual refusal range from seven to 49.

Table 9

Mean Consent Feeling (Internal) and Behaviour Scores During One's First Sexual Experience

Variables	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample*	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Physical Response	3.11	.59	2.88	.81	3.09	.50	3.10	.60	3.10	.60
Safety and Comfort	3.03	.70	2.86	.89	2.96	.55	2.93	.71	3.00	.71
Arousal	3.32	.63	3.26	.88	3.29	.58	3.30	.63	3.29	.64
Agreement and Wantedness	3.48	.52	3.26	.67	3.43	.54	3.37	.61	3.45	.55
Readiness	3.13	.62	2.90	.79	3.03	.55	3.01	.65	3.09	.63
External Consent Behaviours	8.37	3.11	7.64	3.54	8.17	3.18	8.01	3.16	8.26	3.15

Note. FSE = first sexual experience. The internal consent subscales are on a five-point Likert scale from one to four. Scores for the external consent behaviours subscale range from zero to 12.

A significant association between formal sexual health education and all internal consent feelings and external consent behaviours were found (See Appendix G2). This included physical response, $r(491)=.12$, $p=.008$, safety/comfort, $r(491)=.26$, $p<.001$, arousal, $r(491)=.10$, $p=.029$, agreement/wantedness, $r(491)=.11$, $p=.015$, and readiness, $r(491)=.19$, $p<.001$. As mentioned, there was also a significant relationship found between the perceived quality of formal sexual health education and external consent behaviours, $r(491)=.14$, $p=.001$. As perceptions of sexual health education quality increased, participants reported engaging in more external consent behaviours (i.e., nonverbal behaviours, passive behaviours, and communication/initiator behaviours).

Sexual Communication During Most Recent Sexual Experience

Mean sexual communication scores were reported for one's most recent sexual experience (see Table 10). A significant association between formal sexual health education and verbal communication, $r(491)=.14$, $p=.002$, and nonverbal sexual refusal, $r(491)=.09$, $p=.044$, was found (See Appendix G3). As perceptions of sexual health education quality increased, participants reported engaging in more verbal communication behaviours and nonverbal sexual refusal behaviours during their most recent sexual experience. No significant correlation was found between the perceived quality of formal sexual health education and nonverbal sexual initiation and pleasure, $r(491)=.08$, $p=.066$. There was no relationship between people's perceptions of sexual health education and their engagement in nonverbal sexual initiation and pleasure during their most recent sexual experience.

Table 10

Mean Sexual Communication Scores During One's Most Recent Sexual Experience

Variables	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample*	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Verbal Communication	71.63	15.68	77.00	15.49	72.31	12.82	70.94	17.15	71.85	15.83
Nonverbal Sexual Initiation and Pleasure	46.99	8.49	49.56	5.89	48.11	7.09	46.36	9.34	47.09	8.47
Nonverbal Sexual Refusal	26.24	9.56	23.16	8.92	28.94	8.55	27.31	10.58	26.36	9.69

Note. FSE = first sexual experience. Scores for verbal communication range from 13 to 91. Scores for nonverbal sexual initiation and pleasure range from eight to 56. Scores for nonverbal sexual refusal range from seven to 49. The subscales are on a seven-point Likert scale from one to seven.

Internal and External Consent During Most Recent Sexual Experience

Mean internal and external sexual consent scores were reported for one's most recent sexual experience (see Table 11). There is a trend, although not significant, with internal and external consent scores being higher for those who received their formal sexual health education after their first sexual experience, potentially highlighting a recency effect.

A significant association between formal sexual health education and all internal consent feelings was found, except for feelings of agreement/wantedness (See Appendix G4). This included physical response, $r(491)=.12$, $p=.006$, safety and comfort, $r(491)=.12$, $p=.010$, arousal, $r(491)=.12$, $p=.010$, and readiness, $r(491)=.10$, $p=.023$. As perceptions of sexual health education quality increased, participants reported feeling more of a physical response, safer/ more comfortable, more aroused, and more ready. There was no significant relationship between the perceived quality of formal sexual health education and feelings of agreement/wantedness ($r(491)=.08$, $p=.098$) or external consent behaviours $r(491)=.05$, $p=.313$. There was no relationship between peoples perceived quality of sexual health education and their feelings of agreement/wantedness or between their education and their engagement of external consent behaviours during their most recent sexual experience.

Table 11

Mean Consent Feeling and Behaviour Scores During One's Most Recent Sexual Experience

Variables	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample*	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Physical Response	3.50	.58	3.68	.44	3.60	.50	3.50	.63	3.51	.58
Safety and Comfort	3.62	.55	3.81	.39	3.67	.48	3.61	.56	3.63	.54
Arousal	3.65	.55	3.81	.37	3.63	.52	3.59	.66	3.65	.56
Agreement and Wantedness	3.74	.46	3.90	.26	3.73	.45	3.73	.48	3.75	.45
Readiness	3.62	.53	3.78	.42	3.66	.45	3.62	.54	3.63	.52
External Consent Behaviours	9.61	2.82	10.39	2.36	9.28	2.94	9.14	3.10	9.56	2.86

Note. FSE = first sexual experience. The internal consent subscales are on a five-point Likert scale from one to four. Scores for the external consent behaviours subscale range from zero to 12.

Consent attitudes, Social Norms, and Perceived Behavioural Control

Mean attitude toward consent, social norms, and perceived behavioural control scores were reported by when the participant received their formal sexual health education (see Table 12).

A significant association between formal sexual health education and sexual consent attitudes was found, $r(491)=.10$, $p = .032$ (See appendix G5). As perceptions of sexual health education quality increased, participants reported more positive attitudes toward establishing consent. There was no association found between perceived quality of formal sexual health education and social norms, $r(491)=.07$, $p =.125$, and perceived behavioural control, $r(491)=.03$, $p = .569$. There was no relationship between peoples' perceived quality of formal sexual health education and their norms about assuming consent norms or between their education and their level of perceived behavioural control.

Table 12

Mean Sexual Consent Attitude and Belief Scores

Variables	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample*	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Attitudes	6.02	.85	6.14	.71	5.93	.90	5.98	.99	6.01	.87
Social Norms	4.04	1.17	3.99	1.09	3.95	1.13	4.06	1.20	4.04	1.17
Perceived Behavioural Control	5.65	1.21	5.90	1.11	5.37	1.35	5.42	1.32	5.61	1.23

Note. FSE = first sexual experience. The subscales are on a seven-point Likert scale from one to seven.

Hierarchical Multiple Regressions

Hierarchical multiple regressions were performed to investigate the ability of the perceived quality of formal sexual health education to predict levels of sexual communication, consent feeling and behaviours, and consent attitudes and beliefs during one's first and most recent sexual experiences, after controlling for several demographic variables (gender, ethnicity, sexual orientation, and age). Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, and homoscedasticity occurred. Additionally, the correlations among the predictor variable (perceived quality of sexual health education) and gender, sexual orientation, ethnicity, and age were examined (see Appendix H). Unless otherwise stated, only participants who received their sexual health education prior to their first sexual experience (n = 491) were included in these analyses. All other participants (n = 184) were excluded as they either did not receive formal sexual health education, were unsure of when they received it, or received their education after their first sexual experience.

All correlations were nonsignificant to weak, ranging between $r(490)=.06$, $p=.210$ and $r(490)=.12$, $p=.010$. This indicates that multicollinearity was unlikely to be a problem (Tabachnick & Fidell, 2007). The predictor variable for all analyses, perceived quality of sexual health education, was statistically correlated with all the outcome variables reported below, which indicated that the data were appropriately correlated with the dependent variables for examination through hierarchical linear regression. As gender, ethnicity, and sexual orientation variables were not dichotomous, dummy variables were created. The reference groups when conducting our regressions were straight white women as they made up the majority of the sample. For ease of review, a

summary table has been produced for the main analyses (see Table 13). More detailed tables are presented in the appendices.

Table 13

Formal Sexual Health Education and Outcome Variables at First and Most Recent Sexual Experience Regression Models

Predictor	R^2	R^2 Change	F Change	df	Hypothesis Supported
Hypothesis 1					**Partially**
Verbal Communication					Yes
Model 1	.06	.06	4.45***	7	
Model 2	.13	.07	36.39***	1	
Nonverbal Sexual Initiation and Pleasure					Yes
Model 1	.03	.03	2.27*	7	
Model 2	.07	.03	16.99***	1	
Nonverbal Sexual Refusal					No
Model 1	.05	.05	3.82***	7	
Model 2	.06	.01	3.84	1	
Hypothesis 2					**Partially**
Physical Response					Yes
Model 1	.08	.08	5.95	7	
Model 2	.10	.01	7.19**	1	
Safety/Comfort					Yes
Model 1	.05	.05	3.83***	7	
Model 2	.11	.06	30.19***	1	
Arousal					No
Model 1	.10	.10	7.64***	7	
Model 2	.11	.01	4.31	1	
Agreement/Wantedness					No
Model 1	.07	.07	5.33***	7	
Model 2	.09	.01	6.55	1	
Readiness					Yes
Model 1	.04	.04	2.46	7	
Model 2	.06	.03	14.53***	1	
External Consent Behaviours					Yes
Model 1	.03	.03	2.00	7	
Model 2	.05	.02	10.00**	1	
Hypothesis 3					**Partially**
Verbal Communication					Yes
Model 1	.02	.02	1.61	7	
Model 2	.05	.02	11.49***	1	

Predictor	R^2	R^2 Change	*F* Change	*df*	Hypothesis Supported
Nonverbal Sexual Refusal					No
Model 1	.03	.03	1.94	7	
Model 2	.04	.01	4.01	1	
Hypothesis 4					**No**
Physical Response					No
Model 1	.02	.02	1.14	7	
Model 2	.03	.01	6.89**	1	
Safety/Comfort					No
Model 1	.01	.01	.87	7	
Model 2	.03	.01	6.20*	1	
Arousal					No
Model 1	.03	.03	1.83	7	
Model 2	.04	.02	6.24*	1	
Readiness					No
Model 1	.01	.01	.95	7	
Model 2	.03	.01	5.80*	1	
Hypothesis 5					**Partially**
Consent Attitudes					Yes
Model 1	.03	.03	2.21*	7	
Model 2	.05	.01	6.43*	1	

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

Hypothesis One

For the regressions on sexual communication (i.e., verbal, nonverbal sexual initiation and pleasure, and nonverbal sexual refusal) during one's first sexual experience and perceived quality of sexual health education, a Bonferroni correction was applied to control for multiple analyses (.05/3=.017).

1.a. The predictor variable, perceived quality of sexual health education, was significantly correlated with the dependent variable, verbal communication. The correlations between the predictor variables and the verbal communication were all nonsignificant to moderate in strength, ranging from $r(490) = -.07$, $p = .139$ to $r(491) = .30$, $p < .001$ (See Appendix H1).

In the first step of hierarchical multiple regression, predictors were entered: age, gender (men and gender diverse), ethnicity (mixed and diverse identities), and sexual orientation (pansexual/bisexual and diverse orientations) (see Appendix I1). This model was statistically significant $F(7, 470) = 4.45$; $p < .001$ and explained 6.2% of the variance in verbal communication. Identifying with diverse gender identity was the only variable that made a significant unique contribution to the model (see Appendix I2), such that being of diverse gender identity (compared to being a woman) resulted in more verbal communication behaviours during one's first sexual experience ($\beta = .15$, $p = .002$). After entry of the perceived quality of sexual health education at step two, the total variance explained by the model was 13% ($F(7, 470) = 8.73$; $p < .001$). The introduction of perceived quality of sexual health education explained an additional 6.8% of the variance in verbal communication, after controlling age, gender, ethnicity, and sexual orientation ($F(1, 469) = 36.39$; $p < .001$). In the final adjusted model, two out of the eight predictor variables were statistically significant. The perceived quality of formal sexual health education recorded a higher Beta value ($\beta = .27$, $p < .001$) than being of diverse gender identity ($\beta = .13$, $p = .003$).

1.b. The predictor variable, perceived quality of sexual health education, was statistically correlated with nonverbal sexual communication. The correlations between the predictor variables and the dependent variable (nonverbal sexual initation and pleasure) were all weak, ranging from $r(479) = .025$, $p = .58$ to $r(491) = .21$, $p < .001$ (see Appendix H2). In the first step of hierarchical multiple regression, predictors were entered: age, gender, ethnicity, and sexual orientation. This model was not statistically significant $F(7, 470) = 2.27$; $p = .028$ (see Appendix J1). After entry of the perceived

quality of sexual health education at step two, the total variance explained by the model was 6.6% ($F(8, 469) = 4.17$; $p < .001$). The introduction of perceived quality of sexual health education explained an additional 3.4% of the variance in nonverbal sexual initation and pleasure, after controlling age, gender, ethnicity, and sexual orientation ($F(1, 469) = 16.99$; $p < .001$). In the final adjusted model, only perceived quality of formal sexual health education was statistically significant ($\beta = .27$, $p < .001$) (see Appendix J2).

1.c. The predictor variable, perceived quality of sexual health education, was statistically correlated with nonverbal sexual refusal behaviours. The correlations between the predictor variables and the dependent variable (nonverbal communication) were all weak in strength, ranging from $r(490) = -.02$, $p = .720$ to $r(490) = -.16$, $p < .001$ (see Appendix H3). In the first step of hierarchical multiple regression, predictors were entered: age, gender, ethnicity and sexual orientation. This model was statistically significant $F(7, 470) = 3.82$; $p < .001$ and explained 5.4% of the variance in nonverbal sexual refusal behaviours (see Appendix K1). Identifying as a man and having a diverse ethnic background were the only two variables that made a significant unique contribution to the model (see Appendix K2). Men (compared to women) engaged in less sexual refusal behaviours ($\beta = -.18$, $p < .001$) and people of mixed ethnicity (compared to those who are white) engaged in more sexual refusal behaviours ($\beta = .12$, $p = .009$).

After entry of the perceived quality of sexual health education at step two, the total variance explained by the model was 6.1% ($F(8, 469) = 3.84$; $p < .001$). The introduction of perceived quality of sexual health education did not produce a statistically significant change ($F(1, 469) = 3.84$; $p = .051$). In the final adjusted model, two out of the

eight predictor variables were statistically significant, with identifying as a man recording a higher Beta value (β = -.19, $p < .001$) than identifying as having a mixed ethnicity (β = .12, $p = .011$) (see Appendix K2).

Hypothesis Two

For regressions on internal consent feelings (i.e., physical response, safety/comfort, arousal, agreement/wantedness, and readiness) during someone's first sexual experience and perceived quality of sexual health education, a Bonferroni correction was applied (.05/5=.01).

2.a. Perceived quality of sexual health education was statistically correlated with feelings of physical response during one's first sexual experience. The correlations between the predictor variables and the dependent variable (physical response) were all weak, ranging from $r(490) = .07$, $p = .147$ to $r(479) = .14$, $p = .002$ (see Appendix H4).

In the first step of hierarchical multiple regression, predictors were entered: age, gender (men and gender diverse), ethnicity (mixed and diverse identities), and sexual orientation (pansexual/bisexual and diverse orientation). This model was statistically significant $F(7, 470) = 5.95$; $p < .001$ and explained 8.1% of the variance in physical response feelings during one's first sexual experience (see Appendix L1). Identifying as a man was the only variable that made a significant unique contribution to the model (see Appendix L2), such that men, compared to women, reported more feelings of physical response during their first sexual experience (β = .21, $p < .001$). After entry of the perceived quality of sexual health education at step two, the total variance explained by the model was 9.5% ($F(8, 469) = 6.17$; $p < .001$). The introduction of perceived quality of sexual health education explained an additional 1.4% of the variance in feelings of

physical response, after controlling age, gender, ethnicity, and sexual orientation ($F(1, 469) = 7.12$; $p = .008$). In the final adjusted model, two out of the eight predictor variables were statistically significant, with identifying as a man ($\beta = .21$, $p < .001$) recording a higher Beta value than the perceived quality of sexual health education ($\beta = .12$, $p = .008$).

2.b. Perceived quality of sexual health education was statistically correlated with feelings of safety/comfort during one's first sexual experience. The correlations between the predictor and dependent variable (safety/comfort) were weak, ranging from $r(491) = .04$, $p = .411$ to $r(491) = .26$, $p < .001$ (see Appendix H5).

The first step of the model, where the demographic variables were added, was statistically significant $F(7, 470) = 3.83$; $p < .001$ and explained 5.4% of the variance in feelings of safety/comfort during one’s first sexual experience (see Appendix M1). Identifying as having a diverse gender identity was the only variable that made a significant unique contribution to the model (see Appendix M2). After entry of the perceived quality of sexual health education at step two, the total variance explained by the model was 11.1% ($F(8, 469) = 7.33$; $p < .001$). The introduction of perceived quality of sexual health education explained an additional 5.7% of the variance in feelings of safety/comfort, after controlling age, gender, ethnicity, and sexual orientation ($F(1, 469) = 30.19$; $p < .001$). In the final adjusted model, two out of the eight predictor variables were statistically significant, with perceived quality of sexual health education ($\beta = .25$, $p < .001$) recording a higher Beta value than identifying as having a diverse gender identity ($\beta = .17$, $p < .001$).

2.c. Perceived quality of sexual health education was statistically correlated with feelings of arousal during one's first sexual experience. The correlations between the predictor variables and arousal were all weak, ranging from $r(490) = .01$, $p = .819$ to $r(490) = .30$, $p < .001$ (see Appendix H).

In the first step of hierarchical multiple regression, predictors were entered: age, gender, ethnicity, and sexual orientation. This model was statistically significant $F(7, 470) = 7.64$; $p < .001$ and explained 10.2% of the variance in feelings of arousal during one’s first sexual experience (see Appendix N1). Identifying as a man was the only variable that made a significant unique contribution to the model (see Appendix N2). After entry of the perceived quality of sexual health education at step two, the total variance explained by the model was 11% ($F(8, 469) = 7.27$; $p < .001$). The introduction of perceived quality of sexual health education did not produce a statistically significant change ($F(1, 469) =4.31$; $p =.038$). In the final adjusted model identifying as a man was the only statistically significant variable ($\beta = .24$, $p < .001$).

2.d. Perceived quality of sexual health education was statistically correlated with feelings of agreement/wantedness during one’s first sexual experience. The correlations between the predictor variables and the dependent variable (agreement/wantedness) were all weak, ranging from $r(490) = .02$, $p = .636$ to $r(490) = .27$, $p < .001$ (see Appendix H7).

The first step of the model, where the demographic variables were added, was statistically significant $F(7, 470) = 5.33$; $p < .001$ and explained 7.4% of the variance in feelings of agreement/wantedness during one’s first sexual experience (see Appendix O1). Identifying as a man and having a diverse gender identity were the only variables

that made a significant unique contribution to the model (see Appendix O2). After entry of the perceived quality of sexual health education at step two, the total variance explained by the model was 8.6% ($F(8, 469) = 5.54$; $p < .001$). The introduction of perceived quality of sexual health education did not produce a statistically significant change ($F(1, 469) = 6.55$; $p = .011$). In the final adjusted model, two out of the eight predictor variables were statistically significant, with identifying as a man ($\beta = .21$, $p < .001$) recording a higher Beta value than identifying as gender diverse ($\beta = .15$, $p < .01$).

2.e. Perceived quality of sexual health education, was statistically correlated with feelings of readiness during one's first sexual experience. The correlations between the predictor variables and feelings of readiness were all weak, ranging from $r(490) = -.02$, $p = .723$ to $r(491) = .19$, $p < .001$ (see Appendix H8).

In the first step of hierarchical multiple regression, predictors were entered: age, gender, ethnicity, and sexual orientation. This model was not statistically significant $F(7, 470) = 2.46$; $p = .017$ (see Appendix P1). After entry of the perceived quality of sexual health education at step two, the total variance explained by the model was 6.4% ($F(8, 469) = 4.03$; $p < .001$). The introduction of perceived quality of sexual health education explained an additional 2.9% of the variance in feelings of readiness, after controlling age, gender, ethnicity, and sexual orientation ($F(1, 469) = 14.53$; $p < .001$). In the final adjusted model, two out of the eight predictor variables were statistically significant, with perceived quality of sexual health education ($\beta = .18$, $p < .001$) recording a higher Beta value than identifying as gender diverse ($\beta = .16$, $p < .001$) (see Appendix P2).

2.f. The predictor variable, perceived quality of sexual health education, was statistically correlated with external consent behaviours during ones first sexual

experience. The correlations between the predictor variables and external consent behaviours were zero to weak, ranging from $r(491) = .00$, $p = .997$ to $r(491) = .14$, $p = .001$ (see Appendix H9).

