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YOUNG PEOPLE, SEXUAL LITERACY, AND SOURCES OF KNOWLEDGE

A Review

October 2019

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Young People, Sexual Literacy, and Sources of Knowledge: A Review is funded by the Commonwealth Department of Health.

Suggested citation:

Waling, Andrea, Kerr, Lucille, Fraser, Suzanne, Bourne, Adam, & Carman, Marina (2019). *Young People, Sexual Literacy, and Sources of Knowledge: A Review* (ARCSHS Monograph series No. 119). Bundoora, VIC: Australian Research Centre in Sex, Health and Society, La Trobe University.

DOI: 10.26181/5d9ea9a96d8e0

ISBN: 978-0-6487166-0-0

Monograph Series No. 119

Cover image: By Naassom Azevedo @naassomz1, Unsplash

*****This report replaces a previous version. It contains additional acknowledgments information.

Australian Research Centre in Sex, Health and Society

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We would like to thank the funder of the study, the Commonwealth Department of Health, for its ongoing support of this vital research to inform policy and practice to improve the sexual health and well-being of young people in Australia. The authors also wish to thank and acknowledge Associate Professor Christopher Fisher for his early contributions to the conceptualisation and design of this review, and the preliminary guidance he provided on analysis.

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Table of contents

EXECUTIVE SUMMARY

This research report presents the findings of a broad literature review exploring influences on sexual health of young people, and a more targeted literature review exploring sources of sexual health information for young people. Commissioned by the Department of Health, this review sought to identify the major influences on the sexual health and well-being of young people, what sources of information young people look to for their sexual health information, and how those sources of information are integrated within the lives of young people.

Conducting a **broad literature review** in four phases, this review finds that there are a number of influences on the sexual health and well-being of young people:

- individual level influences
- family level influences
- peer influences
- formal education influences
- medical influences
- community, culture, and religion influences.

However, the results of the broad literature review pointed to the need for a more targeted review to look more specifically at the sources of sexual health information young people use, and why.

The process of conducting this review identified several key issues of note:

- Knowledge about the sources of sexual health information young people seek out is limited.
- Most literature is primarily concerned with correlations between knowledge and risk-taking practices, what sexual health information young people should be learning, evaluation of the effectiveness of interventions and trials to improve sexual health knowledge, and the effectiveness of sources of sexual health information and how they are delivered.
- **Peers**, **media, family and community**, and **formal education** are the major sources of sexual health information the literature identifies as used by young people.

The literature review found the following:

- Little research has been conducted exploring what resources young people use to access sexual health information and why.
- Discrepancies exist between the sources of sexual health information seen as credible, and those used most.
- The causes cited for this discrepancy vary. They include the gendering of sexual health information; lack of comprehensive sex education in schools; and barriers, including shame and stigma, to accessing credible resources.
- Peers and friends are conflated in the literature. These categories require separation, and when this separation is preserved, friends remain a significant source of sexual health information.
- Nuanced handling of multiple inputs, sources and influences is lacking.
- Aboriginal and Torres Strait Islander peoples' needs regarding sexual health information contrast with those of other demographic groups, suggesting the need for specific programs and interventions.

Recommendations from this review:

1) Further research is needed to explore more fully young people's access to, and engagement with, sexual health information, including exploring:
    i. what kinds of sources young people prefer to engage with
    ii. how young people negotiate conflicting sources of sexual health information

iii. how young people understand gendered dynamics of sexual health information
iv. what factors shape young people's choice of sexual health information sources
v. how young people assess credibility and trustworthiness of a source
vi. what barriers young people face in trying to access sexual health information sources
vii. how young people experience school-based sex education, including the extent to which this source of knowledge meets their needs
viii. how sources of sexual health knowledge outside of school settings complement sex education.

2) Individual and community level interventions are required to tackle shame, and reduce stigma or embarrassment associated with accessing sexual health information sources.

1 INTRODUCTION

Young people in Australia remain at higher risk of sexually transmitted infections (STIs) and blood-borne virus (BBV) infection and transmission, as well as unplanned pregnancies, compared to the general population. A recent report on the health of Australians in 2018 noted that as of January 31, 2018, there were over 1950 cases of reported syphilis infections, with two-thirds of those reported in young people aged between 15 and 29 (Australian Institute of Health and Welfare, 2018a). Diagnoses of chlamydia and gonorrhoea are also highest amongst young people aged 15–24 years in Australia (Australasian Sexual Health Alliance, 2015). In 2017, there was "an estimated 255,228 new chlamydia infections in people aged 15–29 years", yet most infections remain undiagnosed and untreated in young people (Kirby Institute, 2018). While rates of Human Immunodeficiency Virus (HIV) remain high for young gay and bisexual men, testing remains low for young heterosexual men (Kirby Institute, 2018).

In 2015, 2.7% of all babies in Australia were born to mothers under the age of 20 (Australian Institute of Health and Welfare, 2018c). While research on whether or not these were planned is limited, older studies have estimated that half of all pregnancies in Australia are unplanned (Rissel et al., 2003). Data regarding pregnancy terminations is limited. Only South Australia provides estimates of pregnancy terminations. The most recent estimate of women between the ages of 15 and 29 having had an abortion is 2650 in 2016 (Government of South Australia, 2018).

Recent research regarding sexual violence also notes that young people aged 16–24 are more likely to have attitudes that support violence against women (Australian Institute of Health and Welfare, 2018b). This included that 41% of young Australians felt that economic abuse was justified, while 18% of young Australians felt that control of social life and repeated criticism of a partner were justified (Australian Institute of Health and Welfare, 2018b).

However, rates of human papillomavirus (HPV) infections have steadily declined, with research noting an 83% decrease in diagnoses of genital warts among young women between the ages of 21 and 30 years (Australian Government Department of Health, 2018). Among young people, there have also been noted declines in HIV infections, and increased rates of testing for STIs and blood-borne virus infections (Kirby Institute, 2018), as well as increases in uptake of vaccinations for human papillomavirus (Australian Government Department of Health, 2018). Indeed, these declines in infections, the increase in diagnoses, and increase in seeking testing and vaccinations could be attributed to greater sexual health knowledge among young people in Australia (Kirby Institute, 2018).

Fully understanding these findings requires a thorough knowledge of the sources of sexual health and relationships information that young people access, and the ways they can influence some of these outcomes. In order to develop this knowledge, a literature review was conducted to identify major themes and issues relating to young people's sources of sexual health information in Australia.

1.1 The review

The review was conducted in four phases. This report begins with a discussion of the review's methods and methodological approach. It then provides a summary of the articles identified, outlining the methods and methodologies used, followed by their key areas of focus and themes emerging from the body of work as a whole. The review then conducts a critical appraisal of these sources, outlining a number of gaps and concerns regarding the research itself and the topic it addresses: young people and sources of sexual health information. It concludes with a series of recommendations regarding future research and practice with young people and sources of sexual health information.

1.2 Research aims

Young people interact with a wide range of sources that help shape their sexual health, well-being, knowledge, attitudes, communication skills, and sexual practice (i.e., their sexual literacy). These include the education system, the media (including the internet), peers, and the adults in their lives (e.g., parents, relatives, teachers, GPs, nurses, etc.). However, it is not as well known how they engage with such sources, and why they might choose certain sources over others. This review examines the research on these issues, asking the following questions:

1.3 Research questions

RQ1. What are the sources of sexual health knowledge accessed by young people?

RQ2. What factors shape or influence how and why young people engage with certain sources of sexual health knowledge?

RQ3. How do young people navigate different sources of information and what might this mean for their sexual health decision-making?

2 METHODOLOGY

To answer this review's three research questions, we engaged in a broad literature review. The results of the initial search pointed to the need for an additional targeted search to identify the most relevant literature. The review was then conducted in four phases, outlined below.

2.1 Phase 1: Addressing research question 1

As a starting point, we sought to examine sources of sexual health knowledge for young people. This required attention to the broad range of social and cultural resources that influence sexual health, well-being, knowledge, attitudes, communication, skills, and sexual practice (i.e. their sexual literacy). The first phase of the literature review was specifically designed to cast a wide net that might capture evidence from a diverse range of sources and contexts.

Inclusion criteria for Phase 1 were articles in English that address any aspect of the influences on adolescent sexual health from 2014–2019. Databases searched were: SCOPUS, CINAHL, ERIC, Web of Science, and SocINDEX. For an account of the detailed search terms, see Appendix A.

The initial searches resulted in **7571** articles. Each of these was reviewed by title, and irrelevant items were discarded, bringing the final number down to **2807**. Approximately **500** of those removed were duplicates, while others were not relevant as they were about young adults/adults or biomedical studies.

Overall, this literature reflects many different sexual health information sources accessed by young people, which were categorised into seven key types (outlined in section 3: **YOUNG PEOPLE AND INFLUENCES ON SEXUAL HEALTH LITERACY**).

2.2 Phase 2: Addressing research questions 2 and 3

In order to examine the factors that shape or influence young people's engagement with these sources of sexual health knowledge, as well as how they navigate the diversity of sources, a more focused enquiry was initiated. We focused on **media**, **peers**, **family** and **community**, and **formal education,** as these were the four sources identified as having major engagement from young people regarding sexual health information.

In addition, we also filtered articles emerging at Phase 1 to include only those conducted in Australia and New Zealand, the UK (England, Scotland, Northern Ireland, and Wales), and Canada. These locations were chosen due to their relatively similarity in culture and approach to sexual health and sex education (Pound et al., 2016). Three filters were used to search the EndNote database. The 2807 articles identified as relevant from the initial broad search described above were then reviewed using EndNote database search filters of titles and abstracts (full strategy outlined in Appendix A).

This filtering process resulted in a total of **175** articles. From these **175** articles, **132** were found not to be relevant to the research question. Fifty articles were found to be irrelevant as they did not either a) answer the research question based on title and abstract or b) were not located in Australia, New Zealand, Canada, or the UK. A secondary look at the remaining **125** reduced the number further to **88** relevant articles. The excluded **37** articles were deemed irrelevant as they were: discourse analyses of curriculum; policy statements, guidelines, or commentaries; conference papers; or discourse analyses of media such as YouTube about sex education.

Summaries of the remaining **81** articles were completed within an Excel spreadsheet (and can be found in Appendix B). The articles were organised in EndNote into five major categories by information source: community; peers; media/internet; family; and formal education.

Of these **81** articles, **68** were ultimately deemed outside of the parameters of this review, for one or more of the following reasons: they only reported on clinical trials not relevant to the research question; they only examined at a surface level the relationship between knowledge and sexual risk-taking (rather than the sources of knowledge); or because they only reported on correlates between knowledge and other behaviours (such as alcohol and sexual health). Thus this search of traditional academic journal search engines ultimately resulted in **13** articles deemed relevant to research questions 2 and 3.

Finally, in order to capture relevant books, book chapters, and research reports, as well as to complement the academic journal search strategy outlined above, a further search was undertaken using Google Scholar. The specific strategy can be seen in Appendix A.

This exercise resulted in **32** journal articles, books, book chapters, and research reports, of which **9** additional sources were found to be relevant to the research question.

A content analysis, a "systematic examination of communicative material" (Mayring, 2004) was conducted on these **19** articles, **2** books, and **1** research report. These were analysed by looking closely at:

1) methods and methodology
2) analytical techniques
3) focus of the study
4) emerging themes and patterns in findings and discussion
5) consideration of gaps in the studies.

Conducting this search and filtering process highlighted two key research issues:

1) **Very little research** exists on sources of sexual health information young people choose to use and why they do so.
2) The research that has been conducted identifies the following four primary sources of information on sexual health for young people: **media**, **peers**, **family and community**, and **formal education**.

The findings of **Phase 2** are outlined in section 5: **YOUNG PEOPLE AND SOURCES OF SEXUAL HEALTH INFORMATION**.

3 YOUNG PEOPLE AND INFLUENCES ON SEXUAL HEALTH LITERACY

In ***2.1 Phase 1,*** we sought to answer **RQ1. What are the sources of sexual health knowledge accessed by young people?** A broad overview of the literature found that young people interact with a wide array of resources that influence their sexual health, well-being, knowledge, attitudes, communication, skills, and sexual practice (i.e. their sexual literacy). These resources were: individual perspectives and experiences, family, peer/partners, schools, media, medical, and community/culture/religion. Notably, these studies cover a diverse range of national settings, so the relevance of some to Australia is not clear. They have been included here to provide context for the analysis to follow.

3.1 Individual level influences

The literature identified a range of **individual level influences** on sexual health literacy: socioeconomic status, homelessness, education levels and academic motivation, early menarche for girls, LGBTIQ+ status, feelings of connectedness and social belonging, depression, disability, use of alcohol or other drugs, and child marriage. For example, low income has been found consistently to be associated with teen pregnancy, and interventions that economically empower individuals and families have been found to ameliorate some sexual health risks (Pradhan et al., 2015; Salam et al., 2016). Homelessness, particularly in the context of unmet survival needs, has been associated with increased 'risky sexual behaviour' (Caccamo et al., 2017). Depression has been found to lower adolescents' HIV prevention activity (Lee & Salman, 2016).

