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ORIGINAL ARTICLE

Contraception decision making by Culturally and Linguistically Diverse (CALD) Australian youth: an exploratory study

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ABSTRACT

Context: Culturally and Linguistically Diverse (CALD) youth may become early parents, with some aspiring to parenthood. Yet, the factors that influence CALD youths contraceptive decision-making are less well known, although important for designing appropriate contraception use support programmes for this population. This study aimed to explore the contraception decision-making patterns of CALD Australian youth, in-addition to investigating the factors that influence their use of contraception services.

Methods: We conducted focus groups with 27 CALD youth (ages 16-24) to explore their 1) their contraception use 1) decision-making, 2) information sources, and 3) priority services. For the data synthesis, we utilized thematic analysis to characterize the CALD youth contraception use orientation.

Results: Three themes emerged from the data: 1) the prevalent use of fail-safe contraception methods to minimize personal anxiety, 2) the reliance on online rather than in-person information sources, and 3) the importance to minimize risk for social stigma from use of contraception.

Conclusions: CALD Australian youth reported being competent in self-managing their contraception use decisions. Contraption decision support for CALD youth should address their anxieties about the risk of contraception failure and concerns regarding social stigmas.

KEY POINTS

What is already known:

(1) Australian young females from racial and language minority background communities become parents at younger ages than those from the general Australian population.
(2) Some look forward to becoming parents earlier rather than later in their lives.

What this topic adds:

(1) We unraveled decision making processes and tools the teenagers prefer to use outside conventional understandings.
(2) Cultural psychology beliefs rooted in family social protections are an overriding decision influence in contraception choices.
(3) Peers were less trusted partners in sexual decisions compared to use of online services.

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Cultural diversity; Australia; teenagers; contraception; networking; pregnancy

Introduction

Recent data shows that Australia has the sixth-highest teenage pregnancy rate among selected Organization for Economic Co-operation and Development (OECD) countries as of 2016 (Australian Institute of Health and Welfare, 2020). While Australian teen birth rates are lower than those in the UK (13/1000) and USA (19/1000), the Australian birth rate among young women (15-19 years) was 11.0 per 1000 live births, which are significantly higher than Germany (8/1000), France (5/1000), and the Netherlands (4/1000) (The World Bank Group, 2019). Australian young women are between 1.5 to 3.5 times more likely to become teen mothers, mostly from unplanned or unwanted pregnancies (Children by Choice, 2018; Rowe et al., 2016), suggesting a need to understand contraceptive use behaviours of young Australians for intervention design (Coombe et al., 2016; Richters et al., 2016).

Culturally and Linguistically Diverse (CALD) Australian youth are at increased risk of unwanted pregnancy (Dune, Astell-Burt et al., 2017; Dune, Perz et al., 2017; Ngum Chi Watts et al., 2014). Unwanted

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pregnancies present a significant social cost to under-prepared young parents and their families (Loxton et al., 2007), and may come with stigmatization from family, peers and/or the community (Ntinda et al., 2015; SmithBattle, 2013). Social stigma from unwanted early parenthood might adversely affect the mental health and wellbeing of young adults (Wenze et al., 2015). Views of minority group consumers of health services, such as CALD, are underrepresented in the literature (Australian Institute of Health and Welfare, 2020; Craig et al., 2014; Cubbin et al., 2002; Guzman et al., 2013), making them less likely to be adopted by health care providers.

Contraception use decision influences

There is evidence to suggest that Australian youth experienced social access challenges with contraception services, which they perceived to be less user-friendly (Dune, Perz et al., 2017; Skinner & Marino, 2016). Teenage girls did not want to be seen by people known to them when consulting contraception use services for fear of social stigma (Dune, Perz et al., 2017; Ngum Chi Watts et al., 2015). For instance, CALD teenage girls were concerned about possible breaches of confidentiality/privacy and not wanting their parents to know they were sexually active (Ngum Chi Watts et al., 2014; Skinner & Marino, 2016). The evidence suggests that a majority of youth learn about contraception services through "word-of-mouth" (Dunaev & Stevens, 2016), suggesting social influence on decision regarding contraceptive use. Increasingly, the internet and social media are widely used resources for accessing health information (Lenhart et al., 2015; Ralph et al., 2011; Wartella et al., 2016), including contraception use choices (Children by Choice, 2016; Stevens et al., 2017). CALD youth contraception decisions and the influences on these decisions remains unclear.