The first step of the model, where the demographic variables were added, was not statistically significant $F(7, 470) = 2.00$; $p = .054$ (see Appendix Q1). After entry of the perceived quality of sexual health education at step two, the total variance explained by the model was 4.9% ($F(8, 469) = 3.03$; $p = .002$). The introduction of perceived quality of sexual health education explained an additional 2.0% of the variance in external consent behaviours, after controlling age, gender, ethnicity, and sexual orientation ($F(1, 469) = 10.00$; $p =.002$). In the final adjusted model, three out of the eight predictor variables were statistically significant, with perceived quality of sexual health education ($\beta = .15$, $p = .002$) recording a higher Beta value than identifying as a man ($\beta = .12$, $p = .012$) and age ($\beta = -.10$, $p = .044$) (see Appendix Q2).

Hypothesis Three

The regressions for most recent sexual communication behaviours (i.e., verbal communication and nonverbal sexual refusal) used a Bonferroni correction as well (.05/2=.025).

3.a. The predictor variable, perceived quality of sexual health education, was statistically correlated with verbal sexual communication. The correlations between the predictor variables and the dependent variable (verbal communication) were all weak, ranging from $r(491) = -.02$, $p = .732$ to $r(491) = .14$, $p = .002$ (see Appendix H10).

Predictors were entered in the first step of hierarchical multiple regression. This model was not statistically significant $F(7, 470) = 1.61$; $p = .130$ (see Appendix R1).

After entry of the perceived quality of sexual health education at step two, the total variance explained by the model was 4.7% ($F(8, 469) = 2.88$; $p = .004$). The introduction of perceived quality of sexual health education explained an additional 2.3% of the variance in verbal communication, after controlling age, gender, ethnicity, and sexual orientation ($F(1, 469) = 11.49$; $p < .001$). In the final adjusted model, perceived quality of sexual health education was the only variable that was statistically significant ($\beta = .16$, $p < .001$) (see Appendix R2).

3.b. As there was no significant relationship between people's perceived quality of sexual health education and their nonverbal sexual initiation and pleasure behaviours during their most recent sexual experience, a hierarchical regression was not run.

3.c. The predictor variable, perceived quality of sexual health education, was statistically correlated with nonverbal sexual refusal. The correlations between the predictor variables and the dependent variable (nonverbal sexual refusal) were all weak, ranging from $r(479) = -.02$, $p = .674$ to $r(491) = .10$, $p = .021$ (see Appendix H11).

The first step of the model, where the demographic variables were added, was not statistically significant $F(7, 470) = 1.94$; $p = .061$ (see Appendix S1). The second model, after the entry of the perceived quality of sexual health education, was also not significant ($F(8, 469) = 2.21$; $p = .025$). The introduction of perceived quality of sexual health education did not lead to a significant change in the variance ($F(1, 469) = 4.01$; $p =.046$). The betas, standardized and unstandardized, can be found in Appendix S2.

Hypothesis Four

For regressions on internal consent feelings (i.e., physical response, safety/comfort, arousal, and readiness) during someone’s most recent sexual experience

and perceived quality of sexual health education, a Bonferroni correction was applied (.05/4=.0125).

4.a. The predictor variable, perceived quality of sexual health education, was statistically correlated with physical response feelings during one's most recent sexual experience. The correlations between the predictor variables and the dependent variable (external consent) were weak, ranging from $r(490) = -.02$, $p = .690$ to $r(491) = .12$, $p = .006$ (see Appendix H12).

In the first step of hierarchical multiple regression, predictors were entered: age, gender, ethnicity, and sexual orientation. This model was not statistically significant $F(7, 470) = 1.14$; $p = .339$ (see Appendix T1). The second model, after the entry of the perceived quality of sexual health education, was also not significant ($F(8, 469) = 1.87$; $p = .063$). The betas, standardized and unstandardized, can be found in Appendix T2.

4.b. The predictor variable, perceived quality of sexual health education, was statistically correlated with feelings of safety/comfort during one's most recent sexual experience. The correlations between the predictor variables and the dependent variable (safety/comfort) were weak in strength, ranging from $r(490) = -.02$, $p = .713$ to $r(491) = .12$, $p = .010$ (see Appendix H12).

The first step of the model, where the demographic variables were added, was not statistically significant $F(7, 470) = .87$; $p = .527$ (see Appendix U1). The second model, after the entry of the perceived quality of sexual health education, was also not significant ($F(8, 469) = 1.55$; $p = .138$). The introduction of perceived quality of sexual health education did not lead to a significant change in the variance ($F(1, 469) = 6.20$; $p =.013$). The standardized and unstandardized betas can be found in Appendix U2.

4.c. The predictor variable, perceived quality of sexual health education, was statistically correlated with feelings of arousal during one's most recent sexual experience. The correlations between the predictor variables and the dependent variable (arousal) were weak, ranging from $r(490) = .02$, $p = .629$ to $r(491) = .12$, $p = .010$ (see Appendix H13).

Predictors were entered in the first step of hierarchical multiple regression. This model was not statistically significant $F(7, 470) = 1.83$; $p = .080$ (see Appendix V1). The second model, after the entry of the perceived quality of sexual health education, was also not significant ($F(8, 469) = 2.40$; $p = .015$). The introduction of perceived quality of sexual health education did not lead to a significant change in the variance ($F(1, 469) = 6.24$; $p =.013$). The betas, standardized and unstandardized, can be found in Appendix V2.

4.d. As there was no significant relationship between people's perceived quality of sexual health education and their feelings of agreement/wantedness during their most recent sexual experience, a hierarchical regression was not run.

4.e. The predictor variable, perceived quality of sexual health education, was statistically correlated with feelings of readiness during one's most recent sexual experience. The correlations between the predictor variables and feelings of readiness were weak, ranging from $r(490) = -.01$, $p = .874$ to $r(491) = .10$, $p = .023$ (see Appendix H14).

The first step of the model, where the demographic variables were added, was not statistically significant $F(7, 470) = .947$; $p = .470$ (see Appendix W1). The second model, after the entry of the perceived quality of sexual health education, was also not significant

($F(8, 469) = 1.56$; $p = .134$). The introduction of perceived quality of sexual health education did not lead to a significant change in the variance ($F(1, 469) = 5.80$; $p =.016$). The betas, standardized and unstandardized, can be found in Appendix W2.

4.f. As there was no significant relationship between people's perceived quality of sexual health education and their engagement in external consent behaviours during their most recent sexual experience, a hierarchical regression was not run.

Hypothesis Five

5.a. The predictor variable, perceived quality of sexual health education, was statistically correlated with attitudes toward obtaining consent during one’s most recent sexual experience. The correlations between the predictor variables and consent attitudes were weak, ranging from $r(491) = -.02$, $p = .737$ to $r(479) = -.15$, $p = .001$ (see Appendix H15).

In the first step of hierarchical multiple regression, predictors were entered: age, gender, ethnicity, and sexual orientation. This model was statistically significant $F(7, 470) = 2.02$; $p = .033$ and explained 3.2% of the variance in attitudes during one’s most recent sexual experience (see Appendix X1). Age made a significant unique contribution to the model (see Appendix X2). After entry of the perceived quality of sexual health education at step two, the total variance explained by the model was 4.5% ($F(8, 469) = 2.76$; $p = .006$. The introduction of perceived quality of sexual health education explained an additional 1.3% of the variance in feelings of readiness, after controlling age, gender, ethnicity, and sexual orientation ($F(1, 469) = 6.43$; $p =.012$). In the final adjusted model, both perceived quality of sexual health education ($\beta = .12$, $p = .012$) and age ($\beta = -.12$, $p = .013$) were statistically significant.

5.b. As there was no significant relationship between people's perceived quality of sexual health education and their beliefs in consent norms, a hierarchical regression was not run.

5.c. Similar to hypothesis 5.b., there was also no significant relationship between people's perceived quality of sexual health education and their perceived behavioural control, therefore a hierarchical regression was not run.

Exploratory Analyses

Differences Between First and Most Recent Sexual Experiences

As there were concerns with normality, Wilcoxon Signed-Ranks Tests were conducted to determine whether there was a difference in the ranking of sexual communication sexual consent feelings, and sexual consent behaviours at two-time points for people who received and did not receive sexual health education. A Bonferroni correction was applied and so all effects are reported at a .006 level of significance. These comparisons were done for those who received sexual health education, those who did not, and for the total sample. These comparisons were further broken down into those who received sexual health education before first sexual experience, after, or were unsure (see Appendix Y).

The outputs indicated that for people who received their formal sexual health education before their first sexual experience, there was a significant difference in how people communicated verbally, how people communicated nonverbal sexual initiation and pleasure, and how people indicated nonverbal sexual refusal with statistically significant ($p < .001$) higher rankings at one's most recent sexual experience than for one's first sexual experience (see Appendix Y1). There was also a significant difference

($p < .001$) between people's ranking of internal consent feelings with people feeling more of a physical response, safer, more aroused, more agreement and want for the behaviour, and more ready for sex during their most recent sexual experience. Lastly, this group of participants significantly differed ($p < .001$) in their ranking of engagement in external consent behaviours with more external consent behaviours occurring during their most recent sexual experience.

For people who received their formal sexual health education after their first sexual experience, there was a significant difference in how people communicated verbally and how people communicated nonverbal sexual initiation and pleasure with statistically significant ($p < .001$) higher rankings at one's most recent sexual experience than for one's first sexual experience (see Appendix Y2). There was no significant difference in how people ranked nonverbal sexual refusal between the two-time points ($p = .436$). There was also a significant difference ($p < .001$) between people's ranking of internal consent feelings with people feeling more of a physical response, safer, more aroused, more agreement and want for the behaviour, and more ready for sex during their most recent sexual experience. Lastly, this group of participants significantly differed ($p < .001$) in their ranking of engagement in external consent behaviours with more external consent behaviours occurring during their most recent sexual experience.

For people who were unsure if they received their formal sexual health education before their first sexual experience, there was a significant difference in how they communicated during their first and most recent sexual experience. There was a significant difference in how people communicated verbally ($p < .001$) and how people communicated nonverbal sexual initiation and pleasure ($p < .001$), with statistically

significant higher rankings at one's most recent sexual experience (see Appendix Y3). There was no significant difference in how people ranked nonverbal sexual refusal between the two-time points ($p = .058$). There was also a significant difference ($p < .001$) between people's ranking of internal consent feelings with people feeling more of a physical response, safer, more aroused, more agreement and want for the behaviour, and more ready for sex during their most recent sexual experience. However, there was no significant difference ($p = .011$) in their ranking of engagement in external consent behaviours between the two-time points.

For people who did not receive formal sexual health education before their first sexual experience, there was a significant difference in how people communicated verbally ($p < .001$), how people communicated nonverbal sexual initiation and pleasure ($p < .001$), and how people communicated nonverbal sexual refusal ($p =.003$) with statistically significant higher rankings at one's most recent sexual experience than for one's first sexual experience (see Appendix Y4). There was also a significant difference ($p < .001$) between people's ranking of internal consent feelings with people feeling more of a physical response, safer, more aroused, more agreement and want for the behaviour, and more ready for sex during their most recent sexual experience. Lastly, this group of participants significantly differed ($p < .001$) in their ranking of engagement in external consent behaviours with more external consent behaviours occurring during their most recent sexual experience.

When looking at the total sample there was a significant difference in the ranking of sexual communication sexual consent feelings and sexual consent behaviours at the two-time points for people who received and did not receive sexual health education.

There was a significant difference in how people communicated verbally, how people communicated nonverbal sexual initiation and pleasure, and how people indicated nonverbal sexual refusal with statistically significant ($p < .001$) higher rankings at one's most recent sexual experience than for one's first sexual experience (see Appendix Y4). There was also a significant difference ($p < .001$) between people's ranking of internal consent feelings with people feeling more of a physical response, safer, more aroused, more agreement/want for the behaviour, and more ready for sex during their most recent sexual experience. Lastly, the participants significantly differed ($p < .001$) in their ranking of engagement in external consent behaviours with more external consent behaviours occurring during their most recent sexual experience.

Demographic Differences in Perceived Quality of Formal Sexual Health Education

Kruskal-Wallis tests were run to test if there were differences in how participants perceived their formal sexual health education by sex, gender, sexual orientation, ethnicity, and age (see Appendix Z). A Bonferroni correction was applied and so all effects are reported at a .01 level of significance. Based on the results, we conclude that there is no difference in the level of perceived quality of formal sexual health education between males and females ($H(1) = 1.12$, $p = .290$). In regard to gender, there is no difference in the level of perceived quality of formal sexual health education between men, women, and gender diverse identifying persons $H(2) = 1.92$, $p = .384$). For the difference between people of various sexual orientations and their perceived quality of education, the results indicate a significant difference ($H(2) = 18.37$, $p < .001$). Adjusted pairwise analyses highlight a significant difference between pansexual/bisexual individuals and straight/heterosexual individuals ($p = .000$), with straight/heterosexual

individuals reporting higher perceived quality of education. There was no significant difference found between people of a diverse sexual orientation and those who identified as straight/heterosexual or pansexual and bisexual. As for ethnicity, there was no significant difference in the level of perceived quality of formal sexual health education between ethnicities ($H(2) = 8.18$, $p = .017$). Regarding age, the results indicate that there is no difference ($H(2) = 12.26$, $p = .016$) in the level of perceived quality of formal sexual health education between ages.

Differences in the Perceived Quantity of Informal Sexual Health Education

Man-Whitney U tests were conducted to identify if there were differences between how people who received formal education compared to those who did not on their perception of the quantity of information taught from various sources (see Table 14). These sources included family, the internet, friends/peers, sexual partners, community organizations, schools, and books or magazines. A Bonferroni correction was applied and so all effects are reported at a .007 level of significance.

Table 14

Differences in Perceived Quantity of Informal Sexual Health Education

Measure	Received Formal Sex Education	Did not Receive Formal Sex Education	*U*	*z*	*p*
	Mdn	*Mdn*			
Family	1.17	.83	26469.50	-2.91	.004
Internet	2.17	2.33	34226.00	-1.19	.236
Friends/Peers	2.17	2.17	33342.50	-.72	.471
Partners	2.17	2.08	30377.00	-.84	.399
Community	.00	.00	29969.00	-1.15	.252
School	1.50	.33	14660.50	-9.14	.000
Books/Magazines	.83	.67	32933.00	-.508	.611

Note. The subscales are on a five-point Likert scale from zero to four.

The results indicated that the perceived quantity of education taught by one's family was greater for people who received formal sexual health education than for people who did not receive formal sexual health education (U = 26469.50, p = .004). The results also indicated that the quantity of education learned from the internet (U = 34226.00, p = .236), from friends or peers (U = 33342.50, p = .471), from partners (U = 30377.00, p = .399), from the community (U = 29969.00, p = .252) and through books and magazines (U = 32933.00, p = .661) was not significantly different between people who received formal sexual health education and people who did not receive formal sexual health education. Lastly, the results indicated that people who received formal sexual health education had a significantly higher perceived quantity of education taught by their school than people who did not receive formal sexual health education (U = 14660.50, p <.001).

Differences by Gender.

Kruskal-Wallis tests were conducted to determine whether there is an effect of gender on the level of perceived quantity of education taught from various sources (see Appendix AA). A Bonferroni correction was applied and so all effects are reported at a .007 level of significance. For the effect of gender on the level of perceived quantity of education from family ($H(2)$ = 2.96, p = .228), the internet ($H(2)$ = 4.31, p = .116), partners ($H(2)$ = 4.38, p = .112), the community ($H(2)$ = 6.56, p = .038), school ($H(2)$ = 6.23, p = .044), and from books and magazines ($H(2)$ = .06, p = .972), the results did not indicate a statistically significant difference. However, the results did indicate a statistically significant difference ($H(2)$ = 16.11, p < .001) in the level of perceived quantity learned through friends and peers between the various gender identities.

Adjusted pairwise analyses highlight a significant difference between men and women ($p = .000$), with women reporting a higher level of perceived quantity of education taught by friends and peers.

Differences By Sexual Orientation.

Kruskal-Wallis tests were also conducted to determine whether there is an effect of sexual orientation on the level of perceived quantity of education taught from various sources (see Appendix AB). A Bonferroni correction was applied and so all effects are reported at a .007 level of significance. For the effect of sexual orientation on the level of perceived quantity of education from family ($H(2) = 9.12$, $p = .010$), friends and peers' partners ($H(2) = 1.50$, $p = .473$), and from books and magazines ($H(2) = .18$, $p = .914$), the results did not indicate a statistically significant difference. However, the results did indicate a statistically significant difference in the level of perceived quantity learned through the internet ($H(2) = 21.46$, $p < .001$), from partners ($H(2) = 17.38$, $p < .001$), from the community ($H(2) = 14.48$, $p < .001$), and through school ($H(2) = 16.21$, $p < .001$) between the various sexual orientation identities.

Adjusted pairwise analyses highlight a significant difference between straight/heterosexual and pansexual & bisexual people ($p = .001$), and people who identify as straight/heterosexual and of a diverse sexual orientation ($p = .002$). There was no significant difference found between people who identify as pansexual and bisexual and those who identify with a diverse sexual orientation ($p = 1.00$). People of a diverse orientation reported a higher level of perceived quantity of education learned from the internet, followed by pansexual and bisexual individuals, and then straight/heterosexual individuals. For information learned from partners, adjusted pairwise analyses highlight a

significant difference between straight/heterosexual people and people who identify with a diverse sexual orientation (p = .004). There was also a significant difference between straight/heterosexual people and people who identify as bisexual or pansexual (p = .005). Again, there was no significant difference found between people who identify as pansexual and bisexual and those who identify with a diverse sexual orientation (p = 1.00). Straight people reporting a higher level of perceived quantity of education learned from partners, followed by pansexual and bisexual individuals, and then people of a diverse orientation. Although the results demonstrated a statistically significant difference in the level of perceived quantity learned from the community, adjusted pairwise analyses did not indicate a significant difference between the specific sexual orientations at the Bonferroni corrected level of .007. Lastly, adjusted pairwise analyses highlight a significant difference between straight/heterosexual and pansexual & bisexual people (p = .001), with straight people reporting a higher level of perceived quantity of education learned through school.

Discussion

This study aimed to identify the impact of peoples' sexual health education on their sexual communication behaviours as well as consent feelings, attitudes, and behaviours at two retrospective time points. This study also aimed to identify if there was a difference between peoples' sexual communication and consent negotiation at two-time points (i.e., the first sexual experience compared to one's most recent experience). Several quantitative analyses were conducted and presented to further the understanding of sexual health education's impact on different feelings, behaviours, and beliefs. To our knowledge, there has been no literature on the impact of people's perceived quality of

sexual health education on their sexual communication and sexual consent feelings and behaviours, specifically conducted on people's first and most recent sexual experiences. The results of this study provided partial support for our hypotheses on education's influence on sexual communication behaviours, consent feelings, and consent behaviours during people's first sexual experience as well as people's consent attitudes. There was no support found for our hypotheses regarding people's feelings and behaviours during the participant's most recent sexual experience except for verbal communication. This highlights that formal sexual health education may only impact people's feelings and behaviours when presented close in time to a sexual experience if it is not heavily emphasized in sexual health curriculum.

This study found that participants who received their sexual health education prior to their first sexual experience reported higher perceived quality of education than those who received their education after their first sexual experience. As for the participants who were unsure of when they received their education, it is likely that this was a mixed sample of people who received their education before, after, or at the same time (e.g., the same day), which may explain why those who were unsure reported a greater perceived quality of sexual health education than those who received their formal sexual health education after. This difference between groups in the perceived quality of their sexual health education is likely due to the timeliness of the education. Receiving the required education after the event in which it is needed is likely to be interpreted as less impactful/useful. Past research has found that there are disagreements among Canadian parents regarding when certain topics should be introduced (Wood et al., 2021). The researchers also highlight that parents want most sexual health topics introduced before

the secondary school grades (Wood et al., 2021). The timing of someone's sexual health education is just as imperative as the content. These results demonstrate that although someone's education may be of good quality, it may not be perceived that way if not received prior to their first sexual experience. That is why all regression analyses were run with only the participants who received their sexual health education prior to their first sexual experience.

Hypothesis One: Sexual Communication Behaviours at First Sexual Experience

Hypothesis one was partially supported. There was an association between the perceived quality of sexual health education and one's verbal communication at first sexual experience. Although the correlation was moderate, the perceived quality of sexual health education accounted for some of the variance in verbal communication. Although it is impossible to know how each classroom structures its sexual education, it is possible that this sample learned the importance of communicating verbally and were taught the skills to do so. This is supported by the emphasis put on verbal communication by various educational resources, such as in the Canadian guidelines for sexual health education, which emphasize verbal communication as a key communication approach (SIECCAN, 2019). If the guidelines are being utilized in Ontario, Canada, it is possible that verbal communication skills are being taught in the majority of people's sexual health education. With sexual health education being close in time to people's sexual experience it is likely that it was relevant to their experience, potentially part of the sexual script that they were following at that time. With higher perceived quality, it is possible that their attitudes toward consent were more positive, and they felt more capable of communicating more verbally.