3.2 Family level influences

Also identified in the literature were **family level influences** on sexual health literacy: parent–child communication and relationships, siblings and birth order, family violence, and being a foster child. Parents play a crucial role in the sexual health of their children, and research has shown lowered rates of STIs when there is strong parent–youth communication (Coakley et al., 2017). Further to this, siblings, and even birth order, have been found to influence adolescent sexual health (Elton et al., 2019). Foster youth typically experience a lack of continuity in home and school spheres, and often have poorer sexual health literacy because of this (Ramseyer Winter et al., 2016).

3.3 Peer influences

Peers, including partners, have also been highlighted as having an important role. Partners have been examined with consideration to age gap and teen pregnancy (Masho et al., 2017), and peers have been found to influence adolescents' sexual intentions (Mahat & Scoloveno, 2018). Peer education programs, commonly implemented in schoosl, have been found to be successful interventions (Azizi et al., 2017).

3.4 Formal education influences

Formal education settings such as schools have been found to play a pivotal role in sexual health knowledge, and areas mentioned in the literature include sex education, condom availability programs, school nurses, and policies that relate to school-based sex education. The importance of comprehensive sex education—and policies that support this over approaches of abstinence-only until marriage—appears frequently in the literature (Rabbitte & Enriquez, 2019; Santelli et al., 2017). Condom availability programs within schools have been found to increase the usage of condoms amongst students, and decrease STIs, with no increases in sexual activity or number of partners (Algur et al., 2019).

3.5 Media influences

Various **media** are mentioned in the literature. These include text messaging ('sexting'), mobile phone apps, media portrayals of sex, and pornography. One literature review found that general media has a minimal effect on sexual behaviours (Ferguson, 2017), while another review found a strong association between 'new medias' (e.g. social, digital) and sexual behaviours (Smith et al., 2016). Some literature argued that pornography use may increase sexually aggressive behaviour and casual sex, and influence sexual beliefs (Peter & Valkenburg, 2016).

3.6 Medical influences

Looking at the influence of **medical** resources, articles discussed health promotion, family planning services, provision of sexual and reproductive commodities to youth in pharmacy environments, general practitioner conversations,

interventions in hospital settings, and HPV vaccination. Pharmacy provision of sexual and reproductive commodities has been shown to appeal to adolescents, without increasing any sexual risk (Gonsalves & Hindin, 2017). Some authors have called for a more interventions based in general practice or hospital settings (Fuzzell et al., 2017; Masonbrink et al., 2019).

3.7 Community, culture, and religion influences

Community, culture and religion also appeared in the literature. Community influences cited include Indigenous cultures, needs of culturally diverse youth (with considerations regarding resettlement), religion and faith-based community interventions, and also whether the community is remote or rural. Higher levels of religiosity have been linked to intentions for abstinence (Ghaffari et al., 2015). Some research found that although the sexual health needs of culturally diverse people may not differ from the general adolescent population, family and community contexts can raise challenges if shame or stigma are attached to sexual concerns (Botfield et al., 2016). There may also been discordance between Indigenous ideas about sexual health and biomedical approaches, with Australian Aboriginal and Torres Strait Islander people not receiving adequate sex education (Bell et al., 2017).

3.8 Summary

Much of the research reviewed above focuses on one information source, rather than taking account of the integration of multiple sources. Consideration of what specific sources young people might actively search for in gaining sexual health information is absent, as is work on how they might negotiate multiple sources of sexual health information. Given these concerns and limitations, a more targeted review was undertaken, with the aim of identifying research focused directly on where young people access sexual health information, what sources they see as more trustworthy or credible than others, and why.

4 RESEARCH ON YOUNG PEOPLE AND SEXUAL HEALTH

2.2 Phase 2 and ***2.3 Phase 3*** engaged in a targeted review to answer these two research questions:

> **RQ2. What factors shape or influence how and why young people engage with certain sources of sexual health knowledge?**
>
> **RQ3. How do young people navigate different sources of information and what might this mean for their sexual health decision-making?**

As noted above, most of the studies in **Phase 2** and **3** do not engage with our research question, or, do so only marginally. These studies instead focused on comparisons of knowledge and risk-taking, what young people 'should' be learning and where; trials and interventions, and effectiveness of sources and delivery. Below, we provide a brief summary of some of the major themes from this review of studies not deemed relevant to the research question, while **Appendix B: Summaries** provides a comprehensive account.

4.1 Knowledge and risk-taking practices

A few studies explored the relationship between first or early sexual encounters, sexual health, and risk-taking. Chow et al. (2017) explored first and early sexual encounters among young heterosexual men in Australia. Using a cross-sectional survey, the study found young men were more likely to start with oral sex, followed by vaginal and oral sex by the time they were 19, and that young men with higher numbers of sexual partners were also more likely to engage in vaginal, oral, and anal sex. Chow et al. (2017) note that anal and oral sex are not necessarily covered in contemporary sex education programs, thereby putting these men, and their partners, at risk of STI and HIV infection and transmission. Palmer et al. (2017; 2019) explored the relationship between first encounters, sexual competence, and sexual health. Using data from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3) from the UK, their study found that a lack of sexual competence at early age of sexual intercourse was associated negative sexual health and sexual experiences, including reporting of having received an STI diagnosis, testing positive for HPV, experiencing an unplanned pregnancy, and having experienced non-consensual or nonvolitional sex. Prendergast et al. (2019) noted similar outcomes in their longitudinal study of young people in Australia, where sex at the age of 15 or younger predicted higher rates of young adult sexual risk-taking, such as unplanned pregnancy, and not using contraception to protect against STI/HPV/HIV transmission and infection. Wand et al. (2018) note in their survey of Indigenous young people in Australia that lower levels of education are associated with early sexual experiences, and sexual risk-taking. Senior et al. (2014), in their study of young people in Australia, also found limited knowledge about STIs, and that current programs do not consider how young people understand and construct safety and risk in their sexual experiences. Thus, apart from Senior et al. (2014), these studies identify a correlation between age and risk-taking, while Chow et al. (2017), Senior et al. (2014), and Wand et al. (2018) highlight the need for comprehensive sex education at younger ages as a preventative measure.

4.2 Sexual health information

A number of studies explored whether or not certain aspects of sex and sexual health information should be included in sex education programs, alongside the views of parents and guardians. A number of studies have looked into the question of media literacy and the viewing of pornography as a potential risk factor for young people in relation to engaging in sexual risk-taking (e.g. Lim et al., 2017; Baker 2016; El-Guebaly & Butterwick, 2016; Lewis et al., 2018). Lewis et al. (2018) (Australia) and El-Guebaly and Butterwick (2016) (Canada) contend that better media literacy education is needed for young people to avoid harm. However, Baker's (2016) study in the UK identified a discrepancy between the way teachers, parents, and professionals perceive media and pornography as risky and harmful, and the way young people generally see pornography as only one of many inputs into their sexual subjectivities, and have a critical understanding of the unrealistic portrayals of sex and sexuality in the media. Similarly, Lim et al. (2017) note that young people in Australia, particularly LGBTIQ+ youth, look to pornography as a way to gain information about sexual practices that are not generally covered in contemporary sex education programs.

Parents and guardians have also been a focus regarding sexual health and young people. McKay et al.'s (2014) survey on the attitudes of parents towards sexual health education in schools found 87% felt that sex education needed to be covered in the school curriculum. Robinson et al. (2017) noted similar responses in their survey, interviews and focus groups with parents in Australia, although sex education was regarded as something that should be done in collaboration

with parents, rather than solely by the school. Stone et al. (2017) explored parents' discussion of sex and sexuality with young children, using focus groups, and found a range of reasons why such conversations were initiated, including 'communication prompts', 'the need for truth', 'the threat of ignorance', 'exposure', 'healthy and positive relationships', and 'openness'. The authors (2017) suggest that these findings can be helpful to support parents in communicating with their young children about sex and sexuality.

4.3 Interventions and trials

Numerous studies focused on program interventions and trials of varying kinds to improve sexual health knowledge and literacy in young people (e.g. Vujcich et al., 2018; McCarthy et al., 2016; Lim et al., 2015; French et al., 2016; Lys et al., 2018; Sorhaindo et al., 2016; Roberts et al., 2017; Roberts, 2015; Ollis & Harrison, 2016; Johnson et al., 2014; Hoare & Decker 2016; Davies et al., 2017; Alldred et al., 2016). In their multi-centre cluster randomised controlled trial (RCT) in Australia, Davies et al. (2017) sought to improve student knowledge about HPV vaccination, and uptake of vaccinations, finding that their intervention in chosen schools did increase knowledge and understanding of the HPV vaccination. McCarthy et al. (2016) and French et al. (2016) completed a pilot mobile texting study in the UK in which text messages were sent to participants' phones at intervals to promote safer sex. These studies found that such interventions increased safer sex knowledge, confidence and practices, but note that an RCT is necessary to further test this intervention. Lim et al. (2015) assessed knowledge retention among young people at music festivals by comparing the sexual health campaigns 'Facts', 'Drama Downunder', and the Australian NSTIPP campaign. Their study found that young people retained more knowledge from the targeted campaigns of 'Facts' and 'Drama Downunder' than the NSTIPP. They speculate that this may be due to the light-hearted and targeted nature of 'Facts' and 'Drama Downunder', whereas NSTIPP is broader and more serious. Vujcich et al. (2018) conducted a systematic review of peer-led approaches and interventions for Indigenous youth in Australia, Canada, and the US. They noted that while peer-led interventions are often hailed as preferable for working with young people, little research has evaluated the long-term effectiveness of these approaches, and more rigorous research is needed to evaluate them.

4.4 Effectiveness of sources and delivery

Effectiveness of sources of information and their delivery was another theme identified in the literature, including a focus on sex education in schools. A study by Dobson et al. (2017) compared teacher-led and peer-led sex education programs through observational studies, arguing that peer-led sex education was more effective, as it created a safe and comfortable environment for young people to talk about sex and sexuality. Teacher-led sex education, by contrast, was embedded with difficulty due to teacher–student power dynamics, which meant an inability to create a safe space to talk about sensitive topics. This was echoed in the work of Allen (2014) who noted that humour could be a useful device to support the destigmatisation of sex education in the classroom, and to work to develop a more comfortable environment for the delivery of this often taboo topic. Abbott et al. (2015, 2016) in their study of sex education in the UK, note that while teachers attempt to promote inclusion in the classroom, more often than not their sex education teaching and practices promote exclusion, and reproduce harmful values and gendered stereotypes. Drawing together five different sets of research data in the UK, Pound et al. (2017) noted that programs in schools starting as early as primary school can be effective in supporting the sexual health knowledge of young people, and that, as in the work of Dobson et al. (2017) and Abbott et al. (2015, 2016) teachers may not be the most effective way to deliver sexual health information. Instead students expressed a preference for external delivery.

4.5 Summary

From this review of studies, a number of useful points emerge that are not directly relevant to our research question. The first is that education continues to play an important role in shaping the sexual health knowledge of young people, and that early education may be better to ensure that young people have sexual competency for their first sexual encounters. The second is that there is a discrepancy between what teachers, professionals, parents, and other adults think young people should know, and what young people think they need to know, such as in the debate over young people's vulnerability and susceptibility to media and pornography. The third is that a number of trials and interventions support sexual health literacy among young people, but these do not necessarily seem to take into account what young people use, or trust, in sexual health information.

5 YOUNG PEOPLE AND SOURCES OF SEXUAL HEALTH INFORMATION

In many of the studies reviewed, little consideration is given to why young people access the sources they do, as well as where they get their information, and what this might mean for their sexual health and well-being. For this reason, the targeted review explores **RQ2** and **RQ3**:

- **What factors shape or influence how and why young people engage with certain sources of sexual health knowledge?**
- **How do young people navigate different sources of information and what might this mean for their sexual health decision-making?**

In 3.4 Phase 4, 19 journal articles, **1** research report and **2** books were deemed directly relevant to our research question: which sources of sexual health knowledge do young people actively use. The majority of these works came from Australia (13) followed by the UK (4), and Canada (3). One study crossed a range of countries including Canada, the UK, Australia, and New Zealand (Pound et al., 2016) and one study crossed Canada and New Zealand (Coleman et al., 2016).

5.1 Methods and methodologies

Most of the articles identified used qualitative methods. **Eight** of the studies engaged in semi-structured interviews (Patterson et al., 2019; Litras et al., 2015; Byron 2017; Byron et al., 2013; Rawson & Liamputtong 2010; Meldrum et al., 2016; Healey 2014, 2016; Ezer et al., 2016). One study used interviews and focus groups (Cassidy et al., 2018), and two others used focus groups only (Byron et al., 2013; McKee et al., 2014). A range of analytical approaches were then applied, including discourse analysis, thematic analysis, grounded theory, Indigenous knowledge frameworks, and framework analysis techniques. These studies ranged in number of participants from eight to 89.