While youth across Australia learn about contraception use in high school, CALD youth contraception decisions may be primarily influenced by family, peers and media (Phillips et al., 2013), and personal experiences exploring contraception choices (Dehlendorf et al., 2014; Jackson et al., 2016). Their levels of anxiety about contraception safety also may influence their use decisions (Hall et al., 2015; Wiebe et al., 2011). Qualitative inquiry methods would be ideal for exploring the CALD youth's contraception use decisions, their priority considerations, and preferences.

Aim of the study

We sought to identify the contraception use decisions of Australian CALD youth, the contexts in which they made those decisions, and preferences for accessing contraception services. Our specific research questions were: 1) What are the contraception use decisions that Australian CALD youth make? 2) What influences CALD youth contraception use decisions? and 3) What preferences do CALD youth have regarding contraception services that might work for them? This study's aims are significant given the fact that teenage mothers have a higher risk of experiencing medical complications and avoidable mortality (Azevedo et al., 2015), while policy instruments and practices often neglect to solicit the views of the youth themselves on contraception decisions, services, and resources (Dehlendorf et al., 2013). Furthermore, the findings of this study may be used to better inform mental health contraception use counselling interventions for CALD youth based on their perceptions and experiences.

Methods

Research design

We used an exploratory-descriptive qualitative inquiry approach (Higginbottom & Liamputtong, 2015; Hunter et al., 2019; Kemmis et al., 2013) to discover contraception use decisions and influences among CALD Australian youth. An exploratory- descriptive qualitative research approach is one in which informants share their key understandings, without presumptions by the investigator as to what these might be and how informants elect to frame them. This research approach ensures the authenticity of findings related to informant characteristics and settings, identifying commonly shared experiences without overlooking equally significant divergent experiences (Kemmis et al., 2013). By participating in an exploratory-descriptive qualitative inquiry, informants collectively contribute towards clarifying the phenomenon under study, lending confidence to the credibility and trustworthiness of the findings.

Participants and SETTING

Participants were 27 CALD Australian youth (aged 16-24) from the Greater Western Region of Sydney, with most of the sample being female (66%), single/never married (78%), and students (85%). A significant minority of the youth were living with parents/guardians (48%) (see Table 1). The Greater Western Sydney (GWS) region of Australia is socio-economically deprived and

Table 1. Characteristics of study participants in five focus group discussions.

Characteristics FGDs	Age	Gender	Marital status	Occupation	Living arrangement
FGD 01					
001	17	Female	Single/Never Married	Student	Parent's Home
002	16	Female	Single/Never Married	Student	Parent's Home
003	19	Female	Single/Never Married	Student + Part-time Employed	Parent's Home
004	18	Female	Single/Never Married	Student	Parent's Home
FGD 02					
005	19	Female	De facto Relationship	Student	With Friends
006	19	Female	In a Relationship	Full-time Employed	Parent's Home
007	19	Female	In a Relationship	Casual Retail	With Relatives
008	18	Female	Single/Never Married	Student	With Friends
009	18	Female	Single/Never Married	Student	Parent's Home
FGD 03					
010	23	Female	In a Relationship	Student	With Friends
011	23	Female	Single/Never Married	Student	No Response
012	19	Female	In a Relationship	Student	With Relatives
013	19	Male	Single/Never Married	Student	Parent's Home
014	23	Female	Single/Never Married	Student	No Response
015	20	Male	Single/Never Married	Student	No Response
016	20	Female	Single/Never Married	Student	No Response
FGD 04					
017	24	Male	Single/Never Married	Casual Retail	With Relatives
018	19	Male	Single/Never Married	Student	No Response
019	19	Female	Single/Never Married	Student	Parent's Home
020	18	Female	Single/Never Married	Student	No Response
021	18	Male	Single/Never Married	Student	Parent's Home
022	18	Male	Single/Never Married	Casual Retail	With Relatives
023	18	Male	Single/Never Married	Student	Parent's Home
024	19	Male	Single/Never Married	Student	Parent's Home
FGD 05					
025	23	Female	In a Relationship	Student	With Partner
026	23	Male	Single/Never Married	Student	Parent's Home
027	24	Female	Single/Never Married	Student	Parent's Home