In this study, education was able to explain more of the variance in verbal communication than all other outcome variables. People understand that verbal communication is the best kind of communication approach, especially when negotiating consent (Brady et al., 2018). Although rated as the best approach, previous researchers have found that people often report communicating consent by using nonverbal behaviours (Muehlenhard et al., 2016). With education predicting people's verbal communication in this study, it is important that the emphasis on verbal communication continues, and sexual health education focuses on how to best navigate sexual experiences. In doing this, people's scripts can better encompass verbal communication and help people feel more capable and comfortable communicating verbally.

Emphasis on verbal communication for all identities is imperative as this study found that being of diverse gender, compared to being a woman, resulted in more verbal communication behaviours during one's first sexual experience. Although unexpected, this finding can be supported by the idea that people of diverse genders who do not identify with the binary of men and women, did not receive a sexual health education that applied to them, making it possible that they sought applicable and relevant information elsewhere. Researchers have found that the sexual health needs of transgender and non-binary youth are not commonly covered in formal sexual health curricula or in the other sources the youth seek out (Haley et al., 2019). In this study, participants of a diverse gender may have received more education that helped them feel better equipped to communicate verbally. However, Haley et al. (2019) emphasize that dependence on potentially inaccurate sex education sources (e.g., the internet, peers, and partners) leaves trans and nonbinary youth vulnerable to negative outcomes (e.g., sexually transmitted

infections, pregnancy, and unsanitary sex toy use). Although the participants in this study may have benefitted from seeking additional information in relation to their communication skills, there is the potential that receiving inaccurate information could lead to more negative health outcomes that were not assessed in this study.

It is also possible that the scripts people of diverse genders adhere to differ from those who identify as men or women, as sexual scripts are rarely explored outside of heterosexual and cisgender relationships (Griner et al., 2021), meaning their engagement in verbal communication behaviours may differ from what is expected of cismen and ciswomen. These gender differences could also influence how the event was remembered. People of diverse genders may have made different estimates of their retrospective behaviours than women. For example, women's internalization of traditional sexual scripts (i.e., to be passive and agreeable) plays a role in their behaviours (Hust et al., 2017). Adherence to this script may not have only influenced their verbal communication behaviours during their first sexual experience, but also how they remember communicating.

Like with verbal communication, there was also an association between one’s perceived quality of sexual health education and one’s nonverbal sexual initiation and pleasure behaviours during the participant's first sexual experience. Although the correlation was weak, the perceived quality of sexual health education accounted for some of the variance in nonverbal sexual initiation and pleasure. As this study found that education accounted for more variance in verbal communication, it is possible that the participants prioritized communicating verbally, but not to the exclusion of nonverbal forms of showing interest. As discussed previously, people acknowledge verbal

communication is the best kind of communication approach (Brady et al., 2018), which may be why perceived quality of education accounted for more of the variance in verbal communication than nonverbal communication in this study. Previous researchers have found that their sample's rating for coverage of sexual health topics, including sexual consent, was below the midpoint of their rating scale (MacDougall et al., 2022). In our study, all education groups (received education before, after, and unsure of when receiving education) were above the midpoint of the response range. This difference may highlight why in our study, we see the perceived quality of sexual health education accounting for some of the variance in both verbal communication and nonverbal sexual initiation and pleasure during the participant's first sexual experience.

Although there was an association between the perceived quality of sexual health education and one's nonverbal sexual refusal behaviours, the perceived quality of sexual health education did not lead to a significant change in the variance in nonverbal sexual refusal behaviours during one's first sexual experience. This could be due to sexual education not having adequately taught students on how to refuse a sexual behaviour. Various Canadian researchers have highlighted a gap in the sexual health education Canadian youth experience (Byers et al., 2017; MacDougall et al., 2020; Thiessen et al., 2021; Walters & Laverty, 2022). It is also possible that the education presented to students in this study did emphasize the importance of communicating consent and how to refuse a sexual encounter, but on how to verbally refuse (not nonverbally). This is why it is important that sexual health education presents the various ways one can communicate during sexual activities and how that communication can be understood (or

misunderstood). By providing various options for youth, they may feel more equipped to approach the situation at hand.

Teaching a variety of ways to communicate consent may be one approach to addressing gender differences in communication. In this study, identifying as a man (compared to identifying as a woman) resulted in reduced nonverbal sexual refusal behaviours at first sexual experience, aligning with existing literature that supports how traditional gender roles frame men as initiators and women as gatekeepers (Jozkowski et al., 2017; Richards et al., 2022; Setty, 2021; Weiser et al., 2022). While past research indicated that females often employ more nonverbal cues than males, both genders endorse nonverbal refusals (Richards et al., 2022).[1] This trend could stem from men frequently initiating advances, resulting in fewer refusals, as suggested by Richards et al. (2022), who found that men were significantly more likely than women to perceive the absence of resistance or silence as a sign of consent. This might reflect women's role as gatekeepers rather than initiators. It is plausible that men predominantly communicate refusals verbally while women, as found by Richards et al., rely on verbal cues to signal and interpret consent. An example of this is the avoidance of private settings, a tactic more prevalent among females than males for expressing sexual refusal (Richards et al., 2022).[1] The researchers state that this behaviour, denoting nonverbal sexual refusal, could be attributed to sexual assault prevention programs urging females to avoid isolation and adhere to the "buddy system."[1] This could explain why men reported fewer nonverbal refusals compared to women, given that females often strategically refuse a sexual behaviour for personal safety (Richards et al., 2022).[1] Nonetheless, sexual health

[1] My study uses the term gender, however, when reviewing past literature, I refer to the terminology used by the researchers.

education must emphasize the importance of sexual communication and teach that all people, of any gender, can safely and pleasurably engage in sexual behaviour. More specifically, the ability to decline sexual activity is not exclusive to women.

It was also found that those who identify as having a mixed ethnicity (primarily Caucasian with either Indigenous, South Asian, or Latin American), compared to those who identify as solely white, reported engaging in more nonverbal sexual refusal behaviours during their first sexual experience. This finding is interesting as those who identified as having diverse ethnicity did not engage in more nonverbal sexual refusal behaviours than white-identifying people. It is possible that having parents from two different cultural backgrounds could have created conflict in the kind of education they provided to their child. Previous research found that Black respondents reported receiving more sex information from parents when compared to White and Hispanics/Latinos, with Hispanics/Latinos learning significantly less than the two other groups (Sprecher et al., 2008). It is possible that living in a home with people of different ethnicities may come with dissimilar approaches to discussing sex and sexuality. With differing approaches, participants of a mixed-race identity may have felt that they did not receive the necessary tools to communicate their refusal verbally, instead relying on nonverbal sexual communication to demonstrate their refusal. It is also possible that the type of communication this population engaged in was dependent on the ethnicity of their partner. Whether their partner was of a similar identity, or a different identity, it could have an influence on the type of communication they engaged in. Future research is needed on cultural differences in consent negotiation and if that differs based on someone's partner's ethnicity or cultural norms.

Hypothesis Two: Sexual Consent Feelings and Behaviours at First Sexual Experience

The second hypothesis was focused on the perceived quality of sexual health education's impact on internal consent feelings (i.e., physical response, safety/comfort, arousal, agreement/wantedness, and readiness) and external consent behaviours during someone's first sexual experience. Hypothesis two was also partially supported. There was an association between the participants' perceived quality of their sexual health education and their feelings of physical response during their first sexual experience. While the correlation was weak, the perceived quality of sexual health education accounted for some of the variance in the respondents' feelings of a positive physical response. Despite youths expressing a desire to learn more about sexual pleasure (Wood et al., 2021), it is possible that our sample's education adequately addressed topics concerning physical responses to sexual experiences. The participants might have been less hesitant to acknowledge experiencing physical responses as sexual health education often covers more biological aspects of sex (Laverty et al., 2021). While sexual health education often centers around hypothetical scenarios rather than practical "how-tos" of real-life situations (Thiessen et al., 2021), it is unlikely that this had an impact on the participants' reporting of their physical responses.

However, the education (or socialization factors) the participants were exposed to may have influenced their responses as men in this study, compared to women, reported greater feelings of physical response during their first sexual experience. Men may have reported feeling more of a physical response when compared to women, as men's sexual experiences are often more accepted in society than those of women (Baumeister, 2000).

This is due to the sexual double standard that occurs when men are supported as sexual initiators and women's sexuality is constrained (Jozkowski et al., 2017). For example, Goldfarb et al. (2018) found that women, as well as participants in the lesbian, gay, and bisexual groups, expressed that their communications with parents prior to their first sexual experience resulted in feelings of guilt, disappointment, and fear. When looking at attitudes toward mixed-gender threesomes, male initiators were judged more favourably than female initiators (Thompson & Byers, 2021).[1] However, it is also possible that men felt more of a physical response as they may have received more physical gratification (e.g. orgasm) from their first intercourse (Sprecher et al., 1995). Sprecher et al. discuss that one explanation for men's greater subjective pleasure and likelihood of having an orgasm are because of different socialization experiences that may account for their greater freedom to enjoy sex. This supports the idea of the sexual double standard and why men may report feeling more of a physical response during their sexual experience.

It is conceivable that the sexual double standard's impact could be reduced with comprehensive sexual health education, leading to greater enjoyment of a sexual experience. In this study, there was an association between the perceived quality of sexual health education and one's feelings of safety and comfort during one's first sexual experience. Although the correlation was weak, the perceived quality of sexual health education accounted for some of the variances in feelings of safety/comfort during one's first sexual experience. This may be because the education provided some knowledge on what to expect of the experience. With more knowledge, the participants may have felt more comfortable with themselves and with their partners. This is supported by Nurgitz et al. (2021) who found that higher quality school-based sex education was related to

higher sexual confidence. With a greater sense of ease, comfort, and confidence, the participants may have felt safer and more certain about the behaviours they were about to or were engaging in at that time. With a more comfortable environment, it is possible that the participants would be more likely to verbally express consent, which could result in a more satisfying experience. This is in line with previous research as Willis et al. (2021) found that university students were more likely to actively communicate their consent if they felt safe and ready. It has also been found that comprehensive sexual education predicts self-efficacy and higher sexual confidence, which is related to higher levels of sexual satisfaction (Nurgitz et al., 2021).

Similar to our findings on feelings of physical response there was also a gender difference regarding feelings of safety/comfort. However, this difference was found between women and people of diverse genders. We found that people who identify as having a diverse gender identity, when compared to people who identify as women, felt safer and more comfortable during their first sexual experience. People of a diverse gender may have felt more safe/comfortable, when compared to women, as the sample was predominantly women and predominately in a cisgender mixed partnership (95.5%) meaning their partners were often men. This may have resulted in women having fewer feelings of safety/comfort due to the risk of sexual violence, as men are often the perpetrators of intimate violence against women (Cotter & Savage, 2019). This is further supported as only 36.4% of diverse gender participants in this study were in a sexual relationship with a cisgender man during their first experience. These potential experiences from women could have created feelings of uneasiness and a lack of comfort

due to the concern that if they do not consent to sex there could be negative repercussions (Impett & Peplau, 2002).

Although there was a significant association between the perceived quality of sexual health education and one's feelings of arousal during one's first sexual experience, the perceived quality of sexual health education did not lead to a significant change in the variance in feelings of arousal over and above the other predictors. It is possible that the relationship between the perceived quality of sexual health education and feelings of arousal was picking up something other than the perceived quality of sex education. It is possible it was picking up feelings of physical response instead of arousal as feelings of arousal could be interpreted as physical response as well. It may also be the case that the perceived quality of sexual health education could not significantly predict feelings of arousal as the sexual health education often presented to young people is not focused on aspects of arousal. This idea is supported by researchers finding that young adults obtained the least amount of information from various sources (including school) concerning pleasure, sexual techniques, oral sex, penetration, and ejaculation (Charest & Kleinplatz, 2022). If arousal was taught, it is likely it would be taught in the sense of what biologically occurs, which is not what our survey was asking. It is likely that the sexual health education participants reported receiving did not go into detail about what being turned on means or what that feels like, making it probable that they would search for this information elsewhere. Charest & Kleinplatz (2022) found that men reported obtaining more information from pornography about the pleasurable aspects of sexuality than women did, and straight women learned more about these topics from their partners than did other groups.

The gender differences in sources searched for information on pleasure also help explain the gender differences found regarding feelings of arousal. Men in this study, compared to women, reported greater feelings of arousal. This is in line with our understanding of whose sexual arousal is more socially acceptable. According to the sexual double standard, men's sexual behaviours are often more accepted than women's (Baumeister, 2000; Goldfarb et al., 2018; Jozkowski et al., 2017). It is possible that men and women felt equal amounts of arousal during their first sexual experience, but women may have responded in a more conservative way stating they felt less arousal to fit in line with the kind of responses that are expected of them. One of the arousal items was about feeling interested, and as men have been found to be the sexual initiators when compared to women (Byers, 1996; Jozkowski et al., 2017; Weiser et al., 2022), it is likely that they reported more feelings of arousal due to this. It is also equally likely that men were responding in a socially desirable manner to fit with what is expected of them. Fitting with these expectations, men in this study could have remembered their first sexual experience differently, making it possible that there was a gender difference identified in arousal behaviours, when it was just a gender difference in memory accuracy of the event.

Similar to the relationship between feelings of arousal and education, there was a significant association between the perceived quality of sexual health education and one's feelings of agreement/wantedness during one's first sexual experience, but the perceived quality of sexual health education did not lead to a significant change in the variance in feelings of agreement/wantedness. Previous researchers have provided support for the idea that consent and wantedness are two different concepts (Peterson & Muehlenhard,

2007). It is possible that the participants received education on consent and wantedness as synonymous, resulting in a significant correlation but a non-significant addition of variance (when controlling for some of the participant's demographic characteristics). In addition, it is likely that the education participants received taught the importance of consent, but not what consent looks or feels like during a sexual encounter. It is through increased teaching of practical skills and real-life situations that students could receive the tools needed to identify what is a wanted and consensual experience and know why the difference is important. This is why sexual health education that goes beyond the traditional curriculum of yes means yes/non-means no is imperative.

Providing inclusive and comprehensive education could also address the gender differences that exist regarding feelings of agreement/wantedness. In this study, both men and people of diverse gender identities, compared to women, reported greater feelings of agreement/wantedness during their first sexual experience. Although there is limited literature on the experiences of gender-diverse people, the difference between them and women can be supported with similar arguments that were used for gender differences in feelings of safety/comfort. As the sample was predominantly women and predominately heterosexual, the women's partners were most likely men. This may have resulted in women having fewer feelings of agreement/wantedness due to the risk of sexual violence, as men are often the perpetrators of intimate violence against women (Cotter & Savage, 2019). Due to sexual double standards and the traditional sexual script, it would be expected that men would feel more agreement and want for sex as they are often deemed sexual "initiators" (Byers, 1996; Jozkowski et al., 2017; Weiser et al., 2022). As men are reported/expected to initiate sex more often, there is support for the finding that the men

in this study would report more feelings of agreement/wantedness than women. Although the items in this subscale ask about consent as well as agreement/wantedness, many women may consent or agree to have sex, even if they do not want to have sex. There are many reasons why this may be, including avoiding tension in their relationship, promoting intimacy in the relationship, or satisfying their partners' needs (Impett & Peplau, 2002). This is important to highlight, as the difference between men and women could be reduced if women's experiences were better understood regarding this discrepancy of consent compared to wantedness.

An association was found between the perceived quality of sexual health education and the participants' feelings of readiness. Although the correlation was weak, the perceived quality of sexual health education accounted for some of the variance in one's feelings of readiness during their first sexual experience. It is possible that through the sexual health education the participants received, they felt more prepared for the sexual experience. Sexual health education has been defined as the process of providing "people with the information, motivation and behavioural skills needed to enhance sexual health and well-being and to prevent outcomes that can have a negative impact on sexual health and well-being" (SIECCAN, 2019, p. 22). The sample in this study must have felt equipped with the information and skills they deemed necessary at their first sexual experience, resulting in greater feelings of readiness. However, some of the existing literature has found that students on college and university campuses may not be well equipped to deal with non-consensual sexual experiences due to limited or imbalanced sexual health education, specifically sexual consent education (MacDougall et al., 2020). Feeling safe and ready for a sexual encounter is essential as university students are more

likely to actively communicate their consent if they felt safe, ready, and in agreement with the other person (Willis et al., 2021).

Feeling ready for a sexual encounter is necessary no matter how someone identifies. In this study, identifying as gender diverse, compared to identifying as a cisgender woman, resulted in greater feelings of readiness during one's first sexual experience. Although sexual health education is often focused on the experiences of men and women (Walters & Laverty, 2022), it is possible that by not identifying with the messages presented to cisgender women, those of a diverse identity felt more prepared for the sexual experience. Since women are often taught to protect their "virtue" (Goldfarb et al., 2018), they may be less prepared for the sexual experience. It may be difficult for women to feel equipped for sexual behaviour if they are continuously exposed to this kind of messaging. There has been limited research on people who do not identify as cisgender men or women, so it is difficult to compare this finding to previous literature. Since people of diverse gender identities are often unrepresented in the sexual health education curriculum (Walters & Laverty, 2022), it is possible that this group sought sexual health education elsewhere, for example seeking more information via the Internet as found in our study. By not being well prepared through formal sexual health education, people of a diverse gender may be better equipped and feel more ready for a first sexual experience as they found useful information elsewhere. However, this might not apply to everyone. People may be exposed to false information online, which is why sexual health education provided in schools needs to be inclusive of everyone's experiences to try and reduce people's need to find informative and accurate information elsewhere.

Lastly, under hypothesis two, there was an association between the perceived quality of sexual health education and people's external consent behaviours. Similar to the other outcome variables, the correlation was weak. One's perceived quality of sexual health education accounted for some of the variances in one's external consent behaviours during one's first sexual experience. Although there is research to support that youth do not receive practical skills in how to negotiate consent, and only learn definitions via conceptual and hypothetical scenarios (Thiessen et al., 2021), it is possible that the participants in this study learned the importance of communicating consent through these examples. This could be especially true for external behaviours as people understand verbal consent communication as the best communication approach (Brady et al., 2018), meaning they could have learned the importance of communicating their behaviours with their partners. However, this finding is inconsistent with previous literature as sexual consent behaviours are often excluded from the more traditional sexual script and from peoples' sexual interactions, due to a lack of education and conversations on obtaining and giving consent (Shumlich & Fisher, 2018).

In the current literature, there are various findings on gender and sex differences in sexual communication behaviours, and how consent is understood and expressed (Edison et al., 2022; Newstrom et al., 2021; Willis et al., 2019) and some of these findings are contradictory on whether men/males or women/females are more likely to communicate consent verbally (Richmond & Peterson, 2020; Willis et al., 2019).[1] Men in this study, compared to women, engaged in more external consent behaviours during their first sexual experience. Based on sexual script theory and the theory of planned behaviour, men would be more likely to engage in external consent behaviours as they

have been deemed the initiators of sexual behaviour (Byers, 1996; Jozkowski et al., 2017; Weiser et al., 2022). The external behaviour subscale in this study was not assessing verbal and nonverbal consent behaviours separately, the majority of the questions were focused on initiating behaviour, showing intent to engage in the behaviour, or allowing the behaviour to continue. It is also possible that the different messages presented to men and women impacted men's likelihood to show interest and communicate more about sex. This could be based on the reinforcement of the traditional gender scripts as well as the double standard that exists for men and women (Goldfarb et al., 2018).

These scripts may also be dependent on age. We found that as the participants' age increased, the less they engaged in external consent behaviours. Younger participants most likely received a more comprehensive sexual health education than those who were older. Previous researchers have found that sexual health educators (professionals) became more important between 1990 and 2006 (Sprecher et al., 2008). Although they did not find this with teachers per se, they suggest that young adults' access to both formal and informal sources of information had increased during that time period. Sprecher et al. (2008) highlight that these changes could have been due to increased public awareness of HIV and AIDS and technological and cultural changes in the media. With a lack of informative sexual health education, it is possible the older sample in this study was not as comfortable communicating their consent as a younger generation would be. It is also possible that since the older participants in this study would have engaged in their first sexual experience prior to more liberal sexual health education curriculums, they may not have been equipped with the skills and tools needed to feel comfortable communicating openly.

Hypothesis Three: Sexual Communication Behaviours at Most Recent Sexual Experience

The third hypothesis in this study was partially supported. There was no relationship between one's perceived quality of sexual health education and nonverbal sexual initiation and pleasure during the participants' most recent sexual experience. There was, however, an association between the perceived quality of the participants' sexual health education and their verbal communication and nonverbal sexual refusal behaviours during their most recent sexual experience. Though, only the perceived quality of sexual health education could significantly predict verbal sexual communication behaviours during the participants' most recent sexual experience. As the Canadian guidelines for sexual health education emphasize verbal communication as a key skill embodied in the theoretical model of their guidelines (SIECCAN, 2019), verbal communication may be the most emphasized communication approach in Canadians' sexual health education. It is possible that through a greater focus on verbal communication, participants in this study had a better memory of this education and had a greater understanding of the importance of communicating verbally.