Five of the studies reviewed used survey methods, including national surveys (Fisher et al., 2019; Tanton et al., 2015; Hillier et al, 1998) and smaller surveys (Lim et al., 2014; Stanzel et al., 2016). One study was conducted using structured interview techniques (Jahoda & Powell, 2014). Analysis techniques ranged from basic descriptive and comparative statistical analysis techniques, to one-sample Kolmogorov–Smirnov tests. Participants in these studies ranged in age from 14 to 30 years of age.

Three of the studies used reviews of the literature, one being a systematic review using qualitative synthesis techniques (Pound et al., 2016), and the other two were more general, topic reviews (Coleman et al., 2016; Byron 2018).

5.2 Use of, trust in, and access to sources

Studies note that young people actively engage with a range of sources in seeking sexual health information. The most commonly or frequently used sources were found to be **peers** and **the media,** followed by **formal education**, **community,** and **family.** Notably, these studies highlight a discrepancy between the sources young people actually use, the sources they trust, and barriers to accessing trusted sources of information.

5.2.1 Peers and media

Ten studies found **peers** and the **media** to be major and significant sources of sexual health information (e.g. Hillier et al. 1998). For Hillier et al., these sources were not seen to be as credible by this group as formal sex education or family clinicians. This tension also appears in other research. Litras et al. (2015) studied young heterosexual men in Australia using qualitative methods. Their analysis also noted that the media and peers were far more likely to be approached for sexual health information than GPs and other sexual health services, despite participants reporting that GPs would be more credible and reliable. The most recent iteration of the National Survey of Australian Secondary Students and Sexual Health (SSASH) noted that young female students were more likely than young male students to seek information from a doctor/GP, and that GPs were rated as the most trusted source (88.6%) (Fisher et al., 2019), echoing of Litras et al.' findings (2015). Cassidy et al.'s (2014) Canadian qualitative study identified a key barrier for young people in accessing services they would trust. In their study, young people found sexual health services more credible, yet consistently turned to friends and peers on campus for sexual health information instead. Participants explained that they were not sure what sexual services were available to them, what sexual health services they might need, and how to access these services.

Bryon's (2015, 2018) qualitative study, based in Australia, also found that young people often spoke with friends on sexual health matters, and that sexual health promotion was more likely to occur between friends. This stands in contrast to Byron's (2015; 2018) review of sexual health promotion for young people online, where peers are framed as less reliable sources of information due to exposure to misinformation. As such, Bryon (2015, 2018) contends that discourses of friendship are missing in accounts of sexual health promotion, despite research consistently showing young people are much more likely to turn to peers than other sources. In their qualitative exploration of young Vietnamese women in Australia, Rawson and Liamputtong (2010) also noted that peers and the media were more likely to be approached than other sources. For these women, this was due to cultural barriers regarding silencing about sex and sexuality in Vietnamese culture (Rawson and Liamputtong, 2010). In addition, Meldrum et al.'s (2016) qualitative study also noted similar barriers among young Muslim women in Melbourne. They found that young women relied more on the media, peers, and family than on school-based sources, despite seeing the latter as more reliable and credible.

The National Survey of Australian Secondary Students and Sexual Health (SSASH, Fisher et al., 2019) found that websites (78.7%) and female friends (74.7%) were the most common sources of sexual health information for young people. Participants felt most confident talking with female friends, and rated this as one of the most highly trusted sources of sexual health information (71%). Some LGBTIQ+ youth in that study noted in the open-ended comments that there was a significant lack of LGBTIQ+ content in sex education, leading them to seek information elsewhere, including from peers and the media. Similarly, Jahoda and Pownell (2014) noted that young people without intellectual disabilities were more likely to rely on peers and broader support networks, and had greater sexual health knowledge than young people with intellectual disabilities, who had less access to peers and broader social networks.

Generally, research identifies **the media** as a major source of sexual health information for young people. In his topic review of digital media, Bryon (2017) offers a range of possibilities, opportunities, and risks regarding young people's sexual health. The article also notes that many formal interventions do not deploy or engage with social media in appropriate ways, often failing to understand the social and cultural nuances in how networking sites are used, thus rendering attempts to engage in sexual health promotion there ineffective. Byron (2017) thus notes that formal health promotion inventions need to initiate collaborations with social networking sites in order to engage in more effective sexual health promotion. However, other studies have noted that media is not a preferred source for young people, despite it being one of the most used sources. Lim et al. (2014) note in their study of young people in Australia that participants were more likely to be comfortable accessing sexual health information from formal sexual health websites, mainstream media, and their doctors. Social media, on the other hand, was found not to be an ideal form of accessing sexual health information, because it was seen an extension of themselves, and accessing sexual health information was seen as shameful. Lim et al. (2014) contend that social media is not an ideal form of sexual health promotion for young people because a tension exists between the presentation of the self online and the stigma relating to sexual health information. Similar findings also appear in Byron et al.'s earlier (2013) article, which also note a similar concern about accessing sexual health information on networking sites such as Facebook.

A much more recent study, conducted by Patterson et al. (2019) in the UK, noted similar findings in relation to the use of mobile apps, social networking sites and text messaging options. This analysis found that young people were concerned about being observed when accessing sexual health information, and about accessing any visual or audio material, and were risk-averse, censoring their activities should they be caught. The analysis also noted that mobile apps did not alleviate these concerns, due to fears of phones being accessed or used by friends and family where they might see the app. Patterson et al. (2019) thus suggest a need for resources that ensure anonymity and confidentiality, a finding echoed in Litras et al. (2015) who also note that young men in Australia want to be able to access sexual health resources in a confidential and non-identifiable way, and were not keen on using websites and online sources. In their 2019 national survey of young Australian people and sexual health, Fisher et al. (2019) note that more than half of young people (55.5%) only moderately trusted internet resources for sexual health information, despite this being their most used source.

5.2.2 Family and community

Family and **community** were not regarded as major sources of sexual health information, and in some cases, were identified instead as a barrier for many young people. Stanzel's (2016) case study of a sexual health clinic established at a local Australian secondary school found that young people experienced shame and embarrassment when accessing the clinic, and were concerned about privacy and confidentiality. This study also noted that when parents and caregivers supported young people in using the service, this resulted in better access to the service. In contrast, the study also noted

that some parents were unsupportive, such as one parent who threw out contraception. In Jahoda and Pownell's (2014) article, young people with intellectual disabilities were more likely to be reliant on family members for sexual health information. Jahoda and Pownell (2014) note this as a major barrier for young people with intellectual disabilities, in that reliance on family members, especially those who may have conservative values about sex and disability, may impede access to sexual health knowledge. This was regarded by participants as a major concern, as young people with intellectual disabilities may have less access to other forms of sexual health resources.

The studies by Rawson and Liamputtong (2010) and Meldrum et al. (2016) also present family as a barrier, in that young Vietnamese women (Rawson and Liamputtong 2010) and young Muslim women (Meldrum et al., 2016) report preferring to engage with family for sexual health information, but cannot, due to cultural and religious barriers and the taboo or stigma associated with talking about sex and sexuality. Fisher et al.'s (2019) survey noted that while mothers were seen as the second most trusted source of sexual health information (59.8%); only half of the participants (53%) used their mothers as a source of information, with young women being the most likely to do so (62.4%). However, research exploring Indigenous communities in Canada identified family is a major and significant source of sexual health information. Two qualitative studies conducted by Healey (2014, 2016) noted that for young Inuuqatigiitsiarniq people (Inuit), parents and caregivers were the preferred source of knowledge about sexual health and relationships. Young people in this study did not report turning to the internet for information, and made decisions about their sexual health in terms of broader Indigenous community contexts, and desire and love.

5.2.3 Formal sex education

Formal sex education is identified in research as a major source of sexual health information for young people. By comparing data from 2010-2012 to older data sets (1990–1991; 2000–2001). Tanton et al.'s (2016: 1) study of young people in the UK note that "between 1990 and 2012, the proportion citing school lessons as their main source of information about sexual matters increased from 28.2% (95% CI 24.6 to 32.1) to 40.3% (95% CI 38.6 to 42.1)." Fisher et al. (2019) note that in Australia, 83.6% of students reported having received some kind of sex education in their school, with most indicating that it was somewhat or very relevant (61.6%). However, open-ended comments made in the survey indicate that young people seek information elsewhere as they feel school-based sex education programs do not meet their sexual health information needs, with the internet and friends being major sources (Fisher et al., 2019).

While formal sex education programs are often seen as the major source of sex education information for young people, research has also found that such education can be ineffective, and young people across the globe are increasingly frustrated or disappointed with their formal sex education programs. Litras et al. (2015) noted that young heterosexual men in Australia were overly reliant on their formal sex education, and that such education has not prepared them well in terms of sexual health information. They found that young men were generally poorly educated about sexual health matters as most of their education came from sex education programs that were not comprehensive, were generally poorly recalled, and provided only narrow physiological information.

A systematic review by Pound et al. (2016) identified a number of concerns among students regarding formal sex education programs that led those young people to seek information elsewhere. Using a meta-ethnographic approach, the authors (2016) reviewed 48 qualitative studies of young people's experiences of formal sex education in the UK, Ireland, US, Australia, New Zealand, Canada, Japan, Iran, Brazil, and Sweden. Focusing on those analysed from the UK, Australia, New Zealand and Canada, a number of themes from their work emerge:

1. Formal sex education programs delivered by teachers were perceived to be biased, judgemental, and ineffective, with many students feeling uncomfortable in classes taught by their teachers, or viewing their teachers as unable to teach the subject matter comfortably.

2. The social and power dynamics embedded within the classroom made it difficult to talk about sex and sex-related issues between teachers and students.

3. Formal sex education programs were either overly scientific and biology-based, lacking focus on emotional aspects of sex, sexuality, and sexual relationships; or grounded in implicit moral and generally religious frameworks that promoted abstinence-only education and conservative values.

4. Formal sex education programs were not inclusive of diversity in genders, sexualities, and bodies, were often focused on reproductive, penile–vaginal sexual activity between cisgender men and women only, and dismissive of female pleasure.

5. Formal sex education programs were too focused on risk-based sexual health information, and did not engage enough with concepts of pleasure and young people's abilities to make informed choices.

6. Formal sex education programs did not engage with issues of consent, intimacy, pleasure, and healthy relationships.

7. Young men often tried to conceal sexual ignorance, which limited their participation in formal sex education classes; while young women often felt positioned as always at risk of sexual violence; and LGBTIQ+ people often felt excluded and positioned as at risk.

8. Young people had strong preferences for sex education to be delivered by professionals, such as those who work in sexual health services.

Pound et al. (2016) note that in response to the above issues, many young people across different studies disengaged from sexual health education in the classroom, finding it irrelevant to their lives and experiences.

5.3.3 Range of sources

Little research was found that explored how young people might use or negotiate a **range of sources**. Ezer et al. (2016) conducted a small qualitative study, interviewing eight young women who resided in a rural area of Ontario, Canada, about their sexual decision-making. The authors found a range of factors at work, including peers, family, and community, influenced whether they engaged in sexual activity, and whether or not they used contraception to prevent pregnancy. Ezer et al. (2016) note, however, that whether or not these factors are complementary impacts on how women feel about their sexual health choices. When these factors align, i.e., when peers, family and community beliefs and values are similar to the values of the self, these women felt confident about their sexual health choices. When they are in conflict, or women encounter contradictory information, they felt uncertain and confused. Thus, Ezer et al. (2016) note the significance of different sources of information being in conflict or in alignment in how women use that knowledge for their sexual health choices. Barriers to accessing reliable sexual health information and sexual health services were also identified, including religiosity, transportation issues, and scarcity of available services.

6 DISCUSSION

The findings of this review indicate a number of key issues in how and why young people may use or prefer certain sources of information.

6.1 Lack of research and assumptions about sources of information

Phase 2 and **3** noted a lack of research on the topic of which sources young people access for sexual health information. This lack of attention may be linked to what Fine and McClelland (2006) and, more recently, Pound et al. (2016) note is a lack of awareness of the agency, autonomy, and independence of young people in the choices they make, and the sexual health information they use. Interestingly, many studies already assume that young people are engaging with certain kinds of sexual health information from certain sources without exploring in more detail what these sources are, and why young people do so. The review of this literature thus suggests that more needs to be done to understand where young people access sexual health information and why, *before* trialling what is effective in increasing sexual health knowledge, and devising sex education campaigns and interventions.

6.2 Discrepancy between credible sources and sources most used

The review notes that there is a discrepancy between the sources young people *trust* most, and the sources they *use* most. This discrepancy is not, however, readily addressed in the literature. In fact, some young people rely on sources they may not see as most credible, instead of choosing sources they consider more credible. There may be a number of reasons for this.