has significant CALD populations (Ngum Chi Watts et al., 2014). A significant minority of youth from this socio-economically disadvantaged community might be early parents (Ritter et al., 2015), presumably from unplanned pregnancies, suggesting lower contraception use decision competencies, assuming access to reproductive health support services.

We sampled both female and male youth for this study, understanding that social networks in which the youth are embedded include male peers and partners. Studies on contraception services with teenagers have routinely ignored the hidden pool of teen males who may be fathers, or partners of female teenagers who may be mothers (Brown et al., 2011; Kabagenyi et al., 2014; Rowe et al., 2016). The perceptions of male youth on contraception use decisions might contribute towards a more holistic understanding on how to improve access to contraception services that could benefit them as well as their partners.

We utilized a combination of snowballing and respondent-driven sampling for recruiting the youth for this study (Heckathorn, 2007; Schonlau & Liebau, 2012). Snowballing and respondent-driven sampling are best practices for recruiting participants when studying socially sensitive topics which participants may be wary of engaging in without the encouragement of socially networked others whom they trust. Following the snowballing and respondent-driven sampling, we initiated participant recruitment using five "seed" users of Family Planning New South Wales (FPNSW) contraception services. The seed youth assisted in recruiting others in their social network for the study. We asked each of the sampling "seeds" to nominate up to three people "*with whom you share important information about fertility and safe sex practice*", and to provide their nominations with the contact details of the project youth liaison officer for enrolment into the study. At enrolment, the youth liaison officer invited new recruits to nominate three other youth. These practices resulted in a sample of 42 nominations, 27 of whom attended the focus group discussion meetings for this study's data collection.

For the sample size determination, we applied the information power approach (Malterud et al., 2016). With this approach, the adequacy of the sample depends on likely information yielded from the participants by the centrality of the study topic to them and their self-selection as key informants. With an information power approach to sampling, the more

informants are invested in a topic, the smaller the sample size can be and still provide credible and trustworthy data. Our participants were CALD youth who networked peers to participate in a study on a topic they perceived themselves to be knowledgeable about and personally invested.

Procedure and data collection

The Ethics Committees of Family Planning New South Wales (Protocol #: R2014-02) and Western Sydney University (HREC Approval Number: H13798) approved this study. The data were gathered by the second, fourth, fifth and sixth listed authors (SZH, AB, MA, RP, respectively).

We hosted five mixed sex focus groups of three to eight youth for data collection. Two of the focus groups were hosted face-to-face and three were hosted on zoom. We asked the youth open-ended (grand-tour: Leech, 2002) questions about 1) how they make their contraception use decisions ("Could you please share on how you decide on contraction use and your considerations in making those decisions"?),and their primary sources of information ("How do you learn about contraception use and which sources of information do you consider the most?"), 2) their previous and current contraception use ("What contraception have you used in the past, and which are you using presently"?), 4) their contraception use preferences ("Which contraception do you prefer the most and why"?); and 5) their contraception services access preferences ("In deciding on contraception services, what influences your preferences"?). As part of the interviews, we asked probing questions to encourage elaboration as needed for clarification. In line with the tradition of conducting an exploratory-descriptive qualitative inquiry (Hunter et al., 2019), we did not prompt participants to speak to any content they did not raise in response to the open-ended questions.

We used member checking (Candela, 2019) with a subgroup of 10 of the participants to ensure the credibility and trustworthiness of the data from the focus group interviews. Moreover, we gathered fieldnotes during each focus group interview to provide context to the data, and compared our notes following each interview for consistency. The focus group interviews lasted approximately 90 minutes each. We audiotaped the interviews for data transcription, and assigned case number de-identifiers for reporting confidentiality.