When looking at how influential education was, education was more impactful to the participant's verbal communication during their first sexual experience. This may be because it was more salient as it was presented closer in time to their experience. It is also possible that other factors may have become more relevant or influential during the participants' most recent sexual experience, making the perceived quality of sexual health education less influential to more recent behaviours. Some of these factors can include more confidence in their own sexuality, the ability to understand their partner's needs,

and sexual experience more generally. Education may have only been able to predict verbal communication long-term, but not verbal consent communication. This may be why this finding does not align with previous research (Richmond & Peterson, 2020), as sexual health education needs to emphasize both verbal sexual communication and verbal consent communication. As verbal communication was the only behaviour that education could predict at both time points, it is possible that education's emphasis on verbal communication is influential long term.

As education was associated with all communication behaviours during the participants' first sexual experience, it is possible that the communication behaviours during their first sexual experience influenced the communication behaviours they engaged in during their most recent experience. This may be why education could not significantly predict all communication behaviours at the participant's most recent experience as it was the positive outcomes from their first experience that influenced their later behaviours. As found by Weinstein et al. (2008), women's greater knowledge of sexual health was associated with their sexual assertiveness. They discuss how women who were knowledgeable on sexual health issues felt better able to communicate their needs and desires for safer sex practices to their partners. Therefore, it is possible that feelings of assertiveness and other positive outcomes that came out of one's sexual health education are what may be influencing people's behaviours during their most recent experience. One could also argue that as relationships mature, activities change, and skills used early on are not continued. More longitudinal research is needed.

Although the perceived quality of sexual health education was found to predict verbal communication behaviours at the most recent time point, educational sessions

should still be implemented after people leave high school to ensure that comprehensive sex education is still available long-term. Laverty et al., (2021) found that Canadian students report wanting to learn more beyond the one-off sexual health classes and be offered sexual health content over longer periods of time. This highlights the importance of continuous comprehensive sexual health education as the quality and quantity of one's sexual health education can positively impact consent attitudes and intentions to obtain consent (Richmond & Peterson, 2020). To our knowledge, there is no research on the long-term impacts of Canadian sexual health education on consent and communication feelings and behaviours. Most research is focused on people's perceptions of their sexual health education coverage (Byers et al., 2013; MacDougall et al., 2020) or rating how satisfied they are with their education (Rye et al., 2015). The current study went beyond perceptions and ratings of satisfaction to demonstrate the link between sexual health education and sexual communication during one's first and most recent sexual experience.

Hypothesis Four: Sexual Consent Feelings and Behaviours at First Sexual Experience

The fourth hypothesis was not supported. There was no relationship between one's perceived quality of sexual health education and one's feelings of agreement/wantedness and external consent behaviours during the participants' most recent sexual experience. However, a correlation between the perceived quality of sexual health education and all other consent feelings during the participants' most recent sexual experience was found. Though, the perceived quality of sexual health education could not significantly predict these feelings during one's most recent sexual experience. It is

possible that the education the participants reported receiving could not significantly predict consent behaviours at the participant's most recent experience as it was the positive outcomes from their previous experiences that influenced their greater feelings of physical response, safety/comfort, arousal, and readiness. Again, this finding could also be explained by limited sexual health education prior to the participants' first sexual experience influencing only their feelings close in time to that education. The educational lesson could have helped influence their consent feelings during their first experience but "wore off" before their most recent encounter. This is supported by Falcon et al.'s (2022) study that found that brief exposure to theory-informed educational consent messaging targeting students' consent attitudes, subjective norms related to consent, and perceived behavioural control led to more behavioural intentions to ask for consent and subjective norms around asking for consent among the intervention group. However, participants completed the post-intervention survey directly after exposure to the theory-informed content (Falcon et al., 2022). It is possible that exposure can lead to more positive intentions to ask for consent but only close in time to the exposure, meaning that the education people received in high school may not have salient long-term impacts.

Hypothesis Five: Sexual Consent Attitudes, Norms, and Perceived Behavioural Control

As for the fifth hypothesis, it was partially supported. There was an association between the perceived quality of sexual health education and one's current sexual consent attitudes. Although the correlation was weak, the perceived quality of sexual health education accounted for some of the variance in respondents' consent attitudes. This is in line with previous research as it has been found that greater perceived sex education was

associated with positive attitudes toward consent, intentions to obtain consent, and consent behaviours (Richmond & Peterson, 2020). One's consent attitudes have the power to influence their consent behaviours. This is supported by Hermann et al. (2018) as they found that men who endorsed hypermasculinity reported: more negative attitudes toward consent, reported a greater lack of control over asking for consent, were less likely to report intentions to ask for consent, and reported more indirect consent behaviours.

As mentioned previously, Falcon et al. (2022) found that brief exposure to theory-informed educational consent messaging (such as meme-style formatted posters) targeting students' consent attitudes, subjective norms related to consent, and perceived behavioural control led to more behavioural intentions to ask for consent and subjective norms around asking for consent among the intervention group. These findings also provide support for a possible recency effect as their participants completed the post-intervention survey directly after the exposure to the educational messaging. Like our other findings, sexual health education may only be impactful on the participants' attitudes closer in time to their first sexual experience, not their attitudes as they age. This may be why in our study, as age increased, the participants' agreement with positive consent attitudes decreased.

Unlike with consent attitudes, the perceived quality of one's sexual health education was not associated with norms about assuming consent and perceived behavioural control in asking for consent. This could be due to the amount of time that passed between when the participant received their sexual health education and when the survey was taken. This is especially the case with the participants' perceived quality of

sexual health education as years could have passed making sexual health education less of a contributor to people's self-efficacy. It is also possible that the perceived quality of sexual health education was not associated with social norms surrounding consent as in this study, social norms were not specifically focused on positive consent norms. The participants in this study may have received a better-quality consent education in which the norms they adhered to did not align with the norms presented in this study's survey. This could emphasize that positive and comprehensive consent education is beginning to be presented to youth in Canada. Premier Kathleen Wynne's updated sex education curriculum in Ontario, which included information on consent (Bialystok, 2019), is an example of one of these progressive attempts.

Exploratory Analyses

I also explored if there was a difference between people's first and most recent sexual experiences for those who received their sexual health education prior to their first sexual experience. It is interesting that in this group, these participants had engaged in more communication/consent behaviour and reported more consent feelings at their most recent sexual experience. This means that something between the participants' first and most recent experience led to increased feelings of consent and communication and consent behaviours. It is possible that people's comfort with their long-term partner, relationships, and experience having sex could help explain this difference. It is also possible that the participants had a "better" (or less awkward) sexual experience during their most recent encounter resulting in higher communication, consent feelings, and consent behaviours. Willis et al.'s (2021) found that participants in their study were more likely to actively communicate their consent if they felt safe, ready, and in agreement

with the other person. During their most recent encounter, people may have had more of these feelings leading to more communication, consent feelings, and consent behaviours. It is also probable that the participants reported more communication behaviours, consent feelings, and consent behaviours during their most recent encounter as they may have better recall of this experience.

This finding could also be explained by half of the participants stating that they learned/received more sexual health education since leaving high school. This suggests that while the perceived quality of one's high school education may not significantly predict all communication behaviours and consent-related feelings and behaviours during their most recent encounter, it implies that further education acquired beyond this time point might have the potential to predict and influence those feelings and behaviours. This highlights the importance of providing youth with ongoing sexual health education as they are still learning about sex after high school. Sexual health education should not stop when people leave high school, it should be continued throughout someone’s life especially when discussing boundaries, consent, and clear communication. This could include workshops in the community or additional classes in college or university.

The only demographic group difference found with respect to perceived quality of sexual health education was between people of different sexual orientations. The difference was between straight/heterosexual individuals and pansexual and bisexual individuals, with straight/heterosexual participants reporting a greater perceived quality of education. Sex is often presented via a heterocentric lens, which excludes various groups and hinders the recognition of diverse sexual practices that constitute sex and sexuality (Santos & Santos, 2018). In Canada, gender and sexually diverse youth may be

overlooked and exposed to information that is exclusively focused on cisgender, heterosexual people, and their experiences, resulting in gender and sexually diverse youth reporting lower percentages of topics learned (Walters & Laverty, 2022). These findings highlight that more must be done to ensure that the education presented in school applies to various people of different orientations. Although teachers may be unable to teach all the necessary information, it is imperative that consent education is taught beyond penis-vagina intercourse and is applied to other sexual and non-sexual behaviours.

When exploring informal sexual health education sources, the only significant difference between people who received sexual health education and those who did not, was information learned from family and school. Participants who received formal sexual health education reported learning more from school and family members than those who did not. It is possible that conversations with one’s family occurred more often among those who received formal sexual health education, as parents and other family members were aware of what was being taught in the classroom and continued the conversation at home. This is supported by both youth and parents being in support of more variety in what is taught to students, including conversations around pleasure, communication, and intimacy (Wood et al., 2021). However, families’ communication with their children may not have all been positive. Participants who received formal sex education reported more quantity of informal education from family members, not quality.

Previous researchers have found that although parents' communication with their children about sexual and relationship violence may be communicating important messages about consent, they may also be reinforcing gendered sexual scripts (Weiser et al., 2022). This idea is furthered by Goldfarb et al. (2018) as they found that females were

more typically told by their parents to wait until they were older or married to have sex, whereas males were told to use condoms.[1] Although participants may report receiving sexual health education from their families, this education may not provide the comprehensive sexual consent education that is needed to allow them to feel agentic and skilled to have sex. This is why sexual health education should not just be provided to youth, it should be provided to parents and guardians as well. This would allow them to be better equipped to answer their child's questions as university students have reported wishing their parents had been more open and comfortable discussing sexual health with them (Thiessen et al., 2021). To further this, the students in their study also reported that they wish they could have gone to their parents instead of other sources, suggesting that parents do play an important role in providing sexual education to their children (Thiessen et al., 2021).

As for gender and sexual orientation differences in the perceived quantity of informal sexual health education, there was a significant difference among gender for information learned from friends/peers and sexual orientation differences in the quantity learned from the internet, partners, community, and school. It is possible that women felt more comfortable talking about various topics with their friends or peers because they could discuss their experiences and ask questions or seek guidance. Previous researchers have found that women reported receiving significantly more sex education than men from a variety of sources including same-sex friends (Sprecher et al., 2008).

There was also a significant difference found between the various sexual orientations in quantity learned from the internet. People of a diverse orientation reported a higher level of perceived quantity of education learned from the internet, followed by

pansexual and bisexual individuals, and then straight/heterosexual people. It is likely that these differences stem from the lack of formal sexual health education presented to people who do not identify as heterosexual. Previous researchers have found that students communicated that their sexual health education was heteronormative and felt that including discussions on diverse orientations and relationships could have improved their education (Thiessen et al., 2021). When looking at the difference in what was learned from partners, bisexual and pansexual participants, as well as people of diverse orientations, learned less than heterosexual participants. These results differ from the finding that non-heterosexual participants learned more from the internet than heterosexual participants. This finding highlights that people who learned less from formal sexual health education (i.e., pansexual, bisexual, and people of diverse orientations) may have sought more information from the internet to make up for the gaps in their formal education. Similarly, participants who reported learning less from their partners may have felt less knowledgeable and comfortable communicating about sexual topics with their partners, resulting in a greater need to seek sexual health information from the internet.

With regard to differences in education taught by the community, it is possible that heterosexual people reported learning more from community members than pansexual, bisexual, and people of diverse orientations, as their orientation is often more accepted in certain cultural and religious communities than others (Bailey et al., 2016). Society often assumes a person is heterosexual until that person comes out (Lahey, 2022), making it possible that less relevant information was shared with people who do not identify as straight, influencing their responses on how much they learned from the

community. Lastly, a significant difference was reported for the quantity of sex education that was learned at school, with heterosexual people learning significantly more from school than pansexual and bisexual individuals. Although not significant, straight participants also learned more in school than participants of diverse orientations. LGBTQ+ youth in Canada, when compared to heterosexual youth, report learning less about nearly all sexual health education topics taught (Walters & Laverty, 2022). The emphasis on more inclusive and comprehensive sexual health education in Canada needs to continue in order to provide a safe and educational space for all.

Sexual Script Theory and the Theory of Planned Behaviour

In this study, sexual script theory and the theory of planned behaviour were used to inform potential findings. It was found that the perceived quality of sexual health education was able to predict people's feelings, behaviours, and attitudes. Two important main findings were that the perceived quality of sexual health education predicted positive attitudes toward obtaining consent at the time the study was taken and verbal communication during the participants' first and most recent sexual experience with a partner. Both findings were in line with what was hypothesized using the two theories. As discussed previously, the kind of messaging presented to youth about sexual communication, consent, and sexual health more generally, can be understood differently depending on the scripts that they adhere to, in this case, scripts taught through formal sexual health education. How these scripts are understood and internalized may then influence attitudes toward communicating consent, social norms surrounding communicating consent, and the perceived behavioural control one has in engaging in these behaviours.

These theories can also be applied to the demographic differences found, specifically regarding differences between the gender and sexual orientation groups. For example, as discussed, scripts like the traditional sexual script continue to be prevalent in people's understanding of sex (Jozkowski et al., 2017), and the material people view, like pornography, presents messaging in accordance with the heterosexual script (Willis et al., 2020). This is why sexual health education is important as it can provide youth with the necessary information and skills needed to avoid adhering to these more negative scripts, and instead, educate youth on the importance of sexual communication and consent, leading to adherence to more positive sexual scripts and greater engagement in positive sexual behaviours.

Based on the theories presented, it is likely that the participants learned the importance of sexual communication, specifically verbal sexual communication in the education they received. It is also likely that this education helped shape positive attitudes toward obtaining consent as their education helped form their sexual scripts surrounding consent negotiation. It is important to note that the perceived quality of sexual health education was able to predict the participants' attitudes at the time the study was taken, potentially years after they received their education. It was found that as perceptions of sexual health education quality increased, participants reported more positive attitudes toward establishing consent. This demonstrates education's influence on attitudes, furthering the idea that what is taught in the classroom can make an impression on people's attitudes, a determinant in people's intention to engage in positive consent behaviours.

Although the perceived quality of sexual health education predicted consent attitudes, the participants' education was unable to predict the other two determinants of intention to engage in a behaviour. This may have been due to the amount of time between the

participant's sexual health education and the time in which they took the study. Although that may be the case, the participant's attitudes may have been influential enough to lead to greater engagement in verbal communication behaviours during the most recent sexual experience but required education's influence on social norms and perceived behavioural control to be impactful on all consent feelings and communication behaviours at the two-time points. Overall, these theories were a good fit in informing the research question, hypotheses, and findings. This study went beyond just the use of sexual script theory to explain the findings by using a behaviour-based theory to link what is learned in sexual health education and how it relates to peoples' behaviours.

Limitations

This study is not without its limitations. Like other studies in psychology, this is a small convenience sample that was comprised of mainly females and women. MTurk was used to increase the number of other sex and gender groups, however there were more females and women in that subsample as well. There was also a lack of gender-diverse representation. Although we wished to be inclusive of the number of demographic questions and response options, this does not ameliorate the fact that the sample was still not representative of the Canadian population. Due to this, some of our data merging resulted in similar comparison groups. For example, the two primary comparison groups for sexual orientation (straight/heterosexual and bisexual/pansexual) comprised of people whose first sexual experiences were mixed, or predominately mixed, gender experiences, making the only difference between these groups their identity/orientation. Future researchers should conduct analyses using the participants' identities/orientations and the context of the partnership (i.e., whether the experience was with someone of the same

gender, or not) to see if there are differences in peoples' behaviours based on their identities and their sexual interactions.

This study was also retrospective in nature, meaning some participants may have been unable to remember their sexual health education and their first sexual experience, or remember it differently depending on whether it was a positive or negative experience. This study did not differentiate the difference between consent and wantedness specifically when looking at internal consent. It would be interesting to study how education impacts consent and wantedness separately. Consent and wantedness are two different concepts (Peterson & Muehlenhard, 2007), and by studying and teaching each concept separately, we could better inform youth on the difference and consider how it applies to their sexual experiences and internal consent feelings.

As for the data itself, there were some concerns with non-normality for the exploratory analyses which resulted in the use of non-parametric tests. This may have impacted the strength of the study as some of the original analyses could not be conducted. For the regressions that were conducted, the correlations were all weak with one being moderate. This may have impacted our understanding of the relationships we found as small relationships could have been an indicator of the influence of another factor. Lastly, Bonferroni corrections were applied to most of the results. The Bonferroni correction is quite conservative (Haynes, n.d.) and the results should be interpreted with that in mind.

Future Directions

As this study was retrospective in nature, future researchers should consider a longitudinal approach following students from when they received their sexual health

education and had their first sexual experience, all the way until their most recent sexual experience. This would provide us with more exact data on people's perceived quality of sexual health education and how long it remains influential. It would also give us the opportunity to ask the participants about the sexual experiences they had in between, or if there were any other influential experiences that could explain how education cannot predict most behaviours at their most recent experience. Furthermore, we could investigate why these subsequent experiences involved more consent and communication compared to their initial one. Although this study attempted to be more representative of a Canadian population by including a community sample, future researchers should aim to sample university students across Canada (not just in Ontario) alongside a community sample. In addition, oversampling of people in the LGBTQ+ community would be required to conduct more nuanced analyses on these specific groups. This would provide a better picture of how Canada’s approach to sexual health education is working.

Lastly, as COVID-19 has disrupted various aspects of peoples’ lives, it would be beneficial to conduct this study on people whose sexual health education was provided virtually or was minimally taught during the pandemic and see how it compares to the respondents in this study. Researchers have found that with COVID-19, Canadian university students reported decreases in access to sexual care services (i.e., sexually transmitted infection testing, human immunodeficiency virus testing, human papillomavirus vaccinations, and reproductive health services) (Wood et al., 2022). Although not specific to formal sexual health education, with reduced access to these sources, it is possible that access to comprehensive education during this time was also decreased.

Conclusion

The current study explored the relationship between peoples' perceived quality of sexual health education and its ability to predict sexual communication behaviours as well as consent attitudes, feelings, and behaviours. Perceived quality of sexual health education was found to predict consent feelings and consent and communication behaviours but only during the participant's first sexual experience, as well as verbal communication at the most recent time point. This research has furthered our understanding of the long-term impacts of sexual health education on various feelings and behaviours, highlighting the importance of sexual health education. This study also brought together two theories, sexual script theory and the theory of planned behaviour, to help explain this relationship. Studies such as this one, with a focus on education's influence on consent and communication within the context of one's first and most recent sexual experience with a partner, had not been done before. This study provides continued support for inclusive, comprehensive, accessible, and timely sexual health education in, and outside of, formal educational settings.