6.2.1 The gendering of sexual health information

Young women are often identified as a major source of sexual health information for their peers (Fisher et al., 2019; Bryon 2018; Meldrum et al., 2016; Rawson & Liamputtong 2010) and studies note that women on average have better sexual health knowledge than men (Fisher et al., 2019). This could be due to the consistent framing of young women in broader social discourses as needing to take responsibility for their sexual health, whereas young (heterosexual) men are often absolved of responsibility (Connor et al., 2018). In education contexts, young women are by and large positioned as primarily, or in many cases, solely responsible for sexual health and well-being (Buston & Wight 2002). These responsibilities include protecting themselves against STIs and unwanted pregnancy (Abel & Fitzgerald 2006), being the gatekeepers of sexual activity (Jozkowski & Peterson 2013), being shamed for engagement in sexual practices (Ringrose & Renold 2012), and often considered to be at fault if they are sexually violated (Anderson & Doherty 2007). Young men, on the other hand, are far less responsibilised for their own and others' sexual health and well-being (Connor et al., 2018; Alldred & David, 2007), and are often constituted as active sexual predators, thereby legitimising the narrative of men as intrinsically sexually violent (Forrest et al., 2002). Discourse analyses of formal sex education programs have noted these recurring themes within the material, where the focus is not only on male aggression and sexual violence, but also on male pleasure and desire (Pound et al., 2016). Women are framed instead by strong risk-aversion narratives and dismissive approaches to female sexual desire, in which women are consistently framed as always at risk and vulnerable (Fine & McClelland 2006). A second aspect of this set of issues is that, due to this discourse of responsibility, young women deal with a plethora of sexual health concerns, including menstruation, infertility diseases such as endometriosis, and potential pregnancy, on an ongoing basis. This means they may be more likely to be involved with sexual health clinics and services, especially if using hormonal (i.e. the pill) or internal (i.e. the IUD) contraceptive devices or seeking treatment for a range of reproductive health–related conditions. As a result, they may use a wider array of sources than young men to support their sexual health education. This may also be why they are more likely than young men to engage with sex education curriculum in formal settings (Pound et al., 2016).

As noted above, research has indicated that young men primarily rely on school-based sex education, the internet, and male peers for their sexual health information (Litras et al., 2015), and that they tend to have lower rates of sexual health knowledge than young women (Fisher et al., 2019; Langille et al., 2014). Such discourses can be found not only in sex education, but other forms of school-based health education, including alcohol and other drug education, in which young women are also responsibilised for sexual risk and assault (Farrugia, 2017). Indeed, a study conducted in Australia looking at men and pregnancy prevention noted that service providers never considered young men as responsible, or necessary partners in pregnancy prevention education (Connor et al., 2018). Other research has found that young men are also more

likely to engage in riskier sexual behaviours than young women (Langille et al., 2014). Further, constructs of heterosexuality and masculinity require young men to already be sexual competent (Woodcock et al., 1992; Limmer 2010). This means that many young men may not seek sexual health information as it may expose the limits of their competence (Hilton 2003, 2007).

6.2.2 Poor sex education in schools

A number of studies have noted that young people repeatedly take issue with the sex education they receive in school settings. Pound et al. (2016) noted a host of issues that young people have pointed out about sex education curriculum, largely due to issues with delivery, the information provided, and the setting, among other concerns. For a number of young people, sex education also remains the major source of formal sexual health information, but this information is regarded as not credible, thus requiring young people to seek information elsewhere. For young LGBTIQ+ people, trusted sources are more likely to come from spaces such as select peers or the internet due to 1) broader fears of experiencing homophobia, biphobia, and transphobia in formal education and health service settings and 2) a lack of inclusion or understanding of the specific sexual health needs of LGBTIQ+ young people in formal settings (Pound et al., 2016; Grant & Nash 2018; Hatchel et al., 2017). Indeed, numerous studies not discussed here note that LGBTIQ+ material is often excluded from formal sex education programs, or promotes a heterosexual viewpoint that cannot speak to their lived experiences (Pound et al., 2016; Grant & Nash 2018). This can lead to young LGBTIQ+ people needing to seek sex education elsewhere, and leaving them without adequate preparation for engaging in sexual activity when they attend college or university (Waling & Roffee, 2018). Additionally, many young people who are LGBTIQ+ may not feel they can come out to their parents or caregivers, and so rely on more discreet ways of accessing sexual health information, such as pornography (Lim et al., 2017).

6.2.3 Barriers to accessing credible resources

Barriers to accessing sexual health information also shape why young people might use less-than-credible sources of information. **Shame, embarrassment, and stigma** were found across a few of the studies analysed for this review. The most trusted sources of information, which include GPs and sexual health services, appear to also be the most difficult to access. Recommendations on how to handle these aspects point to a need for sources of information to be private and confidential. These recommendations, however, may not be as effective as they could be. While increasing privacy and confidentiality is important for those accessing sexual health information while negotiating cultural and religious barriers, emphasis on privacy and confidentiality due to concerns about shame and embarrassment may only reproduce the idea that accessing sexual health knowledge is something to be ashamed of, rather than working to destigmatise it. Additionally, other groups, such as those with intellectual disabilities, were noted to experience barriers in accessing sexual health information, due to their reliance on family, which may not provide adequate information. For minority culture groups, accessing family was preferred, but seen as not possible due to cultural stigma. Studies reviewed in this piece also noted that online sources are not considered as trustworthy as GPs and sexual health services (Fisher et al., 2019; Litras et al., 2015), and do not necessarily provide confidentiality and anonymity, particularly with social networking sites (Patterson et al., 2019).

6.3 The significance of peers and friends

Young people consistently sought information from their peers (and in particular from female friends). While there are debates around the effectiveness of peer-led interventions and whether or not peers should be considered a valuable source of sexual health information due to potential misinformation (Vujcich et al., 2018), peers remain a major source for young people. Peer-led formal interventions are considered preferable among young people seeking sexual health information (Dobson et al., 2017), but little research is available on the effectiveness of informal sources such as everyday conversations with friends. Bryon (2018) identifies friendship as a significant source for young people but does not explore whether young people are getting **accurate**, **reliable**, and **up-to-date** information through these sources. Importantly, many peer-led interventions may not be as effective as they could be, as 'peers' in the context of sexual health refer to people similar in age, rather than friendships with others. As Bryon (2018) notes, further consideration of 'friendships' rather than peers is needed to better understand how young people engage with their friends on sexual health matters (especially as not all peers are, in fact, friends).

Further, given young women tend to be the main sources of sexual health information in peer dynamics, this creates a burden of responsibility on young women to become experts in sexual health as part of good friendship practice. This is

perhaps compounded by the lack of sexual health resources that do not promote risk narratives or reproduce gendered discourses that position women as at risk or vulnerable and include information about pleasure or desire (Fine 1988; Fine & McClelland 2006).

6.4 Absence of nuanced considerations of the various inputs on sexual health

The current approach to understanding sexual health knowledge focuses on a range of factors, but does not consider them together, or understand them in a more holistic way. Rather, these studies tended to look at different factors separately, and did not analyse them together to see how young people **reconcile and negotiate different sources of information**. Indeed, a number of the studies in this review listed numerous factors such as family, the media, formal sex education and schools, but did not readily consider these together, as potentially in conflict, or as complementary. More attention could also be paid to the ways in which factors impacting on young people also impact on each other, for example, media coverage of sexual health issues informs families. In the one study that did consider these issues together (Ezer et al., 2016), tensions were identified in whether or not different sources of sexual health information impacted on young women's confidence in the choices that they make, based on whether or not the information provided by such sources were contradictory or confirmatory.

6.5 Aboriginal and Torres Strait Islander peoples' needs

The review only found two articles (Healey 2014, 2016) focusing specifically on young people's sources of sexual health information in Indigenous communities. Both articles were focused on Inuit peoples in Nunavut, Canada, where family members were regarded as the preferred and most credible source of sexual health information. Unlike many studies in Western and Eastern cultures that find family to be a contentious area for sexual health information, Healey (2014, 2016) notes that family is essential for Indigenous communities in Canada. Broader literature concerning Aboriginal and Torres Strait Islander peoples note a need to engage in Indigenous knowledge frameworks which value land-based learning, including the role of parents and guardians in imparting knowledge and wisdom to their youth (MacPhail & McKay 2018; Bell et al., 2017). Engagements with these communities may need to be better oriented to these issues, including ensuring that programs and interventions are culturally sensitive, collaborative, and value Indigenous knowledge and land-based learning as effective tools for knowledge dissemination about sexual health.

7 RECOMMENDATIONS

While this review has covered a range of issues relating to young people's access to and choices about sexual health information, questions remain as to why they actively search out less trusted sources of sexual health information over those that they find more credible, and how they assess certain sources to be more or less credible for their sexual health needs.

7.1 Further research

A number of pressing research areas emerge from this review regarding young people in Australia and sexual health information:

1) How do young people negotiate or understand gendered dynamics of sexual health information, including the burden of responsibility placed on women, and the lack of accessible sexual health information for young people of diverse sexualities, bodies, and gender identities?

2) How do young people negotiate or reconcile conflicting sources of sexual health information? Are interpretations of such sources influenced by cultural and religious values, and if so, how does this impact on young people's confidence regarding their sexual choices?

3) What kinds of sources do young people prefer to engage with, i.e. the media in which they feel most comfortable to access sexual health information, and why?

4) What are the cultural, socio-economic, gendered, sexuality, ability, and religious factors that shape young people's choice of sexual health information sources?

5) How do young people rate or assess the credibility and trustworthiness of a source? What barriers do they face in accessing sources they see as more trustworthy and credible than others?

6) How do young people experience school-based sex education, and to what extent does this source of knowledge meets their information needs?

7) How well do sources of knowledge outside of school settings complement sex education, and how do young people access such sources?

7.2 Programs and interventions

More needs to be done to reduce the shame, embarrassment, and stigma associated with accessing sexual health. As a number of studies noted, young people saw GPs and sexual health services as the most credible yet most difficult to access sources of sexual health information. This suggests more needs to be done to find how to reduce this barrier for young people, drawing on research to ensure effective approaches that do not further stigmatise sexual health issues. Programs should also be considering sexual responsibility across genders. Research indicates a need to specifically target young heterosexual men, as they have the lowest level of sexual health knowledge, and are simultaneously framed as having the least responsibility for sexual health matters, including pregnancy and STI prevention. However, the lack of high-quality research on sources of sexual health information for young people means that additional research is essential to inform national educational campaigns and programs, as well as local and state-based community programs and interventions.

8 SUMMARY

This literature review explored influences on sexual health knowledge among young people in Australia, as well as the sources of sexual health information they access. Conducted in four phases, this review noted that while a range of influences inform young people's sexual health and well-being, very little research has been conducted on the sources they use, and why they choose certain sources over others.

The review found that research primarily identifies **peers** and **the media** as key sources of sexual health information four young people, but also that they view these as less credible than GPs and other health services. GPs, family, and health services were, however, also more difficult to access due to stigma, shame, and embarrassment.

Young people also cite **formal education** as a major source, but literature suggests that young people view this source as problematic for a variety of reasons. This review notes that **family** and **community** were more often seen as barriers for young people in accessing sexual health information. For Indigenous communities, however, family and community were generally regarded as the preferred source of sexual health information.

Our analysis suggests that a discrepancy exists between the sources young people use, and the sources they trust, possibly based on the gendering of sexual health information, barriers to accessing sexual health information, and poor formal sex education. The analysis also suggests that friendships need more critical consideration regarding young people accessing sexual health information, as they are generally the most cited source. It also found an absence of research exploring how young people negotiate and reconcile different sources of sexual health information.

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APPENDIX A: SEARCH STRATEGIES

Phase 1

The following approach was adopted for the initial broad literature search in response to research question 1.

Time frame 2014–2019

Databases SCOPUS, CINAHL, ERIC, Web of Science, and SocINDEX

Search terms (adolescen* OR teen* OR youth OR "young person" OR "young people") AND ("sex* health" OR "sex* behav*" OR "sex* knowledge" OR "sex* literacy" OR "sex* attitude" OR "sex* percept*" OR "sex* beliefs" OR "sex* communication" OR "sex* understand*" OR "sex* outcome*" OR "sex* experience*") AND (media OR internet OR culture OR soci* OR relig* OR community OR famil* OR parent* OR doctor OR nurse OR physician OR "general practitioner" OR counsellor OR psychologist OR healthcare OR policy OR peer OR partner)

Language English

Countries All

Phase 2

The following filters were applied to the database of 2807 articles extracted in Phase 1.