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Appendix A

Sociodemographic characteristics of Participants

A1

Sociodemographic characteristics of Participants

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Highest level of education										
Some high school	1	100	—	—	—	—	—	—	1	.2
Completed high school	78	75.0	7	6.7	3	2.9	16	15.4	104	15.4
Some college/university	301	73.4	24	5.8	17	4.1	68	16.6	410	60.7
Completed college/university	81	68.6	8	6.8	9	7.6	20	16.9	118	17.5
Apprenticeship training and trades	5	55.5	—	—	2	22.2	2	22.2	9	1.3
Some graduate education	4	80.0	—	—	—	—	1	20.0	5	.7
Completed graduate education	14	82.3	—	—	—	—	3	17.6	17	2.5
Professional degree	7	70.0	—	—	—	—	3	30.0	10	1.5
Missing	—	—	—	—	—	—	1	100.0	1	.1
Type of high school attended										
Public	336	77.6	27	6.2	18	4.1	52	12.0	433	64.2
Catholic	113	67.7	10	6.0	9	5.4	35	21.0	167	24.7
Private	26	50.0	2	3.8	4	7.7	20	38.5	52	7.7
Homeschool	—	—	—	—	—	—	1	100.0	1	.2
Other	1	50.0	—	—	—	—	1	50.0	2	.3

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Public and Catholic	13	86.7	—	—	—	—	2	13.3	15	2.2
Public and Private	1	100.0	—	—	—	—	—	—	1	.2
Private and Other	—	—	—	—	—	—	1	100.0	1	.2
Missing	1	33.3	—	—	—	—	2	66.6	3	.4
Political view										
Liberal (0)	44	69.8	9	14.3	—	—	10	15.9	63	9.3
1	120	76.9	8	5.1	4	2.6	24	15.4	156	23.1
2	135	71.4	8	4.2	11	5.8	35	18.5	189	28.0
3	109	74.7	6	4.1	7	4.8	24	16.4	146	21.6
4	28	80.0	2	5.7	2	5.7	3	8.6	35	5.2
Conservative (5)	14	63.6	2	9.1	1	4.5	5	22.7	22	3.3
Missing	41	64.0	4	6.3	6	9.4	13	20.3	64	9.5
Income										
Less than 25, 000	69	74.2	5	5.4	3	3.2	16	17.2	93	13.8
25, 000- 50, 000	74	66.7	6	5.4	6	5.4	25	22.5	111	16.4
50, 000-100, 000	121	71.7	13	7.7	13	7.7	22	13.0	169	25.0
100, 000-200, 000	136	80.0	5	2.9	5	2.9	24	14.1	170	25.2
200, 000+	40	85.1	2	4.2	1	2.1	4	8.5	47	7.0
Prefer not to answer	50	59.5	8	9.5	3	3.6	23	27.4	84	12.5
Missing	1	100.0	—	—	—	—	—	—	1	.1
Disability status										
No	397	72.6	34	6.2	24	4.4	92	16.8	547	81.0
Yes	86	75.4	4	3.5	7	6.1	17	14.9	114	16.9
Prefer not to answer	8	61.5	1	7.7	—	—	4	30.8	13	1.9
Missing	—	—	—	—	—	—	1	100.0	1	.1
Nation of Origin										
North America	445	77.1	32	5.5	22	3.8	78	13.5	577	85.5

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Central America	4	57.1	—	—	—	—	3	42.8	7	1.0
South America	2	25.0	—	—	2	25.0	4	50.0	8	1.2
Europe	8	57.1	3	21.4	—	—	3	21.4	14	2.1
Africa	8	57.1	1	7.1	—	—	5	35.7	14	2.1
Asia	20	43.5	2	4.3	5	10.9	19	41.3	46	6.8
Australia	1	100.0	—	—	—	—	—	—	1	.1
Pacific Islander	—	—	—	—	1	100.0	—	—	1	.1
Caribbean Islands	1	33.3	—	—	1	33.3	1	33.3	3	.4
Prefer not to answer	1	33.3	1	33.3	—	—	1	33.3	3	.4
Missing	1	100.0	—	—	—	—	—	—	1	.1
Citizenship status										
Canadian citizen	460	75.8	34	5.6	27	4.4	86	14.2	607	89.9
Permanent resident	11	45.8	2	8.3	2	8.3	9	37.5	24	3.6
Landed immigrant	2	100.0	—	—	—	—	—	—	2	.3
Temporary resident	11	45.8	1	4.2	—	—	12	50.0	24	3.6
Refugee	1	100.0	—	—	—	—	—	—	1	.1
Other	3	30.0	1	10.0	2	20.0	4	40.0	10	1.5
Prefer not to answer	2	33.3	1	16.7	—	—	3	50.0	6	.9
Missing	1	100.0	—	—	—	—	—	—	1	.1
Generational status										
1st generation	48	51.0	8	8.5	8	8.5	30	32.0	94	13.9
2nd generation	109	84.5	3	2.3	4	3.1	13	10.1	129	19.1
3rd generation	314	77.0	24	5.9	15	3.7	55	13.5	408	60.4
Prefer not to answer	5	50.0	—	—	2	20.0	3	30.0	10	1.5
Not applicable	15	44.1	4	11.8	2	5.9	13	38.2	34	5.0
Religiosity										
Not religious	260	77.8	21	6.3	9	2.7	44	13.2	334	49.6

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Somewhat not religious	70	76.1	6	6.5	4	4.3	12	13.0	92	13.6
Neutral	59	66.3	6	6.7	8	9.0	16	18.0	89	13.2
Somewhat religious	95	67.4	6	4.2	10	7.1	30	21.3	141	20.9
Very religious	6	33.3	—	—	—	—	12	66.7	18	2.7
Missing	1	100	—	—	—	—	—	—	1	.1
Religion										
Catholic/ Christianity	183	67.3	18	6.6	20	7.3	51	18.7	272	40.3
Islam	11	68.7	1	6.3	—	—	4	25.0	16	2.4
Judaism	7	87.5	—	—	—	—	1	12.5	8	1.2
Buddhism	6	66.7	—	—	—	—	3	33.3	9	1.3
Hinduism	8	57.1	—	—	—	—	6	42.9	14	2.1
Sikhism	2	33.3	—	—	—	—	4	66.7	6	.9
Indigenous spirituality	9	81.8	—	—	—	—	2	18.2	11	1.6
Atheism	103	77.4	12	9.0	2	1.5	16	12.0	133	19.7
Agnosticism	63	78.7	7	8.7	2	2.5	8	10.0	80	11.9
Other	36	81.8	—	—	4	9.1	4	9.1	44	6.5
Prefer not to answer	58	76.3	—	—	3	3.9	15	19.7	76	11.3
Missing	5	83.3	1	16.7	—	—	—	—	6	.9

Note. * Total sample percentages are in reference to a breakdown of the baseline characteristic. The percentages are not additive across the rows.

A2

First Sexual Experience Sociodemographic Characteristics of Participants

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Gender										
Women	395	73.3	35	6.5	23	4.3	86	16.0	539	79.9
Men	88	71.5	4	3.2	7	5.7	24	19.5	123	18.2
Trans man	—	—	—	—	1	50.0	1	50.0	2	.3
Non-binary	2	50.0	—	—	—	—	2	50.0	4	.6
Gender fluid	3	100.0	—	—	—	—	—	—	3	.4
Gender queer	1	100.0	—	—	—	—	—	—	1	.2
Two-spirit	—	—	—	—	—	—	1	100.0	1	.2
Prefer to self-describe	1	100.0	—	—	—	—	—	—	1	.2
Missing	1	100.0	—	—	—	—	—	—	1	.2
Partner's gender										
Women	101	69.6	7	4.8	5	3.4	32	22.1	145	21.5
Trans women	1	100.0	—	—	—	—	—	—	1	.2
Men	387	73.6	32	6.1	26	4.9	81	15.4	526	77.9
Trans man	1	100.0	—	—	—	—	—	—	1	.2
Non-binary	1	100.0	—	—	—	—	—	—	1	.2
Two-spirit	—	—	—	—	—	—	1	100.0	1	.2
Sexual orientation										
Asexual	10	71.4	2	14.3	1	7.1	1	7.1	14	2.1
Bisexual	41	77.3	2	3.8	3	5.7	7	13.2	53	7.9
Heterosexual/ straight	400	73.4	29	5.3	24	4.4	92	16.9	545	80.7
Gay/Lesbian	12	63.2	2	10.5	1	5.3	4	21.0	19	2.8

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Pansexual	3	60.0	1	20.0	—	—	1	20.0	5	.7
Queer	2	50.0	—	—	—	—	2	50.0	4	.6
Questioning	23	65.7	3	8.6	2	5.7	7	20.0	35	5.2
Relationship type										
Romantic partner	325	75.0	24	5.5	15	3.4	70	16.1	434	64.3
Friend	101	68.7	11	7.5	11	7.5	24	16.3	147	21.8
Acquaintance	36	69.2	3	5.8	2	3.8	11	21.2	52	7.7
Stranger	23	67.6	—	—	3	8.8	8	23.5	34	5.0
Other	6	75.0	1	12.5	—	—	1	12.5	8	1.2

Note. * Total sample percentages are in reference to a breakdown of the baseline characteristic. The percentages are not additive across the rows.

A3

Most Recent Sexual Experience Sociodemographic Characteristics of Participants

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Gender										
Women	391	73.6	33	6.2	22	4.1	85	16.0	531	78.7
Men	89	71.8	4	3.2	7	5.6	24	19.4	124	18.4
Trans man	—	—	1	33.3	—	—	2	66.7	3	.4
Non-binary	3	50.0	1	16.7	—	—	2	33.3	6	.9
Agender	1	50.0	—	—	1	50.0	—	—	2	.3
Gender fluid	4	100.0	—	—	—	—	—	—	4	.6
Gender queer	2	100.0	—	—	—	—	—	—	2	.3
Two-spirit	1	50.0	—	—	1	50.0	—	—	2	.3
Missing	—	—	—	—	—	—	1	100.0	1	.2
Partner's gender										
Women	94	70.1	7	5.2	5	3.7	28	21.0	134	19.9
Trans women	1	100.0	—	—	—	—	—	—	1	.1
Men	388	73.3	31	5.9	26	4.9	84	15.9	529	78.4
Trans man	2	50.0	1	25.0	—	—	1	25.0	4	.6
Non-binary	2	100.0	—	—	—	—	—	—	2	.3
Gender queer	4	80.0	—	—	—	—	1	20.0	5	.7
Time of experience										
Within the last week	242	72.0	24	7.1	16	4.8	54	16.1	336	49.8
Within the last month	134	74.9	8	4.5	7	3.9	30	16.7	179	26.5

Baseline Characteristic	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample**	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Within the last 6 months	70	71.0	5	5.0	4	4.0	20	20.0	99	14.7
Within the last year	23	85.2	—	—	2	7.4	2	23.5	27	4.0
More than a year ago	22	64.7	2	5.9	2	5.9	8	23.5	34	5.0
Relationship context										
Romantic partner	359	72.2	31	6.2	23	4.6	84	17.0	497	73.6
Friend	69	75.8	5	5.5	3	3.3	14	15.4	91	13.5
Acquaintance	36	78.2	1	2.2	2	4.3	7	15.2	46	6.8
Stranger	23	67.6	1	2.9	3	8.8	7	20.6	34	5.0
Other	4	57.1	1	14.3	—	—	2	28.6	7	1.0
Same partner as first										
Yes	78	72.9	6	5.6	6	5.6	17	15.9	107	15.9
No	412	72.8	33	5.8	25	4.4	96	17.0	566	83.9
Missing	1	50.0	—	—	—	—	1	50.0	2	.3

Note. * Total sample percentages are in reference to a breakdown of the baseline characteristic. The percentages are not additive across the rows.

Appendix B

Average Age and Relationship Duration During First and Most Recent Sexual Experience

Variables	*Received Formal Education Before FSE*		*Received Formal Education After FSE*		*Unsure of when Formal Education was Received*		*No Formal Education*		*Total Sample*	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Age (FSE)	16.63	2.05	14.81	1.94	15.90	2.21	17.09	2.61	16.57	2.20
Relationship Duration (FSE)	8.88	13.32	19.12	21.25	9.86	12.71	13.14	13.22	10.25	14.14
Relationship Duration (MRSE)	33.41	48.80	43.94	83.66	50.09	82.30	36.05	54.31	35.30	54.39

Appendix C

Advertisements

SONA advertisement: You are invited to participate in a study about sexual health education and sexual communication. This study will ask you to reflect on the quality of your sexual health education and past sexual experiences. To be eligible for this study, you must be between the ages of 17 and 35 and have had at least two consensual partnered sexual experiences (i.e., penile-vaginal sex, anal sex, or oral sex). The questionnaire takes approximately 45 minutes to complete. You will be compensated 1.0 credit in your participating psychology course for completing this survey. To participate in the study please click the following link. You will be redirected to an informed consent form and the questionnaire.

MTurk advertisement: You are invited to participate in a study about sexual health education and sexual communication. This study will ask you to reflect on the quality of your sexual health education and past sexual experiences. To be eligible for this study, you must be between the ages of 18 and 35 and have had at least two consensual partnered sexual experiences (i.e., penile-vaginal sex, anal sex, or oral sex). The questionnaire takes approximately 45 minutes to complete. You will be compensated $0.50 (USD) for completing this survey. To participate in the study please click the following link. You will be redirected to an informed consent form and the questionnaire.

Appendix D

Consent Forms

D1

Trent Consent Form

DEPARTMENT OF PSYCHOLOGY
Project Title: Sexual Health Education and Sexual Communication
Information and Consent Form
PRINCIPAL INVESTIGATOR: Eva Fernandes

INFORMATION You are invited to participate in a study on sexual health education and communication. Participation in this study involves filling out a questionnaire concerning sexuality education, sexual communication, sexual attitudes, and sexual behaviour. To be eligible for this study, you must be between the ages of 17 and 35 and have had at least two consensual partnered sexual experiences (i.e., penile-vaginal sex, anal sex, or oral sex). The questionnaire takes approximately 45 minutes to complete.

RISKS & BENEFITS One potential risk or discomfort in this study is that some individuals may feel uncomfortable stating their sexual history / behaviours, however, please note that your responses are completely anonymous and confidential and you are free to leave any question(s) blank if you prefer not to answer. Once you have completed the survey, there is no way to retract or erase your responses as the survey is anonymous. You may also withdraw from the study without penalty at any time. A benefit of this study is that you will have the opportunity to experience being a research participant of questionnaire studies to address psychological issues, thus enhancing your understanding of research. You will also be contributing to the psychological literature examining people's sexual communication behaviours. **CONFIDENTIALITY** Your responses will be kept completely anonymous and confidential. You are only known by your survey panel ID. Your responses to this survey will be de-identified at the time of collection. The demographic information being collected will not be used to identify you. In addition, the data will be stored on a secure server through Qualtrics, the information is protected by Transport Layer Security encryption and processed without leaving the jurisdiction, the data is only accessible to specific authorized accounts. It is expected that the results of this study will be reported in a thesis, psychological journal article, and in presentations at academic conferences. Note, however, that the responses you provide will not be identified in any reports of this research; only aggregated data (i.e., averages from many people) will be reported. No directly identifying information will be downloaded from the SONA system. The results will also be kept in an encrypted file. Raw data will be destroyed five years after the completion of this study, in accordance with the American Psychological Association's guidelines.

COMPENSATION For completing this study through SONA at Trent University, you will receive 1.0 research credit toward your psychology class requirements. If you leave the study before completing a minimum of 50% of the study, you will not be provided any compensation (i.e., extra credit) and we will not use your data. Student participants who complete 50% of the study will be allocated half the research credit (.5), the full 1

credit assigned to this study will be allotted to student participants who complete more that 50% of the survey. The data is reviewed once a week after participants have completed the study to assess credit allocation. Your SONA research ID number is used within the system to allocate credit.
CONTACT If you have questions at any time about the study or the procedures, you may contact the primary researcher, Eva Fernandes, email: evafernandes@trentu.ca or, Dr. Terry Humphreys at the Psychology Department, Trent University, DNA C114 at (705) 748-1011, extension 7773, email: terryhumphreys@trentu.ca. This project has been reviewed and approved by the Research Ethics Committee. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during this project, you may contact Jamie Muckle, Certifications and Regulatory Compliance Officer, Trent University, (705) 748-1011, extension 7896.
FEEDBACK If you wish to receive a summary of the results of this study, you are welcome to e-mail the primary researcher at evafernandes@trentu.ca to request them. We will not store your email so that anonymity is ensured. The results will be sent out at the end of the study, approximately June of 2023. If you do not wish to participate in this study or do not complete the survey, you can still request the results of the study. If you are requesting a summary of results, you will not have your email address or any other identifying information tied to your data. Your email will be deleted after your request has been received.
CONSENT By consenting to this study, you understand and are in agreement with the following statements. You are 17 or older and have read and understood the preceding description. You understand that your participation in this research is voluntary. You understand that you may choose to skip a question or to cease to participate at any time by closing your screen. However, once you have submitted your responses, they are anonymous, and your contributions cannot be withdrawn. You understand that withdrawal will not affect your future opportunities for research participation. You understand that you can print this consent form for your records.

D2

MTurk Consent Form

DEPARTMENT OF PSYCHOLOGY
Project Title: Sexual Health Education and Sexual Communication
Information and Consent Form
PRINCIPAL INVESTIGATOR: Eva Fernandes
INFORMATION You are invited to participate in a study on sexual health education and communication. Participation in this study involves filling out a questionnaire concerning sexuality education, sexual communication, sexual attitudes, and sexual behaviour. To be eligible for this study, you must be between the ages of 18 and 35 and have had at least two consensual partnered sexual experiences (i.e., penile-vaginal sex, anal sex, or oral sex). The questionnaire takes approximately 45 minutes to complete.
RISKS & BENEFITS One potential risk or discomfort in this study is that some individuals may feel uncomfortable stating their sexual history / behaviours, however,

please note that your responses are completely anonymous and confidential and you are free to leave any question(s) blank if you prefer not to answer. Once you have completed the survey, there is no way to retract or erase your responses as the survey is anonymous. You may also withdraw from the study without penalty at any time. A benefit of this study is that you will have the opportunity to experience being a research participant of questionnaire studies to address psychological issues, thus enhancing your understanding of research. You will also be contributing to the psychological literature examining people's sexual communication behaviours. **CONFIDENTIALITY** Your responses will be kept completely anonymous and confidential. You are only known by your survey panel ID. Your responses to this survey will be de-identified at the time of collection. The demographic information being collected will not be used to identify you. In addition, your data will be stored on a secure server through Qualtrics, the information is protected by Transport Layer Security encryption and processed without leaving the jurisdiction, the data is only accessible to specific authorized accounts. It is expected that the results of this study will be reported in a thesis, psychological journal article, and in presentations at academic conferences. Note, however, that the responses you provide will not be identified in any reports of this research; only aggregated data (i.e., averages from many people) will be reported. No directly identifying information will be downloaded. The results will also be kept in an encrypted file. Raw data will be destroyed five years after the completion of this study, in accordance with the American Psychological Association's guidelines.

COMPENSATION For those completing the survey through MTurk, you will receive $0.50 (USD). If you leave before completing a minimum of 50% of the study, you will not be provided any compensation and we will not use your data. The full $0.50 will be allotted to participants who complete more that 50% of the survey. Data is reviewed once a week after participants have completed the survey to assess monetary allocation. Your MTurk ID number is used to allocate your credit.

CONTACT If you have questions at any time about the study or the procedures, you may contact the primary researcher, Eva Fernandes, email: evafernandes@trentu.ca or, Dr. Terry Humphreys at the Psychology Department, Trent University, DNA C114 at (705) 748-1011, extension 7773, email: terryhumphreys@trentu.ca. This project has been reviewed and approved by the Research Ethics Committee. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during this project, you may contact Jamie Muckle, Certifications and Regulatory Compliance Officer, Trent University, (705) 748-1011, extension 7896.

FEEDBACK If you wish to receive a summary of the results of this study, you are welcome to e-mail the primary researcher at evafernandes@trentu.ca to request them. We will not store your email so that anonymity is ensured. The results will be sent out at the end of the study, approximately June of 2023. If you do not wish to participate in this study or do not complete the survey, you can still request the results of the study. If you are requesting a summary of results, you will not have your email address, or any other identifying information tied to your data. Your email will be deleted after your request has been received.

CONSENT By consenting to this study, you understand and are in agreement with the following statements. You are 18 or older and have read and understood the preceding

description. You understand that your participation in this research is voluntary. You understand that you may choose to skip a question or to cease to participate at any time by closing your screen. However, once you have submitted your responses, they are anonymous, and your contributions cannot be withdrawn. You understand that withdrawal will not affect your future opportunities for research participation. You understand that you can print this consent form for your records.

Appendix E

Questionnaire

What was your sex assigned at birth?

- Male
- Female
- Intersex
- Prefer to self-describe: ________________
- Prefer not to answer

Which of the following best describes you?

- Woman
- Trans woman
- Man
- Trans man
- Non-binary
- Agender
- Gender fluid
- Gender queer
- Two-spirit
- Prefer to self-describe: ________________
- Prefer not to answer

How would you describe your sexual identity?

- Asexual
- Bisexual
- Heterosexual/straight
- Gay/lesbian
- Pansexual
- Queer
- Questioning
- Prefer to self-describe: ____________
- Prefer not to answer

What is your age (numerically year, e.g., 24)?

- ________

Which of the following BEST describes your ethnic background? Please CHECK ALL THAT
APPLY.

- White/European
- Indigenous (Inuit/First Nations/Métis)
- Black/African/Caribbean
- Southeast Asian (e.g., Chinese, Japanese, Korean, Vietnamese, Cambodian, Filipino, etc)
- Arab (Saudi Arabian, Palestinian, Iraqi, etc)
- South Asian (East Indian, Sri Lankan, etc)
- Latin American (Costa Rican, Guatemalan, Brazilian, Colombian, etc)

- West Asian (Iranian, Afghani, etc)
- Other (please specify) ___________________________________
- Prefer not to answer

Which of the following best describes your HIGHEST level of education?

- Some high school
- Completed high school
- Some college/university
- Completed college/university
- Apprenticeship training and trades
- Some graduate education
- Completed graduate education
- Professional degree

Where were you born?

- North America
- Central America
- South America
- Europe
- Africa
- Asia
- Australia
- Pacific Islander
- Caribbean Islands
- Other_______________
- Prefer not to answer

What is your annual household income?

- Less than $25,000
- $25,000 - $50,000
- $50,000 - $100,000
- $100,000 - $200,000
- More than $200,000
- Prefer not to answer

What is your Canadian citizenship status?

- Canadian citizen
- Permanent resident
- Landed immigrant
- Temporary resident
- Refugee
- Other ______
- Prefer not to answer

What is your generational status?