Countries Australia, Canada, United Kingdom, Great Britain, New Zealand, England, Scotland, Northern Ireland, and Wales

Search terms peer* OR friend* OR partner*, famil* OR parent* OR guardian* OR sister* OR brother* OR sibling OR cousin* OR aunt* OR uncle* OR grand* OR mother* OR father* OR mothers and fathers, media OR internet OR online OR technolog* OR porn* OR social media, school* OR education, experience*

AND health OR well-being, communicat* OR understand* OR literac* OR attitude* OR *beliefs OR percept* OR behav* OR knowledge OR practice OR activity OR know*

The following strategy was used for the complementary search of Google Scholar.

Countries Australia, Canada, United Kingdom, Great Britain, New Zealand, England, Scotland, Northern Ireland, and Wales

Search terms (peer* OR friend* OR partner*) OR (famil* OR parent* OR guardian* OR sister* OR brother* OR sibling OR cousin* OR aunt* OR uncle* OR grand* OR mother* OR father* OR mothers and fathers) OR (media OR internet OR online OR technolog* OR porn* OR social media) OR school* OR education experience* OR communicat*)

AND (understand* OR literac* OR attitude* OR *beliefs OR percept* OR behav* OR knowledge OR practice OR activity OR know* or expert*)

APPENDIX B: SUMMARIES

REFERENCE	CATEGORY	COUNTRY	TOPIC/AIM	METHOD & ANALYSIS	SUMMARY OF FINDINGS
Abbott et al., 2016	Formal education	UK	Exploration of how teachers approach the teaching of sex education.	Interviews (8) and discourse analysis.	Findings from this study note that teachers tend to try to align their teaching with government priorities, and as a result, exclude concepts of pleasure and diversity. Findings also note that young people, and particularly young women, are positioned as at risk, and there is stigma regarding their broader parental role models and communities. Teachers used broader health contexts (i.e. STI and pregnancy rates) to justify their approach. Discussion notes that teachers need to reflect better on their own discursive engagements with SRE (Sex and Relationship Education).
Abbott et al., 2015	Formal education	UK	Exploration of how teachers promote inclusion in formal sex education.	Interviews (8) and discourse analysis.	Findings from this study note that despite best efforts, teachers still engage in upholding heteronormative beliefs in the classroom when teaching sex education, and that young LGBTIQ+ people are still regarded as outliers and therefore not needed to be included in class discussions. The findings of this research warrant the need for teachers to reflect on all aspects of their SRE practice and discourse.
Alldred et al., 2016	Family and formal education	UK	Case study to assess an intervention to familiarise parents with sex and relationship education books for primary school.	Ethnographic observation, semi-structured interviews, and focus groups with parents and key stakeholders. Pre- and post-program self-completion surveys. Ethnographic account, narrative description, descriptive statistics, and chi-square tests.	Participants had increased understanding of the SRE curriculum and reported improved communication with their children about sex and relationships, including enhanced confidence. A program that familiarises parents with SRE content has the potential to improve SRE generally, by establishing coherency between teachers' and parents' communication to children, and increasing parents' confidence in talking about such topics.
Allen 2014	Formal education	New Zealand	Exploration of the role of humour in sex education.	Ethnography, interviews, and observation.	Findings from the study note that humour can be productive in the classroom setting when teaching sex education, as well as used as a tool of disruption to help young men maintain heterosexual masculinities.

Baker 2016	Media	UK	Exploration of young people in school and professional views on pornography.	Survey, focus groups, cross-tabulations, t-test, chi-square analyses, thematic analyses.	Teaching staff are generally concerned about the harmful effects and impacts of pornography on young people, such as promoting sexism and pressure on young people. In contrast, majority of young people (age 14) have viewed/seen pornography, but do not subscribe to the idea that pornography is shaping or harming their development (i.e. are critical of unrealistic portrayals of sex in pornography and can articulate this).
Bell et al., 2017	Community, family, formal education, peers	Australia	Review of qualitative research on young Indigenous Australians' sexual health.	Scoping review of qualitative research. Nineteen articles analysed thematically.	Findings of the review note gaps in exploring influence of geographic areas, focus on how Indigenous communities support sexual health, and focus on young men and sexually and gender diverse peoples, and access to health services.
Bennett et al., 2015	Formal education	UK	Exploration of how young people view abstinence in their sex education.	Qualitative survey analysed thematically.	Findings from the study demonstrated a desire among young people for greater emphasis to be placed on abstinence as a sexual health option within school-based sex and relationship education.
Blanc et al., 2018	Media, peers	Canada	Validation of a scale to measure attitudes toward sexual behaviours (including those related to social media/sexting).	Survey. Descriptive statistics, confirmatory factor analysis, reliability statistics, and correlations.	ASBS (Attitudes Toward Sexual Behaviours Scale) scores were positively correlated with sexual attitudes and behaviours, and negatively correlated with religiosity. Lower positive attitudes were found to anal sex with a casual partner, sex over the internet with a casual partner, group sex, and sexting with a casual partner.
Bonell et al., 2014	Family	UK	This study looks at sexual risk and teenage pregnancy in disadvantaged young people, focusing on family structure and parenting.	Cohort study of multiply disadvantaged at-risk young people aged 13–15, used longitudinal data. Descriptive statistics, associations.	Adolescent girls living with both biological parents and those who could talk to their mothers about 'private things' were less likely to become pregnant. Those who had parents who cared very much about school performance were more likely to use contraception. No differences were found for adolescent boys. The study found limited evidence for family influences on sexual health risk and teenage pregnancy in disadvantage adolescent girls.
Burbank et al., 2018	Community, family, peers	Australia	Exploration of how young Aboriginal girls navigate sex, sexuality and intimacy in Australia through practices of walking around at night.	Ethnography, interviews. Ethnographic fieldwork over many years (~40). Ethnographic analysis.	Findings note that young girls exhibit a high degree of agency in how they negotiate and make decisions about sexual activity. These include engaging with boys their age to avoid arranged marriages to men much older than themselves. However, findings also note consequences that these girls are aware of, including domestic violence, abandonment, difficulty of single parenthood, and reduction in freedom. Collective effervescence theory is used to make sense of why girls engage in these practices if outcomes may not be favourable, with peers and community noted as key factors for

					engaging in certain sexual behaviours. Peers seen as a cause, but also a strength for change.
Byers et al., 2018	Family	Canada	Exploration of factors associated with mothers and sexual health communication with their adolescent children.	Quantitative survey. Integrative Model of Behavioural Prediction. Longitudinal survey.	While mothers generally rated positively on skills, attitudes about the outcomes of sexual health discussions, perceptions of social norms, self-efficacy, and sexual communication, this did not translate into having such discussions at depth with their adolescent teens. Thus, findings do not support hypothesis. More research is needed to test the IMBP model, as well as explore how young people perceive sexual health communication from their parents.
Byers et al., 2016	Peers	Australia	Exploration of the factors associated with why young people who are sexually experienced may avoid or not engage in further sexual activity.	Survey. Chi-square analyses and logistic regression analyses.	Findings note a number of reasons for avoiding sexual activity, including bad experiences, negative feelings about sex, fear of negative outcomes, no interest in commitment, wrong time or other priorities, and sexual performance concerns. Girls were more likely to avoid due to previous experiences of sexual coercion, and both cisgenders more likely to avoid due to religiosity. Target programs to ensure to understand diversity of experiences of avoidance of sexual activity.
Byron, 2017	Media, peers	Australia	Exploration of young people's (18–25) engagement with discourses of sexual health in health promotion websites.	Interviews (12) and website (3), discourse and thematic analyses.	Findings note that peers (usually female) were preferred over internet and GPs for sexual health information sharing, and that sexual problem-solving was often part of these discussions. Findings also note that friendship was highly valued and contributed to concerns about a loss of friendship should sex occur, but sex with friends also provided a safer space for experimentation. Findings note that sexual health promotion also occurs within the context of friendship. Discussion notes that the positioning of friendship as 'risk' in sexual health promotion is inaccurate, and dismisses value of peer-led sexual health information. Friendship is thus an important factor in negative and positive sexual health information.
Byron, 2017	Media, peers	Australia	Exploration of young people's (18–25) engagement with discourses of sexual health in health promotion websites	Interviews (12) and website (3), discourse and thematic analyses.	Findings note that pre-established friendships lead to better intimacy, safer sex in terms of care by a partner (or caring for a partner, i.e. negotiating safe sex practices), and that sexual intimacy is a missing discourse in sexual health promotion. Discussion notes that discussions of intimacy are vital for sexual health promotion, and this needs to involve a wide range of intimacy that is also connected up to safety.

Chan et al., 2016	Peers	Australia	This study examines the association of alcohol and polydrug use with risky sexual behaviour in adolescents under the age of 16.	Survey (5412 participants). Latent class analysis, chi-squares.	Findings note a correlation between polydrug use and unprotected sex, with boys being at much higher risk than girls if they had antisocial behaviours, whereas girls had a greater risk without having antisocial behaviours or engaging in peer drug use. Targeted programs warranted to support boys and girls using polydrugs, with girls a focus for 'greater consequences' than boys.
Chow et al., 2017	Age	Australia	Exploration of first/early sexual encounters among young heterosexual men in Australia	Cross-sectional survey. Univariate logistic regression analyses.	Findings note that men generally engaged first in oral sex, followed by vaginal and anal sex by the time they were 19. Men with higher numbers of sexual partners were more likely to engage in oral and vaginal sex. Discussion notes that sexual activities outside of penile–vaginal are not really discussed in sex education, which is problematic as men engage in oral and anal sexual activity and therefore may be putting partners or themselves at risk. Discussion recommends improvement to sex education programs to ensure inclusion of all sexual activity.
Clark et al., 2014	Family, community	New Zealand	This research used data from the NZ youth health and well-being survey of secondary school students to examine condom and contraceptive use in Maori youth.	Survey of secondary. students, Maori students (n=2059). Descriptive analysis and logistic regressions.	Risk factors for not using contraception were having less than or equal to three sexual partners, and regular cigarette use (in females). Risk factors for not using condoms were 13- to 15-year-old females and females who enjoyed sex. For males, family connection was associated with increased condom use. Study advises there is a need to increase opportunities for healthy youth development and family connectedness, and access to services.
Connor et al., 2018	Health services	Australia	Exploration of health provider views on preparing young men for pregnancy prevention.	Qualitative interviews (key informants, 8). Thematic analysis.	Findings note that healthcare providers did not generally think about young men in pregnancy prevention programs (gender stereotyping), and that young men were not seen as sexual health consumers (thereby not accessing services); that there are a complexity of issues related to unwanted pregnancies beyond the role of men; and that there is a real lack of focus on concepts of fatherhood/male involvement. Discussion notes that healthcare providers are failing young men in terms of pregnancy prevention, instead focusing on other issues all related to women. Discussion calls for a rapid shift in sexual health promotion and unwanted pregnancy prevention that targets young men.
Davies et al., 2017	Formal education	Australia	This study aimed to improve: (1) student knowledge about HPV vaccination; (2) psycho-	Multi-centre cluster randomised controlled trial (RCT) of a complex intervention in 40 secondary	Study results showed students in intervention schools demonstrate greater knowledge and understanding of HPV and HPV vaccination, which appeared

			social outcomes and (3) vaccination uptake.	schools with 6965 secondary students from 2012 to 2014; semi-structured interviews and focus groups. Broad-based biopsychosocial model and thematic analysis.	to promote positive attitudes towards vaccination and supported confidence with vaccination.
Dobson et al., 2017	Peers, formal education	UK	Exploration of how young people interact with peer-led vs teacher-led sex education	Observational study (two different schools, one with peer-led, the other with teacher led). Frequency analysis.	Findings note that students were more likely to ask a peer an important sexual health question (39) versus a teacher (2); humour was also more likely (40) to create a more comfortable environment; colloquial language was used in peer-led sessions, whereas in teacher-led sessions colloquial language was sanctioned; and that students were more likely to speak out against the teacher than the peer (whereas with the peer they would engage on students' terms).
Duley et al., 2017	Community	Australia	The Strong Family Program was developed with community consultation. This sexual health education brought together youth and Elders in a yarning circle.	Program implemented in three communities, evaluation measured knowledge and attitudes using pre- and post-program surveys and focus group discussions. Statistics for survey (t-tests) and thematic analysis.	Knowledge and attitudes improved. Participants thought information was useful and relevant. Culturally appropriate sexual health education is important to ensure success with Indigenous populations.
El-Guebaly et al., 2016	Media	Canada	Exploration of how the viewing of sexualised media impacts young people's sexual health and well-being literacy, intimacy, and relationships; and sexual health decisions (interviews with 20 young people ranging in ages 19–28).	Qualitative, semi-structured interviews. Thematic analysis, theories include health literacy and media literacy.	Young people are aware of their consumption of sexualised media, and noted negative impacts on self-esteem, sexual performance, experiences of pleasure, and relationships and intimacy. A sexualised media literacy program is vital to support healthy sexuality for young people, which includes gendered analyses of said media (i.e. reproduction of hegemonic masculinity and women-as-objects), the benefits of sexualised media in supporting positive sexualised imagery, and the creation of programs that encourage safe spaces to discuss difficult and embarrassing topics.
Ezer et al., 2019	Formal education	Australia	This paper presents findings related to sexuality education from the Fifth National Survey of Secondary Students and Sexual Health, which surveyed 2193 Australian Year 10, 11,	Mixed methods of survey and qualitative comments. Descriptive analyses, chi-square, t-test statistics and thematic analysis.	Study results show that students have mixed experiences of sex education, with one in five noting they did not receive any, and women had much higher rates of good STI/sexual health knowledge than men. Discussion indicates that students have diverse needs when it comes to the content of sexuality education, and that content delivered varies widely depending on school context. In order to better young people's sexual health knowledge, it is