- 1st generation (persons who were born outside Canada)
- 2nd generation (persons who were born in Canada and had at least one parent born outside
- Canada)
- 3rd generation (persons who were born in Canada with both parents born in Canada)

- Not applicable
- Prefer not to answer

Do you identify with having a (dis)ability/chronic condition that impacts daily living?

- Yes
- No
- Prefer not to answer

What type of high school did you attend?

- Public
- Catholic
- Private
- Homeschool
- Other
- Prefer not to answer

How religious would you say you are?

- Not religious
- Somewhat not religious
- Neutral
- Somewhat religious
- Very religious

Please indicate which of the following options represents your religion or your views about
religion.

- Catholicism/Christianity
- Islam
- Judaism
- Buddhism
- Hinduism
- Sikhism
- Indigenous spirituality
- Atheism
- Agnosticism
- Other: ______

• Prefer not to answer

How would you describe your political view?

- Very Liberal
- Somewhat Liberal
- Neutral
- Somewhat Conservative
- Very Conservative
- Prefer not to answer

Since leaving high school, have you learned more/received more sexual health education?

- Yes
- No
- I don’t know

This questionnaire has been designed to assess aspects of your FIRST sexual experience.

Throughout this section of the questionnaire, first sexual experience has been defined as the first
time you engaged in any sexual behaviour with a partner. These behaviours can include, but are
not limited to, vaginal, anal, and/or oral sex. Please use this definition when responding to this
section of the questionnaire.

Please describe your first sexual experience in detail:
• _____________
How old were you during your first sexual experience?
• ________
What was the context of your relationship with your partner(s) at the time of your first sexual
experience? It was with a…
- Romantic partner
- Friend
- Acquaintance
- Stranger
- Other

If statement (romantic partner option): What was the duration of your romantic relationship prior
to your first sexual experience (specify both years and/or months)?
Would you consider your first sexual experience to be consensual?
- Yes
- No

How would you describe your sexual identity at the time of your first sexual experience? (Select
all that apply)
- Asexual
- Bisexual
- Heterosexual/straight
- Gay/lesbian
- Pansexual
- Queer
- Questioning
- Prefer to self-describe: ____________
- Prefer not to answer

Which of the following best describes you at the time of your first sexual experience?
- Woman
- Trans woman
- Man
- Trans man
- Non-binary
- Agender
- Gender fluid

- Gender queer
- Two-spirit
- Prefer to self-describe: ________________
- Prefer not to answer

Which of the following best describes your partner at the time of your first sexual experience?

- Woman
- Trans woman
- Man
- Trans man
- Non-binary
- Agender
- Gender fluid
- Gender queer
- Two-spirit
- Prefer to self-describe: ________________
- Prefer not to answer

How many months/ years has it been since your first sexual experience? (slider option)

- Months
- Years

First-time partners may communicate with each other about different aspects of their sexual
relationship. Think about your first sexual experience with your partner and check the number
that best describes how often you communicated with them about each sexual topic. Please keep
in mind the definition of first sexual experience that we provided earlier.

- 1 Never
- 2
- 3
- 4
- 5
- 6
- 7 Always

1. I used nonverbal cues (smiling, caressing, etc.) to indicate to my partner that they were pleasing me.
2. I gave sexual praise to my partner when they did things that I liked.
3. It was easy to tell my partner the sexual things that didn’t work for me and why.
4. When I wanted to, I asked my partner for sex.
5. When things went wrong during sex, I avoided being touched by my partner.
6. I used nonverbal cues (snuggling, kissing, etc.) to let my partner know that I wanted to have sex.
7. I told my partner what we needed to do to increase my sexual pleasure.
8. I felt comfortable using nonverbal cues (such as touching, kissing, etc.) to initiate sex with my partner.

9. I snuggled and kissed my partner when they sexually pleased me.
10. I praised my partner when our sexual contacts pleased me.
11. When I wanted sex, I got things going by touching my partner sexually.
12. I used nonverbal cues (e.g., avoiding eye contact) to show my partner that I was not sexually satisfied.
13. I stopped my partner when they did something sexual that I do not like but did not say anything.
14. I used nonverbal cues (stop eye contact, use my hands, etc.) to let my partner know if I
didn't like their sexual techniques.
15. When my partner started to touch me sexually and I was not interested, I moved their hands away.
16. I felt comfortable asking my partner to try sexual things that we had never done before.
17. I felt comfortable snuggling and kissing my partner when they pleased me sexually.
18. I asked my partner to keep doing the things that sexually pleased me.
19. I told my partner if I didn't want to have sex.
20. I felt comfortable telling my partners the things that sexually pleased me.
21. I suggested new things for my partner to try during our sexual contacts.
22. I started to kiss my partner when I wanted to have sex.
23. I felt comfortable telling my partner if I wanted to have sex.
24. When my partner did something that didn't please me, I usually let them know this nonverbally (such as stopping with my hands or avoiding eye contact) instead of saying something.
25. It was difficult for me to ask my partner for sex when I wanted it.
26. I preferred to use nonverbal communication when something went wrong in my sexual
encounters.
27. When it came to sex, I asked my partner to do things that we had never tried before.
28. I used eye contact with my partner when I wanted to initiate sexual contact.

People may have different feelings associated with their consent or willingness to engage in
sexual activity. Think back to the first time you engaged in sexual activity (first sexual experience with a partner). Please indicate the extent to which you agree or disagree that you
felt the following during the first time you engaged in sexual activity.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

1. I felt interested.
2. I felt heated.
3. I felt aroused.
4. I felt secure.
5. I felt in control.

6. I felt turned on.
7. The sex felt consented to.
8. I felt rapid heartbeat.
9. I felt ready.
10. The sex felt desired.
11. I felt sure.
12. I left lustful.
13. I felt willing.
14. The sex felt agreed to.
15. I felt comfortable.
16. I felt safe.
17. I felt erect/vaginally lubricated.
18. I felt aware of my surroundings.
19. The sex felt wanted.
20. I felt certain.
21. I felt respected.
22. I felt flushed.
23. I felt protected.
24. I felt eager.
25. The sex felt consensual.

People communicate their willingness to engage in sexual activity in a variety of ways. Think
about the first time you engaged in sexual activity with another person (first sexual experience).
Which of the following behaviours did you engage in to indicate your consent or agreement to
engage in sexual activity? Indicate all responses that may apply.

1. I used non-verbal cues such as body language, signals, or flirting.
2. I did not resist my partner's attempts for sexual activity.
3. I indicated sexual behaviour and checked to see if it was reciprocated.
4. I took my partner somewhere private.
5. It just happened.
6. I increased physical contact between myself and my partner.
7. I did not say no or push my partner away.
8. I used verbal cues such as communicating my interest in sexual behaviour or asking if they wanted to have sex with me.
9. I shut or closed the door.
10. I did not say anything.
11. I touched my partner, showed them what I wanted through touch or increasing physical
contact between myself and the other person.
12. I let the sexual activity progress (to the point of intercourse).
13. I indirectly communicated/implied my interest in sex (e.g. talked about getting a condom).

14. I just kept moving forward in sexual behaviours/actions unless my partner stopped me.
15. I did not do anything; it was clear from my actions or from looking at me that I was willing to engage in sexual activity/sexual intercourse.
16. I reciprocated my partner's advances.
17. I removed mine and my partner's clothing.
18. I engaged in some level of sexual activity such as kissing or "foreplay".

This section of the survey is designed to gather important information about your feelings concerning the sexual health education that you might have received in high school.
Did you receive any formal sexual health education in high school (e.g., classes from teachers,
programs, etc.)?

- Yes
- No (If no, directed to other sources of sexual health education questions)

Did you receive your formal sexual health education before your first sexual experience?

- Yes
- No
- Unsure

Below is a list of statements about the sexual health education you received in high school.
Please respond to each statement below.
Based on the education I received, I feel that…

- SA-Strongly agree;
- A-Agree;
- D-Disagree;
- SD-Strongly disagree;
- DK-Don't know.

1. the teacher was enthusiastic about teaching the class
2. the teacher discussed topics in a way that made me feel comfortable.
3. the teacher encouraged me to talk about my opinions.
4. the teacher encouraged me to think about my own values concerning sexuality.
5. the teacher encouraged me to consider the use of birth control in order to avoid an unplanned pregnancy.
6. I was encouraged to ask questions about sexuality in class.
7. the teacher provided class activities aimed at improving decision-making skills.
8. I was permitted to express my own values in the class.
9. the teacher provided class activities aimed at improving factual knowledge.
10. the teacher was comfortable during class discussions concerning sexuality.
11. the teacher got along well with students in class.
12. the teacher encouraged me to think about the consequences of sexual relationships before I
entered into them.

The following is a list of statements which relate to the sexual health education that you might

have experienced in high school. Please select the response that best represents your feelings
about each statement.

- SA-Strongly agree;
- A-Agree;
- D-Disagree;
- SD-Strongly disagree;
- DK-Don't know.

As a result of the sexual health education that you received in high school, do you feel you had a
greater understanding of:

1. Physical changes during adolescence.
2. Human reproduction.
3. The emotional needs of adolescents.
4. The social needs of adolescents.
5. The emotional changes during adolescence.
6. The social changes during adolescence.
7. Abstinence as an alternative to sexual intercourse.
8. The effectiveness of different birth control methods.
9. The probability of becoming pregnant.
10. The problems associated with adolescent parenthood.
11. Sexually transmitted infections.
12. Common myths concerning sexuality.
13. The positive role of sexuality in your life.
14. Your long-range life goals.
15. Your own emotional needs.
16. Your sexual feelings.
17. Being responsible for your own behaviour.
18. Accepting your own body variation.
19. Accepting your own set of rules to guide your behaviour.

As a result of the sexual health education that you received in high school, do you feel you had a
greater ability to:

1. Make decisions.
2. Communicate your feelings verbally.
3. Discuss sexual behaviour with your potential partner.
4. Express your desire to use birth control in order to avoid an unplanned pregnancy.
5. Express your desire not to be involved sexually if you don't wish to be.
6. Resolve conflicts that may exist between you and another person.
7. Respect the individual dignity of each person.
8. Feel comfortable when discussing sexual issues with friends.
9. Feel comfortable with your own bodily functions.
10. Be satisfied with who you are.
11. Form your own sex role standards.
12. Be responsible for your own behaviour.

13. Accept your own body variations.
14. Accept your own set of rules to guide your behaviour.
15. If you are paying attention to what you are reading, please select “strongly agree” for this item.

The following is a scale representing how topics in your school’s sexual health education curriculum were presented:

- Not at all covered
- Covered a little bit
- Covered the basics
- Mostly covered
- Thoroughly covered

Please select the response that best represents how you feel each topic was covered in the sexual
health education that you received in high school.

1. Anatomy and physiology
2. Biological aspects of human reproduction
3. The probability of becoming pregnant
4. Human sexuality as an aspect of one’s total personality
5. The relationship between how one feels about oneself and one’s behaviour
6. The emotional needs during adolescence
7. The social needs during adolescence
8. Adolescent pregnancy
9. Students’ attitudes about sexual activity
10. Students’ feelings about sexual activity
11. The range of sexual behaviours
12. Sexually transmitted infections
13. Common myths concerning sexuality
14. Students’ attitudes about sex roles
15. Students’ feelings about sex roles
16. Peer pressure and sexual behaviour
17. Avoiding unwanted sexual experiences
18. Advantages of the various contraceptive methods
19. Disadvantages of the various contraceptive methods
20. The effectiveness of the various contraceptive methods
21. Improving decision-making skills
22. Improving problem-solving skills
23. Improving communication skills with peers
24. Improving communication skills with parents
25. Sexual diversity (LGBTQ+ identities/orientation)
26. Safer sex for LGBTQ+

Please indicate how much you feel you learned about the following topics from each of the

following sources when you were in high school.

- Nothing (0)
- A small amount (1)
- A moderate amount (2)
- A large amount (3)
- Almost all (4)

Sexual coercion and sexual assault

- Family (including mothers, fathers, aunts, uncles, grandparents, siblings, cousins)
- Internet (sex education/information websites, pornography videos)
- Friends/peers
- Romantic partners or sexual partners
- Community (e.g., religious organization)
- School sex education
- Books or magazines

Sexual consent

- Family (including mothers, fathers, aunts, uncles, grandparents, siblings, cousins)
- Internet (sex education/information websites, pornography videos)
- Friends/peers
- Romantic partners or sexual partners
- Community (e.g., religious organization)
- School sex education
- Books or magazines

Sexual communication

- Family (including mothers, fathers, aunts, uncles, grandparents, siblings, cousins)
- Internet (sex education/information websites, pornography videos)
- Friends/peers
- Romantic partners or sexual partners
- Community (e.g., religious organization)
- School sex education
- Books or magazines

Sexual decision making

- Family (including mothers, fathers, aunts, uncles, grandparents, siblings, cousins)
- Internet (sex education/information websites, pornography videos)
- Friends/peers
- Romantic partners or sexual partners
- Community (e.g., religious organization)
- School sex education
- Books or magazines

Sexual pleasure

- Family (including mothers, fathers, aunts, uncles, grandparents, siblings, cousins)
- Internet (sex education/information websites, pornography videos)
- Friends/peers
- Romantic partners or sexual partners
- Community (e.g., religious organization)
- School sex education

- Books or magazines

Sexual Identity/Orientation

- Family (including mothers, fathers, aunts, uncles, grandparents, siblings, cousins)
- Internet (sex education/information websites, pornography videos)
- Friends/peers
- Romantic partners or sexual partners
- Community (e.g., religious organization)
- School sex education
- Books or magazines

Did you receive any informal sexual health education (i.e., from family, friends, peers, etc.)
before your first sexual experience?

- Yes
- No
- Unsure

When answering the following questions, please respond as if you were responding at the time of
your most recent sexual experience. Your most recent sexual experience has been defined as the
most recent time you engaged in any sexual behaviour with a partner. These behaviours can
include, but are not limited to, vaginal, anal, and/or oral sex. Please use this definition when
responding to this questionnaire.

Please describe your most recent sexual experience in detail:

- _____________

When was your most recent sexual encounter?

- Within the last week
- Within the last month
- Within the last 6 months
- Within the last year
- More than a year ago

Which of the following best describes you at the time of your most recent sexual experience?

- Woman
- Trans woman
- Man
- Tran man
- Non-binary
- Agender
- Gender fluid
- Gender queer

- Two-spirit
- Prefer to self-describe: ________________
- Prefer not to answer

Which of the following best describes your partner at the time of your most recent sexual experience?

- Woman
- Trans woman
- Man
- Tran man
- Non-binary
- Agender
- Gender fluid
- Gender queer
- Two-spirit
- Prefer to self-describe: ________________
- Prefer not to answer

What was the context of your relationship with your partner(s) at the time of your most recent
sexual experience? It was with a…

- Romantic partner
- Friend
- Acquaintance
- Stranger
- Other

If statement (romantic partner option):
What was the duration of your romantic relationship prior to your most recent sexual experience
(specify both years and/or months)? _____

My most recent sexual experience was with the same partner as my first sexual experience:

- Yes
- No

Please note that the term "sexual consent" is used extensively throughout this questionnaire.
Please use this definition of sexual consent when answering the questions that follow:
Sexual consent: the freely given verbal or non-verbal communication of a feeling of willingness
to engage in sexual activity.
Using the following scale, please select the response that best describes how strongly you agree
or disagree with each statement.
Remember, there are no right or wrong answers, just your opinions.

- Strongly Disagree

- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

1. I feel that sexual consent should always be obtained before the start of any sexual activity.
2. I believe that asking for sexual consent is in my best interest because it reduces any misinterpretations that might arise.
3. I think it is equally important to obtain sexual consent relationships regardless of whether
or not they have had sex before.
4. I feel that verbally asking for sexual consent should occur before proceeding with any sexual activity.
5. When initiating sexual activity, I believe that one should always assume they do not have
sexual consent.
6. I believe that it is just as necessary to obtain consent for genital fondling as it is for sexual
intercourse.
7. Most people that I care about feel that asking for sexual consent is something I should do.
8. I think that consent should be asked before any kind of sexual behaviour, including kissing and petting.
9. I feel it is the responsibility of both partners to make sure sexual consent is established before sexual activity begins.
10. Before making sexual advances, I think that one should assume 'no' until there is clear
indication to proceed.
11. Not asking for sexual consent some of the time is okay.
12. I would have difficulty asking for consent because it would spoil the mood.
13. I am worried that my partner might think I'm weird or strange if I asked for sexual consent before starting any activity.
14. I would have difficulty asking for consent because it doesn't really fit with how I like to
engage in sexual activity.
15. I would worry that if other people knew I asked for sexual consent before starting sexual
activity, that they would think I was weird or strange.
16. I think that verbally asking for sexual consent is awkward.
17. I have not asked for sexual consent (or given my consent) at times because I felt that it
might backfire and I wouldn't end up having sex.
18. I believe that verbally asking for sexual consent reduces the pleasure of the encounter.

19. I would have a hard time verbalizing my consent in a sexual encounter because I am too
shy.
20. I feel confident that I could ask for consent from a new sexual partner.
21. I would not want to ask a partner for consent because it would remind me that I'm sexually active.
22. I feel confident that I could ask for consent from my current partner.
23. I think that obtaining sexual consent is more necessary in a new relationship than in a committed relationship.
24. I think that obtaining sexual consent is more necessary in a casual sexual encounter than
in a committed relationship.
25. I believe that the need for asking for sexual consent decreases as the length of an intimate
relationship increases.
26. I believe it is enough to ask for consent at the beginning of a sexual encounter.
27. I believe that sexual intercourse is the only sexual activity that requires explicit verbal consent.
28. I believe that partners are less likely to ask for sexual consent the longer they are in a relationship.
29. If consent for sexual intercourse is established, petting and fondling can be assumed.

Partners may communicate with each other about different aspects of their sexual relationship.
Think about your most recent sexual experience with a partner and check the number that best
describes how often you communicated to your partner about each sexual topic.

- 1 Never
- 2
- 3
- 4
- 5
- 6
- 7 Always

1. I used nonverbal cues (smiling, caressing, etc.) to indicate to my partner that they were pleasing me.
2. I gave sexual praise to my partner when they did things that I liked.
3. It was easy to tell my partner the sexual things that didn't work for me and why.
4. When I wanted to, I asked my partner for sex.
5. When things went wrong during sex, I avoided being touched by my partner.
6. I used nonverbal cues (snuggling, kissing, etc.) to let my partner know that I wanted to have sex.
7. I told my partner what we needed to do to increase my sexual pleasure.
8. I felt comfortable using nonverbal cues (such as touching, kissing, etc.) to initiate sex with my partner.
9. I snuggled and kissed my partner when they sexually pleased me.

10. I praised my partner when our sexual contacts pleased me.
11. When I wanted sex, I got things going by touching my partner sexually.
12. I used nonverbal cues (e.g., avoiding eye contact) to show my partner that I was not sexually satisfied.
13. I stopped my partner when they did something sexual that I do not like but did not say anything.
14. I used nonverbal cues (stop eye contact, use my hands, etc.) to let my partner know if I didn't like their sexual techniques.
15. When my partner started to touch me sexually and I was not interested, I moved their hands away.
16. I felt comfortable asking my partner to try sexual things that we had never done before.
17. I felt comfortable snuggling and kissing my partner when they pleased me sexually.
18. I asked my partner to keep doing the things that sexually pleased me.
19. I told my partner if I didn't want to have sex.
20. I felt comfortable telling my partners the things that sexually pleased me.
21. I suggested new things for my partner to try during our sexual contacts.
22. I started to kiss my partner when I wanted to have sex.
23. I felt comfortable telling my partner if I wanted to have sex.
24. When my partner did something that didn't please me, I usually let them know this nonverbally (such as stopping with my hands or avoiding eye contact) instead of saying something.
25. It was difficult for me to ask my partner for sex when I wanted it.
26. I preferred to use nonverbal communication when something went wrong in my sexual encounters.
27. When it came to sex, I asked my partner to do things that we had never tried before.
28. I used eye contact with my partner when I wanted to initiate sexual contact.

People may have different feelings associated with their consent or willingness to engage in
sexual activity. Think back to the last time you engaged in sexual activity (most recent sexual
experience). Please indicate the extent to which you agree or disagree that you felt the following
during the last time you engaged in sexual activity.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

1. I felt interested.
2. I felt heated.
3. I felt aroused.
4. I felt secure.
5. I felt in control.
6. I felt turned on.
7. The sex felt consented to.

8. I felt rapid heartbeat.
9. I felt ready.
10. The sex felt desired.
11. I felt sure.
12. I left lustful.
13. I felt willing.
14. Please select “agree” to this item.
15. The sex felt agreed to.
16. I felt comfortable.
17. I felt safe.
18. I felt erect/vaginally lubricated.
19. I felt aware of my surroundings.
20. The sex felt wanted.
21. I felt certain.
22. I felt respected.
23. I felt flushed.
24. I felt protected.
25. I felt eager.
26. The sex felt consensual.