			and 12 students from diverse school systems.		necessary to provide sexuality education that is: nuanced to the differing needs of young men, women and LGBT persons; that serves as a basis for clarifying and reinforcing knowledge acquired elsewhere; and which is age appropriate.
Ezer et al., 2016	Peers, family, community	Canada	Exploration of how young women (16–19) make decisions about sexual intercourse and pregnancy in a rural area of Ontario.	Interviews (8). Constructivist ground theory.	Findings note that for these young women, influences come from family, peers, friends and self, regarding their decision processes regarding engaging in sexual activity and/or preventing (or not) pregnancy. Findings note that when these are in alignment, these strengthen these women's choices, but when these are conflict, these women feel confused and uncertain. Findings note a number of barriers to accessing sexual health knowledge and making informed decisions, including religiosity; transportation difficulties; boredom due to limited leisure activities; social exclusion due to sexual behaviour and/or reputation; future prospects and goals; high visibility and familiarity; and scarcity of discreet services. Discussion explores recommendations to support young women, including comprehensive sex education in rural schools, increased access to sexual health resources/services in rural townships, and programs that work to empower young women regarding decisions about their sexual health.
French et al., 2016	Media	UK	Exploration of young people's views of and experiences with a mobile phone text messaging intervention to promote safer sex behaviour (16 interviews with young men and women aged 16–24).	Qualitative semi-structured interviews with young people who received an intervention text message promoting safe sexual behaviour. Thematic analysis.	Receipt of support by text message had positive impacts. Texts were reportedly easy to understand and trusted. Frequency and timing of the texts were perceived as appropriate. Participants reported that receiving these through mobile texting was convenient. Some participants reported increased knowledge of condom use, confidence, and reduced stigma. Their accounts indicated that the intervention increased knowledge, confidence, and safer sex behaviours. A large-scale randomised controlled trial (RCT) is needed to assess effectiveness.
Garceau et al., 2019	Peers, Family, Community, Formal Education, Media	Canada	Exploration of first/early sexual encounters among young men and women in Canada.	Interviews (40). Thematic analysis and grounded theory.	Findings note many thematic areas of consideration regarding influences of sexual health on young men and women in Canada.
Grant & Nash, 2019	Formal education	Australia	This qualitative study addresses the gap and contributes new perspectives by examining bisexual and	Interviews. Thematic analysis.	Authors argue that biomedical, risk-based, and heteronormative approaches to sex and relationships education reduce young women's sexual health literacy, and that this leads to bi/queer women's disengagements with sexual health. Discussion indicates a need to reframe sex education to be inclusive,

			queer young women's experiences of school-based sex and relationships education in the state of Tasmania through the lens of sexual citizenship.		and through a sexual citizenship lens, whereby young queer women engage in sexual health through a wholistic and civic engagement approach, to support other women and peers like themselves.
Healey, 2016	Family, community, media	Canada	Exploration of Inuit young people's (14–19) decisions about sexual health/getting sexual health information	Interviews (17). Indigenous knowledge framework.	Findings note that parents/caregivers are preferable sources of knowledge for sexual health and relationships, and that young people did not use the internet for this information. Findings also note that young people make decisions about sex through a consideration of a broader community context, and that young people also talked about sex through discourses of love and desire.
Healey, 2014	Community, family	Canada	Interviews with parents on sexual health influences.	Interviews with 20 parents. Indigenous knowledge approach—immersion and crystallisation analytical approach.	Sexual health in the context of historical community events (the trauma of forced resettlement, residential schools, family separation). Sexual health influences in these Indigenous communities is complex. Public health approaches should include Inuit family perspectives on sexual health and understanding of historical community context.
Helmer et al., 2015	Formal education	Australia	This paper reports explores sexual behaviour and decision-making of young people in Western Australia.	Qualitative methods: group discussions and body mapping around a hypothetical scenario, and interviews. Iterative approach.	Findings note that young people see sex education as too clinical, irrelevant, and unengaging. Young people wanted more information about relationships, first sexual experiences, and negotiating condom use.
Heron et al., 2015	Family, community	UK	This research examines social factors associated with early sexual activity in adolescence.	Prospective study of almost 5000 15-year-olds (Avon Longitudinal Study of Parents and Children). A computer-assisted interview was conducted with participants on sexual behaviours in the last year. Chi-square tests and univariable regression models.	The findings demonstrate strong evidence of social patterning for early sexual activity, including higher rates for those from poorer homes; of lower social class; and with younger, less educated mothers. Paper argues for the provision of comprehensive education for all social groups.

Heywood et al., 2016	Formal education	Australia	This study investigated feelings, reasons, pressures, and previous sexual experiences reported by students who have not had sexual intercourse and how these factors are associated with self-rated likelihood of having sex during the next year.	Survey. Descriptive statistics and principal component analysis (PCA).	Reasons for not having sex such as being proud to say no and not being ready were rated higher in importance than fear of potential outcomes or religious/cultural beliefs. Students reported limited pressure from parents and friends and, despite not having sexual intercourse, more than half of the sample had experienced some form of sexual activity. Stronger likelihoods of having sex during the next year were reported by students who had previously engaged in other sexual practices, reported more pressure from friends to have sex, and had negative feelings about not having sex.
Heywood et al., 2016	Formal education	Australia	This paper reports on fertility knowledge and intentions to have children among a national sample of students in years 10–12.	Survey. Chi-square analyses.	Most students wanted to have children (77%). Of those who wanted children or were unsure (n=1780), 54% were able to identify six of eight factors that could affect fertility. Male students had poorer knowledge than females. Poorer knowledge was also reported by male students who were born overseas or used marijuana and by female students who were sexually active or religious. More than half the students (59%) wanted to have their first child when they were aged 25–29, while 19% wanted their first child after 30. Intentions to have children at an earlier age were associated with being religious, sexually active (females), and using marijuana (males). Students not exclusively attracted to the opposite sex were more likely to want children at an older age. Most students typically want children in their late 20s. Many were unaware of factors that could affect their fertility and there was a mismatch between intentions and likely behaviour.
Hoare & Decker, 2016	Formal education	New Zealand	A health promotion leaflet that folded into a small square containing a condom and was dubbed the 'teabag' was distributed to 15- to 18-year-olds prior to the summer holiday of 2012, in order to increase their sexual health knowledge. This paper reports on the evaluation of the teabag from the students' perspective.	Interviews (17), intervention. Grounded theory.	Teabag proved effective in increasing sexual health knowledge/literacy for young people in New Zealand. Discussion reiterates importance of sexual health literacy in reducing unwanted pregnancies and STI/HIV infections, and that the 'teabag' given to students in school is a good intervention to do so.
Hodder et al., 2018	Family, community, formal	Australia	Individual and environmental resilience protective factors are suggested to be	Participants were Grade 10 students attending 28 Australian government high	Only total environmental protective factors remained in the final total score model; students with higher total environmental protective factors scores were 2.59 times more likely to always use a condom (95% CI:1.80 to 3.74).

	education, peers		associated with adolescent condom use; however, previous studies have not comprehensively examined such associations. This study aimed to determine the associations between condom use, and numerous individual and environmental resilience protective factors in sexually active Australian adolescents.	schools (n=1688). An online survey (2011) collected data regarding sexual intercourse and condom use. Multivariable backward stepwise logistic regression models examined condom use and protective factors (total, subscale).	Only three of 14 protective factor subscales were associated with a higher likelihood of always using a condom in the final subscale model (individual: goals/aspirations; environmental: community participation, pro-social peers). Such findings suggest that some protective factors of adolescent resilience may similarly be protective factors of condom use in sexually active adolescents.
Ireland et al., 2015	Formal education, community	Australia	Remote-living Aboriginal women have poorest sexual health indicators. Study describes young women's behaviour and knowledge related to sexual health.	Descriptive ethnographic study, which included: extended fieldwork over a six-year period; community observation and participation; field notes; semi-structured interviews; group reproductive ethnopsychology drawing and language sessions; focus groups, training and employment of Aboriginal research assistants; consultation and advice from community. Thematic analysis.	Participants had poor biomedical understanding of STIs and contraception, compounded by English not being their first language; low literacy levels; and different beliefs regarding body functions. Multiple casual partners, marijuana use, and violence were frequently reported. Further, school-based sex education was problematic due to non-attendance and Catholic-based system. Healthcare professionals do not share common language or construct of the body with their patients. Deficits in sexual health knowledge, participation in risky behaviours, issues with school-based sex education, cultural barriers between healthcare workers and their clients, and situational vulnerability in sexual relationships contribute to poor sexual health.
Johnson et al., 2014	Formal education	Australia	This study examines the implementation of a 10-lesson pilot RSE (Relationships and Sexuality Education) unit of work and an accompanying assessment task in two primary schools in South-East Queensland, Australia.	Pilot of program, survey and focus groups. Thematic analysis.	The results show the provision of a high-quality RSE curriculum resource grounded in contemporary educational principles and practices enables teachers to feel more confident to deliver RSE and minimises potential barriers such as parental objections and fear of mishandling sensitive content. It is recommended that RSE curriculum resources, such as the unit of work used in this study, continue to be made available to primary school teachers in order to provide greater guidance on topic selection and on the depth of exploration of potentially sensitive content. Teachers often emphasised throughout the course of this research the level of comfort experienced in knowing the unit of work had been approved by an external provider of RSE. This endorsement meant that teachers felt they had genuine

					recourse and were free to 'pass the blame' if they experienced parental objections. It also resulted in teachers feeling more confident to respond to parental concerns, an issue which had acted as a barrier to RSE delivery for these teachers until they participated in this research.
King, 2014	Formal education	New Zealand	This study examines youth sexual agency during sexuality lessons in a New Zealand secondary school.	Observation. Post-structural and discourse analysis.	This study demonstrates that it is discursive versions of agency which hold central importance in youth sexual development. Thus, the capacities for sexual action that are fostered in classroom conversation cannot plausibly be separated from agentive sexual practices of young people beyond the classroom's walls. Discussion notes the importance of agency and supporting young people to develop this in the classroom, i.e. how to exert power or understand power in sexual encounters.
Langille et al., 2014	Formal education	Canada	Associations of lower school connectedness have been seen with adolescent sexual risk behaviours, but little is known about gender differences with respect to these relationships. Understanding any such differences could contribute to better supporting the school environment to promote youth sexual health.	Survey. Multivariate logistic regression stratifying by sex.	In boys, lower connectedness was associated with three risk behaviours, having ≥2 partners in the previous year (odds ratio [OR] 1.07; 95% CI 1.01 to 1.13), no condom use at last intercourse (OR 1.06; 95% CI 1.01 to 1.12), and having unplanned intercourse due to substance use (OR 1.09; 95% CI 1.03 to 1.15). No such associations were seen in girls. These results demonstrate that gender differences may exist for associations of school connectedness and sexual risk behaviours; connectedness may be more important for boys than for girls in this area of adolescent health.
Lapointe, 2014	Peers	Canada	Exploration of the role of gay–straight alliances (GSAs) on peer-led sex education for LGBTIQ+ youth (under 18).	Interviews (5), authors note severe difficulty in recruiting due to lack of GSAs in schools, and/or participants not wanting to out themselves to parents (as parents have to provide consent under 18). Thematic analysis.	Findings note that there is a lack of queer content in sex ed, which has led to GSAs being a resource for straight and LGBTIQ+ students. Highlights the need for schools to engage with GSAs to combat homophobia.

Le Grice & Braun 2018	Community, formal education	New Zealand	Maori concepts of sexual health are influenced by Indigenous and Western knowledge, colonising influence, and intervention. This research looks at how school-based sex education can impact this by decolonisation.	Mana Wahine (Maori feminist) research methodology (focused on decolonisation). Qualitative semi-structured interviews. 43 participants. Thematic analysis.	Maori knowledge is explored through the four themes of: relationships, reproductive responsibility, open conversations about sexuality, and contraceptive education. Holistic approach to sexual and reproductive health. Sexuality should be talked about in a warm, supportive, light-hearted way, and by engaging with discourses of desire and positive sexual agency. Indigenous Maori sexual health psychologies offer innovated approaches to conversations about sexual health.
Lee-Foon et al., 2018	Family	Canada	This article looks at health and social care professionals' perceptions of black-Canadian parent–youth communication.	Semi-structured in-depth interviews (17) with providers who worked with black parents and youth. Critical Race Theory.	Participants perceived that parents were unlikely to discuss sexual health or HIV prevention with youth. Providers believed that the approach and content of communication between parent–child was different depending on cultural background. Sex/gender was perceived to influence the communication. Study suggests there is a need to understand how providers develop their perceptions and ways to address these. Also a need for parents and professionals to collaborate for black youth sexual health promotion.
Lewis et al., 2018	Media	Australia	Exploration of young people's 'exposure' to sexualised media content (11 focus groups, age 14–18)	Focus groups. Grounded theory.	Findings note that most sexual content young people encounter online is unintended (i.e. they were not actively seeking sexual content) and that encounters of unintended sexual content made them feel irritated, uncomfortable, or embarrassed/awkward. Young people noted strategies to avoid this content. Discussion notes that work needs to be done to promote better social media regulation for young people to avoid sexual content, as well as engage in harm minimisation programs/education to support young people's use of social media.
Lim et al., 2017	Media	Australia	Exploration of how pornography (i.e. viewing of) impacts young people's (age 15–19) sexual risk-taking.	Survey distributed via social media (941 participants). Contingency table analyses.	Findings note that viewing of pornography was 100% for young men and 82% for young women. Findings also note increased rates of pornography for LGBTIQ+ people; for women, more pornography watching was associated with having had anal sex; younger age of exposure to pornography correlates with poorer mental health in later life; no correlation between viewing pornography and sexual risk-taking (lack of protection). Discussion notes that pornography needs to be addressed in schools for young people, and that LGBTIQ+ young people are using pornography to gain sexual health information due to lack of inclusion in sex education programs. Women's experiences of anal sex could be coerced/pressured. Laws preventing

					pornography watching (under 18) are not working, as most participants in the study have watched, thereby suggesting that current regulations are not effective. More needs to be taken into consideration about the correlation between early pornography viewing and poorer mental health.
Lim et al., 2015	Media	Australia	Exploration of how well young people (16–19) recalled information from 'Facts' and 'Drama Downunder' campaigns and the Australian NSTIPP campaign.	Surveys (distributed at a music festival), descriptive statistics, chi-squares.	Findings note that participants had greater recall of 'Facts' and 'Drama Downunder' than they did the national prevention campaign. Discussion notes that the light-hearted and specific/targeted messaging of 'Facts' and 'Drama Downunder' may contribute to higher rates of recognition of information than more serious campaigns such as NSTIPP. Funding should be targeted to support more specific/targeted interventions that engage in tactics that denote humour, friendliness, and warmth (i.e. scare tactics not effective).
Lim et al., 2014	Media	Australia	Exploration of how comfortable young people feel with using social media to access sexual health information.	Surveys (distributed at a music festival), descriptive statistics.	Findings note that participants were more likely to be comfortable in accessing sexual health information from formal sexual health websites, mainstream media, and their doctors. Social media was noted to not be an ideal form of accessing sexual health information, despite other studies noting its efficacy. Discussion notes that social media is perhaps not ideal because it is not compatible with the presentation of the self and the stigma of sexual health information. However, this does not align with studies that have noted impact from social media sexual health websites. As such, further research is needed to explore the specifics of social media sexual health information.
Litras et al., 2015	Media, health services, peers	Australia	Exploration of how young men (16–19) access sexual health information in Australia	Semi-structured interviews. Thematic analysis.	Findings notes that young men were generally poorly educated about sexual health matters, as most of their education came from sex education programs (not comprehensive). Their existing knowledge mainly came from school-based sexual health education, which while valued, was generally poorly recalled and provided only a narrow scope of physiological information. Young men seek sexual health information from various sources including family, the internet, friends, and pornography, with information from the latter three sources perceived as unreliable. GPs were seen as a source of trustworthy information, but they were not accessed for this purpose due to embarrassment, which is a major barrier for young men.
Logie et al., 2018	Community	Canada	Indigenous adolescents' sexual health is influenced by social disparities. Depression and	Cross-sectional survey in Northwest Territory communities. Participants	Most participants were Indigenous (77.4%), women (82.4%), and reported depressive symptoms (70.1%). Resilience mediates the relationship between depression and condom use self-efficacy. Those who experienced food

			food insecurity may limit condom use self-efficacy. This study examined factors associated with condom use self-efficacy.	aged 13–18. Descriptive statistics, regression to test mediation models, and a conditional process analysis to examine the moderating role of food insecurity in the relationship between depression, resilience, and condom use self-efficacy.	insecurity had higher use of condom if they also had higher resiliency. Strategies to improve sexual health among adolescents in this region should be strengths-based and resilience focused. There is a need to address poverty, mental health, and sexual health together.
Lys et al., 2018	Formal education	Canada	Fostering Open eXpression among Youth (FOXY)—an arts-based HIV prevention program, designed to address sexual health, HIV, STIs, sexuality, and health relationships in Northern and Indigenous Canadian Youth.	Pilot study with young females aged 13–17 years in the Northwest Territories. Descriptive statistics of sociodemographics. Pre- and post-test results, Kolmogorov–Smirnov test for normality. Due to non-normality, a Wilcoxon test was conducted to evaluate whether knowledge, self-efficacy and resiliency were improved.	Significant increases in STI knowledge scores and safer sex self-efficacy were observed. This program is an effective method of delivering sexual health information.
Lys et al., 2019	Family, community, peers	Canada	This study was informed by social ecological theory and explored how young women in the NWT develop sexual subjectivity within the context of contraception use and access during this time of decolonisation.	Interviews (41), arts-based method. Social ecological frameworks of health, framework analysis.	Findings identified barriers to the development of sexual subjectivity that included a culture of stigma and shame surrounding sexuality; pervasive alcohol use in communities; predatory behaviours by older men; poor quality sexual health education offered in schools; and issues with accessing health services. In addition, analysis identified the following facilitators: comprehensive sexual health education; widespread access to free condoms; and positive health support networks with female relatives, peers, and some teachers.
MacPhail & McKay, 2018	Family, community, formal education, peers	Australia	This systematic review assessed the evidence of social determinants impacting on Aboriginal and Torres Strait	Systematic review of 14 studies. Qualitative synthesis.	Findings suggest that social determinants such as access to healthcare, poverty, substance use, educational disadvantage, sociocultural context, gender inequalities, status and identity, and social disadvantage impacted on Indigenous adolescents' sexual behaviours and sexual health risk. Evidence from the literature included in the review suggests that peer education may be an acceptable and appropriate approach for addressing such issues.

			Islander adolescents' sexual health in Australia.		
McCarthy et al., 2016	Media	UK	Testing a mobile app intervention (safetxt) to reduce sexual risk-taking and increase safer sex behaviours in young people (16–24) who had tested positive for a STI or reported unsafe sex in the past year.	Pilot randomised controlled trial, questionnaire after one month of trial. Unspecified statistical analyses.	Findings note that the program was overly successful. Findings note that participants reported that the text message made them consider carefully their actions/sexual behaviours (82%) and came from a trusted source (66%).
McKay et al., 2014	Family	Canada	This research explores the opinions and attitudes of parents toward school-based sexual health education.	Surveys with 1002 parents whose children attended public primary/secondary schools. Descriptive statistics and analysis of variance to compare mothers to fathers.	The majority (87%) of participants either agreed that school-based sex education should be provided in school, 84% that it should start by middle school. All of the sexual health topics were rated as important/very important to be taught. There were small differences between mothers and fathers. This research builds on previous Canadian findings showing that there is strong and persistent parental support for school-based sex education.
McKay et al., 2017	Formal education	Australia	This paper reports on findings from the first Western Australian Survey of Educators of Sexuality Education, which aimed to assess the state of relationships and sexuality education (RSE) in the state of Western Australia.	Survey. Power analysis.	Key findings show that secondary school teachers provided more hours of RSE instruction than the national average. However, they mainly taught curriculum topics such as Abstinence from Intercourse until Married, Effects of Alcohol/Drug Use on Decision-Making, Puberty, and Sex and Ethics (respectful relationships). The least taught subjects included Sexually Transmitted Infections (STIs) and HIV/AIDS, Birth Control, the Impact of Media on Sexual Identity and Sexual Orientation.
McKee et al., 2014	Formal education	Australia	Exploration of young people's knowledge of sexual health information	Focus groups (89 participants). Framework analysis, thematic analysis.	Key findings suggest that scientific information does not articulate closely with everyday practice; that young people get the message that sex is bad, and they should not be preparing for it, and that it is not appropriate to talk about sex. Understanding how young people think about these issues is particularly important, because the focus groups also found that young people disengage from sources of information that do not match their own experiences. A series of recommendations are made that echo other papers regarding the need for more comprehensive sex education, though this paper is a bit tentative in these recommendations.

Monchalin et al., 2016	Community, formal education	Canada	Intervention called 'Sexy Health Carnival' given at powwows. This was peer-led and strengths-based.	Pilot intervention taken by Indigenous youth leaders to four powwows. Survey administered to 154 youth who took part. Means, frequencies, and standard deviations for variables.	Majority (80%) rated the intervention as 'awesome', 99% said they would return at future events, and 96% said powwows were a good place to talk about sexual health. However, 41% were very or somewhat uncomfortable attending. Based on these results, the program is feasible and well accepted in a powwow setting.
Ngum Chi Watts et al., 2014	Community, family	Australia	This research looked at contraception knowledge, attitudes and beliefs of African Australian teenagers and women who have a refugee background. These are influenced by culture and family.	Qualitative research underpinned by intersectionality theory, cultural competency, and phenomenology. Interviewed 16 teenagers and women who had experienced teenage pregnancy. Thematic analysis.	Knowledge of contraception was low; many had misconceptions. Attitudes related to contraceptive use were influenced by partners, family, and community. Migration status and other circumstantial instabilities affected their beliefs. Life experiences, culture, and family should be taken into consideration when providing sexual health education and care to this population.
Ollis & Harrison, 2016	Formal education	Australia	This paper reports on data collected as part of a five-year project designed to implement a health-promoting and whole school approach to sexuality education in a five-campus Year 1–12 college in regional Victoria, Australia.	Mixed methods approach involving surveys, interviews, document analysis, and participant observation. Community engagement focus.	Sexuality education has become a key school policy and has been implemented from years 1 to 9. Teachers and key support staff have engaged in professional learning, a mentor program has been set up, a community engagement/parent liaison position has been created, and parent forums have been conducted on all five campuses.
Palmer et al., 2017	Age	UK	Using data from Natsal-3, conducted in 2010–2012, this study examined whether a context-based measure of first intercourse—termed sexual competence—was associated with subsequent sexual health in a population-based sample of 17- to 24-year-olds residing in the UK (n=2784).	Survey, not stated.	Participants were classified as 'sexually competent' at first intercourse if they reported the following four criteria: contraceptive protection, autonomy of decision (not due to external influences), that both partners were 'equally willing'", and that it happened at the 'right time'. A lack of sexual competence at first intercourse was independently associated with testing positive for human papillomavirus (HPV) at interview; low sexual function in the past year; and among women only, reported sexually transmitted infection (STI) diagnosis ever; unplanned pregnancy in the past year; and having ever experienced nonvolitional sex.