People communicate their willingness to engage in sexual activity in a variety of ways. Think
about the last time you engaged in sexual activity with another person (most recent sexual experience). Which of the following behaviours did you engage in to indicate your consent or
agreement to engage in sexual activity? Indicate all responses that may apply.

1. I used non-verbal cues such as body language, signals, or flirting.
2. I did not resist my partner’s attempts for sexual activity.
3. I indicated sexual behaviour and checked to see if it was reciprocated.
4. I took my partner somewhere private.
5. It just happened.
6. I increased physical contact between myself and my partner.
7. I did not say no or push my partner away.
8. I used verbal cues such as communicating my interest in sexual behaviour or asking if they wanted to have sex with me.
9. I shut or closed the door.
10. I did not say anything.
11. I touched my partner, showed them what I wanted through touch or increasing physical contact between myself and the other person.
12. I let the sexual activity progress (to the point of intercourse).
13. I indirectly communicated/implied my interest in sex (e.g. talked about getting a condom).
14. I just kept moving forward in sexual behaviours/actions unless my partner stopped me.
15. I did not do anything; it was clear from my actions or from looking at me that I was

willing to engage in sexual activity/sexual intercourse.
16. I reciprocated my partner's advances.
17. I removed mine and my partner's clothing.
18. I engaged in some level of sexual activity such as kissing or "foreplay".

Do you have anything else you want to say about this topic?
• ___________
What do you think is missing from sexual health education presented to adolescents?
• ___________

Appendix F

Debriefing Forms

F1

Trent Debriefing Form

TRENT UNIVERSITY: **PROJECT SUMMARY**
PROJECT: SEXUAL HEALTH EDUCATION AND SEXUAL COMMUNICATION
PRINCIPAL INVESTIGATOR: Eva Fernandes

Thank you for taking part in this study. Your participation is greatly appreciated. We would like to take this opportunity to provide you with a more in-depth understanding of the study.

The purpose of this study is to examine the relationship between one's sexual education and their level of communication and consent negotiation at two time points: first sexual experience and most recent sexual experience with a partner. Previous research on this topic has not looked at communication and consent negotiation within these contexts.

The current study aims to explore the connections between one's attitudes about sex and previous sexual health education and how it influenced their communication and consent negotiation during their first and most recent sexual experience with a partner. Research has been known to support the fact that quality and quantity of sexual health education is associated with positive consent attitudes, intentions, and communication (Richmond & Peterson, 2020). For this reason, you were asked various questions about the sexual health education you received in high school, as well as how much you may have learned from a variety of other sources.

In addition, you were asked several demographic questions and attitudinal questions about your sexuality. By collecting more demographic information, it is the study's aim to better identify which groups or communities may benefit from more intensive and comprehensive sexual health education.

If you would like to know how the results of this study turn out, you may contact the principal investigator at evafernandes@trentu.ca or, Dr. Terry Humphreys at the Psychology Department, Trent University, DNA C114 at (705) 748-1011, extension 7773, email: terryhumphreys@trentu.ca any time after June 2023. If you are requesting the results of how this study turned out, your email address or any other identifying information will not be tied to the data that was collected during survey completion. We will not store your email so that anonymity is ensured, and your email will be deleted after your request has been received.

Please remember that it is normal for some people to experience uncomfortable feelings as a result of filling out questionnaires on sensitive issues, such as sexuality. If any of the material that you have experienced in this study has disturbed you on a personal level, to the point that you may wish to discuss it, I recommend contacting the Counselling Centre, here at Trent University (705-748-1386).

Thanks again for your participation!

F2

MTurk Debriefing Form

TRENT UNIVERSITY: **PROJECT SUMMARY**
PROJECT: SEXUAL HEALTH EDUCATION AND SEXUAL COMMUNICATION
PRINCIPAL INVESTIGATOR: Eva Fernandes

Thank you for taking part in this study. Your participation is greatly appreciated. We would like to take this opportunity to provide you with a more in-depth understanding of the study.

The purpose of this study is to examine the relationship between one's sexual education and their level of communication and consent negotiation at two time points: first sexual experience and most recent sexual experience with a partner. Previous research on this topic has not looked at communication and consent negotiation within these contexts.

The current study aims to explore the connections between one's attitudes about sex and previous sexual health education and how it influenced their communication and consent negotiation during their first and most recent sexual experience with a partner. Research has been known to support the fact that quality and quantity of sexual health education is associated with positive consent attitudes, intentions, and communication (Richmond & Peterson, 2020). For this reason, you were asked various questions about the sexual health education you received in high school, as well as how much you may have learned from a variety of other sources.

In addition, you were asked several demographic questions and attitudinal questions about your sexuality. By collecting more demographic information, it is the study's aim to better identify which groups or communities may benefit from more intensive and comprehensive sexual health education.

If you would like to know how the results of this study turn out, you may contact the principal investigator at evafernandes@trentu.ca or, Dr. Terry Humphreys at the Psychology Department, Trent University, DNA C114 at (705) 748-1011, extension 7773, email: terryhumphreys@trentu.ca any time after June 2023. If you are requesting a summary of this study's results, your email address or any other identifying information will not be tied to the data that was collected during survey completion. We will not store your email so that anonymity is ensured, and your email will be deleted after your request has been received.

Please remember that it is normal for some people to experience uncomfortable feelings as a result of filling out questionnaires on sensitive issues, such as sexuality. If any of the material that you have experienced in this study has disturbed you on a personal level, to the point that you may wish to discuss it, I recommend visiting the Government of Canada's mental health support page (https://www.canada.ca/en/public-health/services/mental-health-services/mentalhealth-get-help.html).

Thanks again for your participation!

Appendix G

Correlations for Formal Sexual Health Education During First and Most Recent Sexual Experience

G1

Correlations for Formal Sexual Health Education and Sexual Communication at First Sexual Experience

Variable	1	2	3	4
1.Formal Education	—			
2.Verbal communication	.302**	—		
3. Nonverbal sexual initiation and pleasure	.209**	.641**	—	
4.Nonverbal sexual refusal	.099*	.157**	.187**	—

Note. ** *p* <.01, * *p* <.05.

G2

Correlations for Formal Sexual Health Education and Sexual Consent Feelings and Behaviours at First Sexual Experience

Variable	1	2	3	4	5	6	7
1.Formal Education	—						
2.Physical Response	.120**	—					
3.Safety and Comfort	.263**	.638**	—				
4. Arousal	.099**	.797**	.662**	—			
5. Agreement and Wantedness	.109**	.709**	.754**	.750**	—		
6. Readiness	.187**	.660**	.838**	.636**	.764**	—	
7. External Consent Behaviours	.143**	.363**	.436**	.331**	.407**	.369**	—

Note. ** *p* <.01, * *p* <.05.

G3

Correlations for Formal Sexual Health Education and Sexual Communication at Most Recent Sexual Experience

Variable	1	2	3	4
1.Formal Education	—			
2.Verbal communication	.138**	—		
3. Nonverbal sexual initiation and pleasure	.083	.658**	—	
4.Nonverbal sexual refusal	.091*	-.024	.033	—

Note. ** *p* <.01, * *p* <.05.

G4

Correlations for Formal Sexual Health Education and Internal Sexual Consent at Most Recent Sexual Experience

Variable	1	2	3	4	5	6	7
1.Formal Education	—						
2.Physical Response	.124**	—					
3.Safety and Comfort	.116**	.757**	—				
4. Arousal	.117**	. 850**	.812**	—			
5. Agreement and Wantedness	.075	.780**	.867**	.830**	—		
6. Readiness	.103*	.806**	.866**	.822**	.884**	—	
7. External Consent Behaviours	.046	.407**	.373**	.390**	.367**	.375**	—

Note. ** *p* <.01, * *p* <.05.

G5

Correlations for Formal Sexual Health Education and Consent Attitudes and Beliefs

Variable	1	2	3	4
Formal Education	—			
Attitudes	.097*	—		
Norms	.069	-.465**	—	
PBC	.026	.620**	-.489**	—

Note. ** *p* <.01, * *p* <.05.

Appendix H

Correlations for All Outcome Variables

H1

Correlations for Verbal Communication at First Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188**	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135****	.197**	.008	.035	—	
6. Verbal Communication	**.302****	.136**	-.067	.096*	**-.098***	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H2

Correlations for Nonverbal Sexual Initiation and Pleasure at First Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188**	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135****	.197**	.008	.035	—	
6. Nonverbal Sexual Initiation and Pleasure	**.209****	.079	-.092*	.048	**.025**	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H3

Correlations for Nonverbal Sexual Refusal at First Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Nonverbal Sexual Refusal	**.099***	-.160**	-.160	.082	**-.090***	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H4

Correlations for Physical Response at First Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Physical Response	**.120****	.267**	.066	.078	**.143****	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H5

Correlations for Safety/Comfort at First Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	

Variable	1	2	3	4	5	6
6. Safety/Comfort	**.263****	.120**	-.084	.037	**-.069**	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H6

Correlations for Arousal at First Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Arousal	**.099***	.304**	.010	.118**	**.131****	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H7

Correlations for Agreement/Wantedness at First Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Agreement/ Wantedness	**.109***	.268**	.021	.030	**.089**	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H8

Correlations for Readiness at First Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Readiness	**.187****	.118**	-.016	.073	**-.017**	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H9

Correlations for External Sexual Consent at First Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. External Consent Behaviour	**.143****	.100*	.031	.000	**-.087**	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H10

Correlations for Verbal Communication at Most Recent Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Verbal communication	**.138****	-.075	.023	-.015	**-.080**	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H11

Correlations for Nonverbal Sexual Refusal at Most Recent Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Nonverbal Sexual Refusal	**.091***	-.072	.032	.104*	**-.019**	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H11

Correlations of Physical Response at Most Recent Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					

Variable	1	2	3	4	5	6
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Physical Response	**.124****	.031	-.018	-.026	**-.086**	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H12

Correlations of Safety/Comfort at Most Recent Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Safety/Comfort	**.116****	-.017	-.027	-.061	**-.093***	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H13

Correlations of Arousal at Most Recent Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Arousal	**.117****	.056	.022	-.033	**-.116***	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H14

Correlations of Readiness at Most Recent Sexual Experience

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Readiness	**.103***	-.021	-.007	-.062	**-.070**	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

H15

Correlations for Consent Attitudes

Variable	1	2	3	4	5	6
1.Formal Education	—					
2. Gender	.057	—				
3. Sexual Orientation	-.188*	.066	—			
4. Ethnicity	.116*	.133**	.024	—		
5. Age	**-.135***	.197**	.008	.035	—	
6. Attitudes	**.097***	-.091*	.067	-.015	**-.149****	—

Note. Pearson correlations are in bold, spearman correlations are not. **. Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Appendix I

Formal Sexual Health Education and Verbal Communication at First Sexual Experience Regression Tables

I1

Formal Sexual Health Education and Verbal Communication at First Sexual Experience Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.25	.06	.05	17.87	.06	4.45***	7
Model 2	.36	.13	.12	17.23	.07	36.39***	1

Note. *** p <.001, ** p <.01, * p <.05.

I2

Formal Sexual Health Education and Verbal Communication at First Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	59.95	2.81		21.32***
Age	-.31	.12	-.12	-2.59*
Gender				
Men	5.71	2.23	.12	2.49*
Diverse	17.13	5.47	.15	3.13**
Ethnicity				
Diverse	-.32	2.54	-.01	-.12
Mixed	8.04	3.10	.12	2.59*
Sexual Orientation				
Pansexual & Bisexual	-2.89	2.08	-.06	-1.39
Diverse	-6.42	2.96	-.10	-2.59*
Model 2 (constant)	37.65	4.584		8.21***
Age	-.20	.12	-.08	-1.73
Gender				
Men	4.98	2.21	.10	2.25*
Diverse	15.67	5.28	.13	2.97**
Ethnicity				
Diverse	-1.93	2.47	-.03	-.78

Predictor	*B*	SE	β	*t*
Mixed	7.17	3.00	.11	2.39*
Sexual Orientation				
Pansexual & Bisexual	-.58	2.04	-.01	-.28
Diverse	-4.36	2.88	-.07	-1.52
Formal Education	.114	.02	.270	6.03***

Note. *** p <.001, ** p <.01, * p <.05.

Appendix J

Formal Sexual Health Education and Nonverbal Sexual Initiation and Pleasure at First Sexual Experience Regression Tables

J1

Formal Sexual Health Education and Nonverbal Sexual Initiation and Pleasure at First Sexual Experience Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.18	.03	.02	10.30	.03	2.27*	7
Model 2	.26	.07	.05	10.13	.03	16.99***	1

Note. *** p <.001, ** p <.01, * p <.05.

J2

Formal Sexual Health Education and Nonverbal Sexual Initiation and Pleasure at First Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	38.77	1.62		23.93***
Age	.02	.07	.01	.281
Gender				
Men	1.72	1.32	.06	1.30
Diverse	7.70	3.15	.12	2.44*
Ethnicity				
Diverse	-.20	1.47	-.01	-.14
Mixed	2.46	1.79	.06	1.38
Sexual Orientation				
Pansexual & Bisexual	-1.94	1.20	-.08	-1.63
Diverse	-4.68	1.71	-.13	-2.74
Model 2 (constant)	29.82	2.70		11.07***
Age	.06	.07	.04	.91
Gender				
Men	1.43	1.30	.05	1.20
Diverse	7.12	3.10	.12	2.29*
Ethnicity				
Diverse	-.85	1.45	-.03	-.58

Predictor	*B*	SE	β	*t*
Mixed	2.11	1.76	.05	1.20
Sexual Orientation				
Pansexual & Bisexual	-1.02	1.20	-.04	-.85
Diverse	-3.85	1.70	-.12	-2.28*
Formal Education	.05	.01	.19	4.12***

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

Appendix K

Formal Sexual Health Education and Nonverbal Sexual Refusal at First Sexual Experience Regression Tables

K1

Formal Sexual Health Education and Nonverbal Sexual Refusal at First Sexual Experience Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.23	.05	.04	7.97	.05	3.82***	7
Model 2	.25	.06	.05	7.95	.01	3.84	1

Note. *** p <.001, ** p <.01, * p <.05.

K2

Formal Sexual Health Education and Nonverbal Sexual Refusal at First Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	25.00	1.25		19.93***
Age	-.04	.05	-.03	-.73
Gender				
Men	-3.97	1.02	-.18	-3.88***
Diverse	-.72	2.44	-.01	-.29
Ethnicity				
Diverse	.67	1.13	.03	.59
Mixed	3.64	1.38	.12	2.63**
Sexual Orientation				
Pansexual & Bisexual	.19	.93	.01	.21
Diverse	-1.38	1.32	-.05	-1.05
Model 2 (constant)	21.66	2.11		10.25***
Age	-.02	.05	-.02	-.43
Gender				
Men	-4.08	1.02	-.19	-4.00***
Diverse	-.94	2.44	-.02	-.38
Ethnicity				
Diverse	.43	1.14	.02	.38

Predictor	*B*	SE	β	*t*
Mixed	3.51	1.38	.12	2.54*
Sexual Orientation				
Pansexual & Bisexual	.54	.94	.03	.57
Diverse	-1.08	1.33	-.04	-.81
Formal Education	.02	.01	.09	1.96

Note. *** p <.001, ** p <.01, * p <.05.

Appendix L

Formal Sexual Health Education and Physical Response at First Sexual Experience Regression Tables

L1

Formal Sexual Health Education and Physical Response at First Sexual Experience Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.29	.08	.68	.56	.08	5.95	7
Model 2	.31	.10	.08	.56	.01	7.19**	1

Note. *** p <.001, ** p <.01, * p <.05.

L2

Formal Sexual Health Education and Physical Response at First Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	2.86	.09		32.22***
Age	.01	.00	.09	1.86
Gender				
Men	.33	.07	.21	4.58***
Diverse	.39	.17	.10	2.24*
Ethnicity				
Diverse	.08	.08	.05	1.02
Mixed	.08	.10	.04	.84
Sexual Orientation				
Pansexual & Bisexual	.05	.07	.03	.72
Diverse	.08	.09	.04	.86
Model 2 (constant)	2.54	.15		17.02***
Age	.01	.00	.10	2.25*
Gender				
Men	.32	.07	.21	4.46***
Diverse	.37	.17	.10	2.13*
Ethnicity				
Diverse	.06	.08	.03	.73

Predictor	*B*	SE	β	*t*
Mixed	.07	.10	.03	.72
Sexual Orientation				
Pansexual & Bisexual	.08	.07	.06	1.21
Diverse	.11	.09	.05	1.18
Formal Education	.00	.00	.12	2.68***

Note. *** p <.001, ** p <.01, * p <.05.

Appendix M

Formal Sexual Health Education and Safety/Comfort at First Sexual Experience

Regression Tables

M1

Formal Sexual Health Education and Safety/Comfort at First Sexual Experience Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.23	.05	.04	.69	.05	3.83***	7
Model 2	.33	.11	.10	.67	.06	30.19***	1

Note. *** *p* <.001, ** *p* <.01, * *p* <.05.

M2

Formal Sexual Health Education and Safety/Comfort at First Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	3.23	.11		29.79***
Age	-.01	.00	-.10	-2.04
Gender				
Men	.21	.09	.11	2.35*
Diverse	.83	.21	.19	3.95***
Ethnicity				
Diverse	.03	.10	.01	.30
Mixed	.06	.12	.02	.49
Sexual Orientation				
Pansexual & Bisexual	-.17	.08	-.10	-2.09*
Diverse	-.23	.11	-.10	-2.05*
Model 2 (constant)	2.44	.18		13.73***
Age	-.00	.00	-.06	-1.24
Gender				
Men	.18	.09	.10	2.11*
Diverse	.78	.21	.17	3.81***
Ethnicity				
Diverse	-.03	.10	-.01	-.29

Predictor	*B*	SE	β	*t*
Mixed	.03	.12	.01	.24
Sexual Orientation				
Pansexual & Bisexual	-.09	.08	-.05	-1.08
Diverse	-.16	.11	-.07	-1.44
Formal Education	.00	.00	.25	5.50***

Note. *** p <.001, ** p <.01, * p <.05.

Appendix N

Formal Sexual Health Education and Arousal at First Sexual Experience Regression Tables

N1

Formal Sexual Health Education and Arousal at First Sexual Experience Regression

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.32	.10	.09	.60	.10	7.64***	7
Model 2	.33	.11	.10	.60	.01	4.31	1

Note. *** p <.001, ** p <.01, * p <.05.

N2

Formal Sexual Health Education and Arousal at First Sexual Experience Regression

Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	3.07	.09		32.55***
Age	.00	.00	.07	1.51
Gender				
Men	.42	.08	.25	5.40***
Diverse	.45	.18	.11	2.42*
Ethnicity				
Diverse	.06	.09	.03	.73
Mixed	.23	.10	.10	2.17*
Sexual Orientation				
Pansexual & Bisexual	-.04	.07	-.02	-.52
Diverse	.07	.10	.03	.65
Model 2 (constant)	2.81	.16		17.65***
Age	.01	.00	.08	1.82
Gender				
Men	.41	.08	.24	5.30***
Diverse	.43	.18	.12	2.33*
Ethnicity				
Diverse	.04	.09	.02	.50
Mixed	.22	.10	.09	2.08
Sexual Orientation				

Predictor	*B*	SE	β	*t*
Pansexual & Bisexual	-.01	.07	-.01	-.13
Diverse	.09	.10	.04	.89
Formal Education	.00	.00	.09	2.08*

Note. *** p <.001, ** p <.01, * p <.05.

Appendix O

Formal Sexual Health Education and Agreement/Wantedness at First Sexual Experience Regression Tables

O1

Formal Sexual Health Education and Agreement/Wantedness at First Sexual Experience Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.27	.07	.06	.51	.07	5.33***	7
Model 2	.29	.09	.07	.50	.01	6.55	1

Note. *** p <.001, ** p <.01, * p <.05.

O2

Formal Sexual Health Education and Agreement/Wantedness at First Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	3.36	.08		42.11***
Age	.00	.00	.04	.75
Gender				
Men	.31	.07	.22	4.69***
Diverse	.52	.16	.16	3.38***
Ethnicity				
Diverse	-.05	.07	-.03	-.66
Mixed	.05	.08	.02	.53
Sexual Orientation				
Pansexual & Bisexual	.02	.06	.02	.38
Diverse	-.04	.00	.04	.75
Model 2 (constant)	3.08	.13		22.99***
Age	.00	.00	.05	1.14
Gender				
Men	.30	.07	.21	4.58***
Diverse	.51	.15	.15	3.28**
Ethnicity				
Diverse	-.07	.07	-.04	-.94

Predictor	*B*	SE	β	*t*
Mixed	.04	.09	.02	.41
Sexual Orientation				
Pansexual & Bisexual	.05	.06	.04	.86
Diverse	-.01	.08	-.01	-.16
Formal Education	.00	.00	.12	2.56*

Note. *** p <.001, ** p <.01, * p <.05.