Palmer et al., 2019	Community, age, peers	UK	This paper looked at the context of first sexual intercourse using the concept of 'sexual competence' as defined by: contraceptive use, autonomy of decision, 'willing' partners, and 'right' timing.	Data from Natsal-3) Multivariable logistic regression explored associations between sexual competence and potential explanatory factors.	Lower 'sexual competence' was associated with younger age, area-level deprivation, lower educational level, black ethnicity, friends as a main source of information on sex, not being in a committed relationship at first sex, and uncertainty of partner's virginity status. The context of first sexual intercourse reflects broader social inequalities in sexual health. A significant proportion of adolescents in the UK begin sexual activity in situations that are not conducive to good sexual health.
Patrick et al., 2015	Media	Australia	Exploration of young people and sexting practices	Survey (Year 10, 11, and 12 students). Chi-squares.	Findings note that more young people had sent or received a sexually explicit message rather than a photo, and social media sites were not common areas for this to occur. Students were more likely to have received than sent a sexual image; and sexually active students were more likely to have sexted. Sexting was also associated with other markers of risk, including substance abuse, and those who were not exclusively heterosexual were more likely to sext. Discussion notes that young people may be less inclined to send photos due to concerns about loss of control of images.
Patterson et al., 2019	Media	UK	Exploration of barriers that young people (16–19) face in accessing sexual health information online.	Qualitative interviews (49). Framework analysis, systematic thematic analysis.	Findings note practical barriers (too much content, outdated information, finding locally relevant information); and socio-cultural barriers (concerns about being 'seen' accessing information, embarrassment about visual/audio material, risk-averse in censoring, social media and social networking sites a major barrier, i.e. not wanting to like information, and sexual health apps no better). Discussion notes that awareness of reliable sources (promoting) is vital to support young people, and that social networking sites or apps are not ideal in targeting sexual health, embarrassment plays a key factor so creating anonymous/private resources.
Pound et al., 2017	Formal education	UK	Aims to identify what makes SRE programs effective, acceptable, sustainable and capable of faithful implementation.	This is a synthesis of findings from five research packages conducted (practitioner interviews, case study investigation, Natsal, review of reviews, and qualitative synthesis). Stakeholder consultations also provided feedback on the research.. Multiple	Findings indicate that school-based SRE and school-linked sexual health services can be effective at improving sexual health. Professional consensus that good programs start in primary school. Professionals and young people agreed that good programs are age-appropriate, interactive, and take place in a safe environment. Some young women reported preferring single-sex classes, but young men appeared to want mixed classes. Young people and professionals agreed that SRE should take a 'life skills' approach and not focus on abstinence. Young people advocated a 'sex positive' approach, but reported this was lacking. Young people and professionals agreed that SRE should discuss risks, but young people indicated that approaches to risk

				analyses including qualitative synthesis, cross-case analysis, systematic reviews.	need revising. Professionals felt teachers should be involved in SRE delivery, but many young people reported disliking having their teachers deliver SRE, and findings showed that key messages could become lost when interpreted by teachers. The divergence between young people and professionals was echoed by stakeholders. The authors developed criteria for best practice based on the evidence. The discussion provides an extensive list of recommendations for SRE programs based on both youth and professional stakeholder inputs, and based on research.
Pound et al., 2016	Formal education	UK, Ireland, US, Australia, New Zealand, Canada, Japan, Iran, Brazil and Sweden.	This paper provides a qualitative synthesis of young people's experiences of sex education	Systematic review of 48 studies. Qualitative synthesis.	Paper highlights a number of issues that young people note regarding their sex education experiences, including the failing of providing up-to-date and relevant content, content that is based in moral judgements and/or is too scientific, and the delivery of content as impacting knowledge retention. Findings note what is working for young people, such as external delivery, and the need for comprehensive/whole approach to sex education. Findings note that sex education continues to be delivered within a moralistic and anti-sex for young people framework, and that until this changes, young people will continue to report dissatisfaction and disengagement with sex ed content that they deem is not relevant to their lives or experiences.
Prendergast et al., 2019	Age	Australia	This paper examined whether adolescent sexual behaviour predicted young adult health and social outcomes within longitudinal cohorts in Victoria, Australia.	The sample responded to a web-based survey as young adults in 2010/2011. Multivariate negative binomial regression models examined the predictive effect of sex by age 15 on young adult outcomes.	After adjustment for other factors, sex at age 15 or younger (early sex) predicted higher rates of young adult sexual risk-taking such as pregnancy, lifetime partners, and sex without using a condom. Early sex also predicted higher rates of young adult substance use (alcohol, tobacco, and/or illicit substance use) and antisocial behaviour, but rates of adult psychological distress were not affected. This study found that early adolescent sex had unique predictive effects on a range of adverse young adulthood outcomes. Public health policies should synthesise longitudinal data on the risks of early sexual behaviour, while advocating evidence-based adolescent sexual health promotion interventions. Our results indicate that even if early sexual initiation is not the causal factor, it is a consistent marker of some adverse adult outcomes, and firmer public health guidelines about sex before this age would help to guide public health providers and educators.
Roberts, 2015	Formal education	Wales (UK)	The purpose of this paper is to describe the development of new interactive, bilingual Sex and Relationships Education	Trial of program resources and survey. Unspecified analyses.	Paper highlights that the resources were effective and supported student literacy in the classroom. Findings note that sex education needs to be

			(SRE) resources called Tyfu i Fyny/Growing Up, suitable for students aged between five and 12 years.		regulated in Wales, and that the use of these resources could support increased sexual health literacy among young people.
Roberts et al., 2018	Community, family	Wales	Examines sexual health in young Welsh people who are in foster care compared to those living in private households.	Data from two separate studies. First study was the School Health Research Network Survey which examined behaviours and outcomes of young people. Second is qualitative data from social care professionals. Survey: descriptive statistics and binary logistic regressions. Interview data: inductive thematic approach.	Young people in foster care in Wales have poorer sexual health compared to those not in care. Qualitative data indicates that professionals find problems responding to the sexual needs of people in state care: lack of resources, value-based judgements, and individual determinism. Article concludes that there should be monitoring of the sexual health of foster youth, and a review of policy and practice is necessary.
Roberts et al., 2017	Formal education	Australia	This study evaluated the effectiveness of the Sharing Stories youth theatre program, which uses interactive theatre and drama-based strategies to engage and educate multicultural youth on sexual health issues.	Evaluation of sex ed program (survey and sexual health scenarios). Descriptive statistics and frequency analysis.	Participants reported being confident talking to and supporting their friends with regards to safe sex messages, improved their sexual health knowledge and demonstrated a positive shift in their attitudes towards sexual health. Drama-based evaluation methods were effective in engaging multicultural youth, and worked well across the cultures and age groups. Discussion notes that drama can be an appropriate method of teaching young CALD people about sexual health, and that it demonstrates an effective source of knowledge.
Robinson et al., 2017	Family	Australia	Explores the perspectives of parents of primary school children related to sex education.	Online survey, interviews, and focus groups. Descriptive statistics and thematic analysis.	The majority of parents believed that sex education was relevant and important to primary school children. Most believed that sex education should be taught to children collaboratively (families and schools). The findings show parental support for sex education, and also acknowledgment that parents have a role in this.
Rowlinson, 2014	Formal education	UK	Review of the literature related to sexual health and alcohol in young people and the role of	Reviews qualitative and quantitative research—no	Addressing the issue of alcohol is an increasing priority in young people; PSHE education is important. Need for implementation of National Institute

			personal, social, health and economic (PSHE) education.	detailed methods. Unspecified analysis.	for Health and Care Excellence guidelines and consistent, holistic, high-quality PSHE.
Salehi et al., 2014	Community, age	Canada	Research explored predictors of access to sexual health services among urban immigrant adolescents in Toronto.	Survey of 1216 youth in community settings. Binary logistic multivariate regression—access to sexual health services and individual, interpersonal, and structural variables.	Significant variables included sexual activity, age, race, and social resources. For young women, those with more social resources accessed services more often (no different among young men). Immigration status not statistically significant when combined with other variables. Implications for practice include: that youth should be encouraged to access sexual health services before they become sexually active, there is a need for more outreach and to take account of diversity, and there is also a need for ongoing professional development in relation to cultural competency.
Senior et al., 2014	Peers, formal education, health promotion	Australia	This paper examines young people's (16- to 25-year-olds') perceived vulnerability to sexually transmitted infections (STIs) and their efforts to create a sense of personal safety within an environment in which risks may be high and where STIs are highly stigmatised.	Qualitative methods, including body mapping and scenario-based interviewing (171). Thematic analysis.	A complex range of social determinants influences young people's sexual decision-making and their propensity to put themselves at risk of becoming pregnant or getting an STI. It was clear throughout this study that young people had limited knowledge about STIs and they tended to disregard educational messages as not being relevant to their lives. The perceptions of young people in this study pose considerable difficulties for interventions that attempt to change young people's sexual risk-taking behaviour because suggesting safe sex within this environment poses a threat to dominant constructions of safety held by young people who participated in this research. If young people develop better decision-making and negotiating abilities, this may result in decreasing the amount of sexual risk they are willing to take. By working to strengthen self-worth, the ability to handle interpersonal relations may also be increased.
Sorhaindo et al., 2016	Formal education	England	This paper reports on the evaluation of the Teens and Toddlers positive development and teenage pregnancy prevention program.	Four focus groups, eight paired or triad interviews, and 15 individual interviews of young women participating in the RCT of the program. Phenomenological approach.	Some program facilitators and counsellors were perceived as caring, others perceived as too critical. Reported lack of opportunities for skill-building and challenge in activities. Results offer guidance on further refinements to positive youth development programs—ensuring a balance between challenge and support, need for trusting relationships between adults–youth.
Stanzel, 2016	Formal education	Australia	This case study documents the journey of an outreach youth clinic from its inception to its current practice.	A case study method was applied to review agency evaluation reports and open-ended feedback surveys	The results identify sexual and reproductive health, and mental health, as the main concerns for which young people seek help. Additionally, confidentiality and privacy issues are of concern, while parental and caregiver's understanding acts as an enabler for young people to obtain better health.

				completed by service users. Unspecified analysis.	
Stone et al., 2017	Family	England	This research looks at the views and experiences of parents in terms of early childhood sexuality education.	Focus group discussions with 110 parents. Thematic analysis.	There were a range of justifications and reasons as to why communication about sexuality had occurred between parents and their young children. There were six key themes: 'communication prompts', 'the need for truth', 'the threat of ignorance', 'exposure', 'healthy and positive relationships', and 'openness'. By examining why early parent–child sexuality communication happens, these findings inform the practice responses to support parents in communicating effectively.
Tanton et al., 2015	Formal education	UK	To assess progress in meeting young people's sex education needs in the UK by examining the current situation and changes over the past 20 years in sources of information about sexual matters and unmet information needs.	Cross-sectional probability sample surveys (3869 men and women aged 16–24 years, interviewed 2010–2012 for Natsal-3, compared with 16 to 24- year-olds in Natsal-1 (1990–1991; 792 men and women) and Natsal-2 (1999–2001; 2673 men and women). Complex survey analysis.	Between 1990 and 2012, the proportion citing school lessons as their main source of information about sexual matters increased from 28.2% (95% CI 24.6 to 32.1) to 40.3% (95% CI 38.6 to 42.1). In 2010–2012, parents were reported as a main source by only 7.1% (95% CI 5.8 to 8.7) of men and 14.1% (95% CI 12.6 to 15.7) of women and, for women, were less commonly reported than in 1999–2001 (21.7%; 95% CI 19.6 to 24.0).
Vujcich et al., 2018	Family, community	Australia	Aim of the study was to examine carers' perspectives of giving sexual health information to young people and what helps or stops these discussions from taking place.	Thirteen focus groups and three interviews (81 participants in rural and urban regions of WA). Thematic analysis interpreted using the Aboriginal Family Wellbeing Model of Empowerment.	Participants acknowledged the need to talk to youth about sex. Carers used books, pamphlets, television, and humour in their discussions. A large proportion of participants reported difficulties including colonisation disrupting traditional structures, and that sex is a challenging topic.
Vujcich et al., 2018	Peers	Australia, Canada, US	A systematic review to understand the range and characteristics of Indigenous youth-led health promotion projects implemented and their effectiveness	Systematic review. Unspecified analysis.	Twenty-four studies were identified for inclusion, based on 20 interventions (9 Australian, 4 Canadian, and 7 from the United States of America). Only one intervention was evaluated using a randomised controlled study design. The majority of evaluations took the form of pre–post studies. Methodological limitations were identified in a majority of studies. Study outcomes included improved knowledge, attitude, and behaviours. Currently, there is limited high quality evidence for the effectiveness of peer-led health interventions with

					Indigenous young people, and the literature is dominated by Australian-based sexual health interventions.
Wand et al., 2018	Formal education	Australia	Exploration of Indigenous young people, levels of education and association with sexual risk-taking and outcomes.	Survey. Descriptive statistics and logistic regression models.	Most study participants had sex for the first time when they were 14 years or younger (79% and 67% for males and females, respectively). More than 80% of participants were categorised as being in the high-risk category for the combined sexual risk factors (i.e. not using condoms, drunk or high at last sexual act, or three or more sexual partners in the past year). There was a linear decreasing trend between the proportion of males and females who had less than high school education and age at first sex (Ptrend<0.001).
Yin et al., 2016	Community, family, formal education	England	Study examines association between truancy and teenage pregnancy.	Data from the Longitudinal Study of Young People of England (3837 Females). Logistic regression (four models) to investigate the association between truancy at age 16 and likelihood of pregnancy by age 19.	After adjusting for ethnicity, educational intentions, parental socioeconomic status, and family composition, truancy showed a dose-response association with teenage pregnancy. Truancy is independently associated with teenage pregnancy.
Young et al., 2018	Formal education	Wales	This study investigates how the sexual health outcomes of a representative sample of students aged 15–16 in Wales vary according to delivery of Sex and Relationships Education (SRE) in schools, students' access to on-site sexual health services, and access to free condoms.	Cross-sectional, self-report survey data (3781 students aged 15–16). School level data were also collected. Binary and linear multi-level analyses.	Compared to teachers, other modes of SRE delivery were associated with better sexual health outcomes, including remaining sexually inactive, later age of first intercourse, and condom use. Providing on-site sexual health services did not significantly reduce the odds of having ever had sex or delaying first intercourse; but was associated with increased condom use.