Appendix P

Formal Sexual Health Education and Readiness at First Sexual Experience

Regression Tables

P1

Formal Sexual Health Education and Readiness at First Sexual Experience Regression Model

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.19	.04	.02	.61	.04	2.46	7
Model 2	.25	.06	.05	.61	.03	14.53***	1

Note. *** p <.001, ** p <.01, * p <.05.

P2

Formal Sexual Health Education and Readiness at First Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	3.15	.10		32.63***
Age	-.00	.00	-.03	-.66
Gender				
Men	.12	.08	.07	1.51
Diverse	.66	.19	.17	3.54***
Ethnicity				
Diverse	.05	.09	.03	.59
Mixed	.11	.11	.05	1.03
Sexual Orientation				
Pansexual & Bisexual	-.01	.07	-.01	-.14
Diverse	-.15	.10	-.07	-1.52
Model 2 (constant)	2.66	.16		16.50***
Age	.00	.00	-.00	-.09
Gender				
Men	.10	.08	.06	1.32
Diverse	.63	. 19	.16	3.41***
Ethnicity				
Diverse	.02	.09	.01	.19

Predictor	*B*	SE	β	*t*
Mixed	.09	.11	.04	.86
Sexual Orientation				
Pansexual & Bisexual	.04	.07	.03	.58
Diverse	-.11	.10	-.05	-1.07
Formal Education	.00	.00	.18	3.81***

Note. *** p <.001, ** p <.01, * p <.05.

Appendix Q

Formal Sexual Health Education and External Consent Behaviours at First Sexual Experience Regression Tables

Q1

Formal Sexual Health Education and External Consent Behaviours at First Sexual Experience Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.17	.03	.01	3.10	.03	2.00	7
Model 2	.22	.05	.03	3.07	.02	10.00**	1

Note. *** p <.001, ** p <.01, * p <.05.

Q2

Formal Sexual Health Education and External Consent Behaviours at First Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	9.28	.487		19.04***
Age	-.05	.02	-.12	-2.51*
Gender				
Men	1.07	.40	.13	2.69**
Diverse	1.09	.95	.06	1.15
Ethnicity				
Diverse	-.30	.44	-.03	-.67
Mixed	.42	.54	.04	.79
Sexual Orientation				
Pansexual & Bisexual	.31	.36	.04	.85
Diverse	-.02	.51	-.00	-.03
Model 2 (constant)	7.20	.82		8.82***
Age	-.04	.02	-.10	-2.02*
Gender				
Men	1.00	.39	.12	2.54*
Diverse	.95	.94	.05	1.0
Ethnicity				
Diverse	-.45	.44	-.05	-1.02

Predictor	*B*	SE	β	*t*
Mixed	.34	.53	.03	.64
Sexual Orientation				
Pansexual & Bisexual	.52	.36	.07	1.43
Diverse	.18	.51	.02	.34
Formal Education	.01	.00	.15	3.16**

Note. *** p <.001, ** p <.01, * p <.05.

Appendix R

Formal Sexual Health Education and Verbal Communication at Most Recent Sexual Experience Regression Tables

R1

Formal Sexual Health Education and Verbal Communication at Most Recent Sexual Experience Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.15	.02	.01	15.61	.02	1.61	7
Model 2	.22	.05	.03	15.44	.02	11.49***	1

Note. *** p <.001, ** p <.01, * p <.05.

R2

Formal Sexual Health Education and Verbal Communication at Most Recent Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	75.10	2.46		30.58***
Age	-.14	.10	-.06	-1.34
Gender				
Men	-2.24	2.00	-.05	-1.12
Diverse	4.44	4.78	.04	.93
Ethnicity				
Diverse	-.32	2.22	-.01	.89
Mixed	2.05	2.71	.04	.45
Sexual Orientation				
Pansexual & Bisexual	1.94	1.81	.05	.29
Diverse	-4.61	2.59	-.09	.08
Model 2 (constant)	63.87	4.11		15.55***
Age	-.09	.10	-.04	-.82
Gender				
Men	-2.61	1.98	-.06	-1.31
Diverse	3.70	4.73	.04	.78
Ethnicity				

Predictor	*B*	SE	β	*t*
Diverse	-1.13	2.21	-.02	-.51
Mixed	1.62	2.68	.03	.60
Sexual Orientation				
Pansexual & Bisexual	3.09	1.83	.08	1.70
Diverse	-3.58	2.58	-.06	-1.39
Formal Education	.058	.02	.16	3.39***

Note. *** p <.001, ** p <.01, * p <.05.

Appendix S

Formal Sexual Health Education and Nonverbal Sexual Refusal at Most Recent Sexual Experience Regression Tables

S1

Formal Sexual Health Education and Nonverbal Sexual Refusal at Most Recent Sexual Experience Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.17	.03	.01	9.47	.03	1.94	7
Model 2	.19	.04	.02	9.44	.01	4.01	1

Note. *** p <.001, ** p <.01, * p <.05.

S2

Formal Sexual Health Education and Nonverbal Sexual Refusal at Most Recent Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	25.52	1.49		17.13***
Age	.02	.06	.01	.29
Gender				
Men	-3.12	1.2	-.12	-2.57*
Diverse	-.19	2.90	-.00	-.06
Ethnicity				
Diverse	3.12	1.35	.11	2.32*
Mixed	2.90	1.64	.08	1.77
Sexual Orientation				
Pansexual & Bisexual	.57	1.10	.02	.51
Diverse	.70	1.57	.02	.44
Model 2 (constant)	21.46	2.51		8.55***
Age	.04	.06	.03	.59
Gender				
Men	-.3.25	1.21	-.13	-2.68
Diverse	-.45	2.89	-.01	-.16
Ethnicity				
Diverse	2.83	1.35	.10	2.10*

Predictor	*B*	SE	β	*t*
Mixed	2.75	1.64	.08	1.68
Sexual Orientation				
Pansexual & Bisexual	.98	1.12	.04	.88
Diverse	1.07	1.58	.03	.68
Formal Education	.02	.01	.09	2.00*

Note. *** p <.001, ** p <.01, * p <.05.

Appendix T

Formal Sexual Health Education and Physical Response at Most Recent Sexual Experience Regression Tables

T1

Formal Sexual Health Education and Physical Response at Most Recent Sexual Experience Regression Models

Predictor	R	R^2	Adjusted R^2	SE	R^2 Change	F Change	df
Model 1	.13	.02	.00	.59	.02	1.14	7
Model 2	.18	.03	.01	.56	.01	6.89**	1

Note. *** p <.001, ** p <.01, * p <.05.

T2

Formal Sexual Health Education and Physical Response at Most Recent Sexual Experience Regression Table

Predictor	B	SE	β	t
Model 1 (constant)	3.69	.09		41.26***
Age	-.01	.00	-.11	-2.24*
Gender				
Men	.11	.07	.08	1.55
Diverse	.17	.17	.05	.98
Ethnicity				
Diverse	-.02	.08	-.01	-.27
Mixed	-.02	.10	-.01	-.18
Sexual Orientation				
Pansexual & Bisexual	.02	.07	.01	.29
Diverse	-.11	.09	-.06	-1.19
Model 2 (constant)	3.37	.15		22.44***
Age	-.01	.00	-.09	-1.83
Gender				
Men	.10	.07	.07	1.41
Diverse	.15	.17	.04	.87
Ethnicity				
Diverse	-.05	.08	-.03	-.55

Predictor	*B*	SE	β	*t*
Mixed	-.03	.10	-.01	-.31
Sexual Orientation				
Pansexual & Bisexual	.05	.06	.04	.78
Diverse	-.08	.09	-.04	-.88
Formal Education	.00	.00	.12	2.63**

Note. *** p <.001, ** p <.01, * p <.05.

Appendix U

Formal Sexual Health Education and Safety/Comfort at Most Recent Sexual Experience Regression Tables

U1

Formal Sexual Health Education and Safety/Comfort at Most Recent Sexual Experience Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.11	.01	-.00	.56	.01	.87	7
Model 2	.16	.03	.01	.55	.01	6.20*	1

Note. *** p <.001, ** p <.01, * p <.05.

U2

Formal Sexual Health Education and Safety/Comfort at Most Recent Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	3.80	.09		43.50***
Age	-.01	.04	-.10	-2.05*
Gender				
Men	.02	.07	.02	.30
Diverse	.08	.17	.02	.47
Ethnicity				
Diverse	-.05	.08	-.03	-.63
Mixed	-.05	.10	-.02	-.48
Sexual Orientation				
Pansexual & Bisexual	-.01	.07	-.01	-.13
Diverse	-.10	.09	-.05	-1.13
Model 2 (constant)	3.51	.15		23.86***
Age	-.01	.00	-.08	-1.65
Gender				
Men	.01	.07	.01	.17
Diverse	.06	.17	.02	.36
Ethnicity				
Diverse	-.07	.08	-.04	-.89

Predictor	*B*	SE	β	*t*
Mixed	-.06	.10	-.03	-.60
Sexual Orientation				
Pansexual & Bisexual	.02	.07	.02	.34
Diverse	-.08	.09	-.04	-.84
Formal Education	.00	.00	.12	2.49*

Note. *** p <.001, ** p <.01, * p <.05.

Appendix V

Formal Sexual Health Education and Arousal at Most Recent Sexual Experience

Regression Tables

V1

Formal Sexual Health Education and Arousal at Most Recent Sexual Experience

Regression Model

Predictor	R	R^2	Adjusted R^2	SE	R^2 Change	F Change	df
Model 1	.16	.03	.01	.54	.03	1.83	7
Model 2	.20	.04	.02	.54	.02	6.24*	1

Note. *** p <.001, ** p <.01, * p <.05.

V2

Formal Sexual Health Education and Arousal at Most Recent Sexual Experience

Regression Table

Predictor	B	SE	β	t
Model 1 (constant)	3.88	.09		45.49***
Age	-.01	.00	-.14	-3.02**
Gender				
Men	.15	.07	.10	2.17*
Diverse	.20	.17	.06	1.21
Ethnicity				
Diverse	-.05	.08	-.03	-.67
Mixed	-.05	.09	-.02	-.52
Sexual Orientation				
Pansexual & Bisexual	.03	.06	.02	.44
Diverse	-.02	.09	-.01	-.21
Model 2 (constant)	3.59	.14		25.04***
Age	-.01	.00	-.13	-2.62**
Gender				
Men	.14	.07	.10	2.04*
Diverse	.18	.17	.05	1.10
Ethnicity				
Diverse	-.07	.08	-.04	-.93

Predictor	*B*	SE	β	*t*
Mixed	-.06	.09	-.03	-.64
Sexual Orientation				
Pansexual & Bisexual	.06	.06	.04	.91
Diverse	.01	.09	.00	.09
Formal Education	.00	.00	.12	2.50*

Note. *** p <.001, ** p <.01, * p <.05.

Appendix W

Formal Sexual Health Education and Readiness at Most Recent Sexual Experience Regression Tables

W1

Formal Sexual Health Education and Readiness at Most Recent Sexual Experience Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.12	.01	-.00	.53	.01	.95	7
Model 2	.16	.03	.01	.53	.01	5.80*	1

Note. *** *p* <.001, ** *p* <.01, * *p* <.05.

W2

Formal Sexual Health Education and Readiness at Most Recent Sexual Experience Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	3.77	.08		45.17***
Age	-.01	.00	-.08	-1.59
Gender				
Men	.03	.07	.02	.43
Diverse	.17	.16	.05	1.06
Ethnicity				
Diverse	-.07	.08	-.04	-.94
Mixed	-.08	.09	-.04	-.88
Sexual Orientation				
Pansexual & Bisexual	.00	.06	.00	.03
Diverse	-.13	.09	-.07	-1.46
Model 2 (constant)	3.49	.14		24.91***
Age	-.00	.00	-.06	-1.22
Gender				
Men	.02	.07	.01	.30
Diverse	.15	.16	.05	.96
Ethnicity				
Diverse	-.09	.08	-.06	-1.20

Predictor	*B*	SE	β	*t*
Mixed	-.09	.09	-.05	-1.00
Sexual Orientation				
Pansexual & Bisexual	.03	.06	.02	.48
Diverse	-.10	.09	-.06	-1.17
Formal Education	.00	.00	.11	2.41*

Note. *** p <.001, ** p <.01, * p <.05.

Appendix X

Formal Sexual Health Education and Consent Attitudes Regression Tables

X1

Formal Sexual Health Education and Consent Attitudes Regression Models

Predictor	*R*	R^2	Adjusted R^2	*SE*	R^2 Change	*F* Change	*df*
Model 1	.18	.03	.02	.85	.03	2.21*	7
Model 2	.21	.05	.03	.85	.01	6.43*	1

Note. *** *p* <.001, ** *p* <.01, * *p* <.05.

X2

Formal Sexual Health Education and Consent Attitudes Regression Table

Predictor	*B*	SE	β	*t*
Model 1 (constant)	6.37	.13		47.55***
Age	-.02	.01	-.14	-2.90**
Gender				
Men	-.07	.11	-.03	-.66
Diverse	.04	.26	.01	.16
Ethnicity				
Diverse	-.07	.12	-.03	-.55
Mixed	.00	.15	.00	.02
Sexual Orientation				
Pansexual & Bisexual	.12	.10	.06	1.2
Diverse	.21	.14	.07	1.48
Model 2 (constant)	5.91	.23		26.24
Age	-.01	.01	-.12	-2.50*
Gender				
Men	-.09	.11	-.04	-.80
Diverse	.01	.26	.00	.04
Ethnicity				
Diverse	-.10	.12	-.04	-.82
Mixed	-.02	.15	-.01	-.10
Sexual Orientation				
Pansexual & Bisexual	.17	.10	.08	1.69
Diverse	.25	.14	.09	1.78
Formal Education	.00	.00	.12	2.54*

Note. *** *p* <.001, ** *p* <.01, * *p* <.05.

Appendix Y

Difference Between First Sexual Experience and Most Recent Sexual Experience Based on Education Received

Y1

Difference Between First Sexual Experience and Most Recent Sexual Experience for People Who Received Education Before FSE

Measure	Received Formal Education Before FSE			
	FSE *Mdn*	MRSE *Mdn*	*z*	*p*
Verbal Communication	56.00	75.00	-15.34	<.001
Nonverbal Sexual Initiation and Pleasure	41.00	49.00	-13.60	<.001
Nonverbal Sexual Refusal	24.00	27.00	-5.58	<.001
Physical Response	3.00	3.67	-10.57	<.001
Safety/Comfort	3.00	3.86	-13.60	<.001
Arousal	3.33	4.00	-8.81	<.001
Agreement/Wantedness	3.60	4.00	-9.66	<.001
Readiness	3.00	4.00	-12.65	<.001
External consent behaviours	9.00	11.00	-9.23	<.001

Y2

Difference Between First Sexual Experience and Most Recent Sexual Experience for People Who Received Education After FSE

Measure	Received Formal Education After FSE			
	FSE *Mdn*	MRSE *Mdn*	*z*	*p*
Verbal Communication	52.00	82.00	-5.29	<.001
Nonverbal Sexual Initiation and Pleasure	38.00	51.00	-5.37	<.001

Measure	Received Formal Education After FSE			
	FSE *Mdn*	MRSE *Mdn*	*z*	*p*
Nonverbal Sexual Refusal	22.00	23.00	-.78	.436
Physical Response	3.00	3.83	-4.32	<.001
Safety/Comfort	2.86	4.00	-4.69	<.001
Arousal	3.00	4.00	-4.31	<.001
Agreement/Wantedness	3.20	4.00	-4.44	<.001
Readiness	2.75	4.00	-4.75	<.001
External consent behaviours	9.00	11.00	-4.16	<.001

Y3

Difference Between First Sexual Experience and Most Recent Sexual Experience for People Who Were Unsure of When Formal Education Was Received

Measure	Unsure of when Formal Education was Received			
	FSE *Mdn*	MRSE *Mdn*	*z*	*p*
Verbal Communication	49.00	75.00	-4.72	<.001
Nonverbal Sexual Initiation and Pleasure	39.00	50.00	-4.54	<.001
Nonverbal Sexual Refusal	27.00	30.00	-1.90	.058
Physical Response	3.00	3.83	-4.47	<.001
Safety/Comfort	3.00	3.86	-4.33	<.001
Arousal	3.00	4.00	-2.84	.005
Agreement/Wantedness	3.40	4.00	-3.32	<.001
Readiness	3.00	4.00	-4.11	<.001
External consent behaviours	11.00	12.00	-2.55	.011

Y4

Difference Between First Sexual Experience and Most Recent Sexual Experience for People Who Did Not Receive Formal Education

Measure	Did Not Receive Formal Education			
	FSE *Mdn*	MRSE *Mdn*	*z*	*p*
Verbal Communication	52.50	75.00	-7.45	<.001
Nonverbal Sexual Initiation and Pleasure	38.00	48.00	-6.67	<.001
Nonverbal Sexual Refusal	24.00	28.00	-2.98	.003
Physical Response	3.17	3.38	-5.41	<.001
Safety/Comfort	3.00	3.86	-7.20	<.001
Arousal	3.33	4.00	-3.79	<.001
Agreement/Wantedness	3.60	4.00	-5.58	<.001
Readiness	3.00	4.00	-6.90	<.001
External consent behaviours	8.00	10.00	-3.76	<.001

Y5

Difference Between First Sexual Experience and Most Recent Sexual Experience for the Total Sample

Measure	Total sample			
	FSE *Mdn*	MRSE *Mdn*	*z*	*p*
Verbal Communication	54.00	75.00	-18.51	<.001
Nonverbal Sexual Initiation and Pleasure	40.00	49.00	-16.76	<.001
Nonverbal Sexual Refusal	24.00	27.00	-6.57	<.001
Physical Response	3.00	4.00	-13.24	<.001

Measure	Total sample			
	FSE *Mdn*	MRSE *Mdn*	*z*	*p*
Safety/Comfort	3.00	4.00	-16.65	<.001
Arousal	3.33	4.00	-10.85	<.001
Agreement/Wantedness	3.60	4.00	-12.34	<.001
Readiness	3.00	4.00	-15.70	<.001
External consent behaviours	9.00	11.00	-10.95	<.001

Appendix Z

Demographic Differences in Perceived Quality of Formal Sexual Health Education

Group	n	Mean Rank	*p*
Sex			.290
Female	403	242.83	
Male	88	260.50	
Gender			.384
Woman	391	241.33	
Man	87	264.54	
Diverse	12	243.25	
Sexual Orientation			<.001
Straight	347	263.02	
Bi/Pan	99	199.82	
Diverse	44	210.09	
Ethnicity			.017
White	390	237.25	
Diverse	64	290.32	
Mixed	37	261.59	
Age			.016
15-24	370	251.64	
25-34	61	199.30	
35-44	41	196.21	
45-54	5	218.90	
55-64	2	278.00	

Appendix AA

Effect of Gender on the Level of Perceived Quantity of Education Taught from Various Sources

Source	n	Mean Rank	*p*
Family			.228
Woman	530	342.46	
Man	122	327.20	
Diverse	22	275.11	
Internet			.116
Woman	530	338.92	
Man	122	318.21	
Diverse	22	410.34	
Friends/Peers			<.001
Woman	530	352.96	
Man	122	276.09	
Diverse	22	305.68	
Partners			.112
Woman	530	334.20	
Man	122	362.81	
Diverse	22	276.55	
Community			.038
Woman	530	329.51	
Man	122	375.14	
Diverse	22	321.20	
School			.044
Woman	530	334.26	
Man	122	365.60	
Diverse	22	259.61	
Books and Magazines			. 972
Woman	530	337.84	
Man	122	337.77	
Diverse	22	227.77	

Appendix AB

Effect of Sexual Orientation on the Level of Perceived Quantity of Education Taught from Various Sources

Group	n	Mean Rank	*p*
Family			. 010
Straight	476	352.07	
Pansexual & Bisexual	134	303.09	
Diverse	64	301.20	
Internet			< .001
Straight	476	315.53	
Pansexual & Bisexual	134	384.42	
Diverse	64	403.99	
Friends and Peers			.473
Straight	476	334.17	
Pansexual & Bisexual	134	335.86	
Diverse	64	365.71	
Partners			< .001
Straight	476	357.26	
Pansexual & Bisexual	134	297.74	
Diverse	64	273.80	
Community			< .001
Straight	476	354.29	
Pansexual & Bisexual	134	302.41	
Diverse	64	286.10	
School			< .001
Straight	476	356.86	
Pansexual & Bisexual	134	287.50	
Diverse	64	298.20	
Books and Magazines			.914
Straight	476	338.54	
Pansexual & Bisexual	134	338.47	
Diverse	64	327.74	