Author positionality

As authors, we are all of CALD backgrounds and engage in sexual health and reproductive research, encompassing breast and cervical cancer, sexual infections continuum of care and health policy analysis. Our studies have focused mostly on CALD youth and young adults' perceptions of sexual health, applying mixed methods approaches. We believe that knowledge of findings from our prior studies with similar populations provide a reliable benchmark for our observations from this study, adding to the credibility and trustworthiness of our findings.

Data analysis

For the data analysis, we utilized Interpretative Phenomenological Analysis (IPA) (Biggerstaff & Thompson, 2008) to identify emerging themes. IPA is a highly adaptable and accessible approach for an in-depth understanding of data that gives voice to the individual perspectives of participants. In applying the IPA, we undertook a three-phase iterative procedure to contextualize and make sense of the participants' claims about their contraception use decisions and to convey their opinions in their terms. Firstly, the second author (SZH) completed a "line-by-line analysis" for data integrity. Secondly, the second and fourth author (SZH, AB) identified significant analytical themes, with the consensus building. Third, the first and third authors (EM,TD) cross-checked and verified the coherence of the themes in addressing the research question. Moreover, the second, fourth, fifth and eight listed authors (SZH, AB,MA, and VM) confirmed the dependability of the data interpretations with 10 of the study participants. The seventh and eighth listed authors (PL, VM) cross-checked the coherence of emergent themes and the evidence for them.

Results

We constructed three main themes from the data characterizing the Australian CALD youth perspectives, their contraception use decisions and influences on those decisions: contraception use decisions based on personal experience with contraception, reliance on online sources of information, and preference for easy-to-access contraception use services.

Theme 1. Decicions based on personal experience with contraception

Most participants self-reported high confidence in their contraception use decisions based on their user experience knowledge of the services and resources. They also reported to experiment with different types of implanted contraception due to their convenience, dependability to purpose, and ease of use.

Types of contraception

In general, participants reported a having sound knowledge of contraception. They spoke about their decisions using the contraception types they preferred. Most of the female participants (77%) reported using a contraceptive implant or an Intrauterine device (IUD), while 67% reported using the pill.

The pill and IUD. Participants' levels of comfort varied regarding their decisions about using emergency contraception or "morning-after pill", injections, implants, and condoms. However, participant #027 admitted to using the pill primarily as a means of inducing her menstrual cycle as opposed to preventing pregnancy. She stated, "*I can only use the pill according to what my doctor says, because of my menstrual cycles. It wouldn't be good for me to use like an IUD or any other form of contraception*". Less than 10% of the participants reported having any knowledge to guide their decision-making process when considering the use of contraceptive injections, female condoms, vaginal rings, or natural methods. For example, Participant #004, reported having variable knowledge on contraception: "*I know the effectiveness of most methods and how they work, e.g., condom, pill, IUD, contraceptive implant, contraceptive and emergency pill. Not sure about the methods such as a female condom, mini pill or injections*".

Participants reported to base their contraception use decisions with a view to "*determine how effective each form of contraception (is) in comparison to one another*" (Participant #005). Participant #027 reported to "double up" on contraception for enhanced safety, and to reduce anxiety about having an unwanted pregnancy. She said, "*personally, for me, I always like to double up. So I would say that I would use the pill and … I feel more comfortable if the guy has a condom*". Participant #027 indicated a level of anxiety stating that "*I always feel quite anxious like I could just use the pill on its own, but I was anxious that it might not be enough. And that's why I always try to make sure that the guy has a condom*".

Contraceptive implant use. Female participants #007 and #009 pointed to bleeding problems because of contraceptive implant use. Participant #009, for instance, noted that "*I had the implant inserted into my arm. Three months later, I was bleeding heavily and decided to remove it. I can use the emergency pill if needed*". Nonetheless, most female participants (77%) believed that contraceptive implants were the most effective form of contraception, while others, such as Participant #003, said that "*they are effective depending on your body's reaction and the correct procedure to use*", and Participant #005 reported that "*a friend had fallen pregnant on the rod [contraceptive implant]*". Some participants reported difficulties in the use of contraception because of "allergic reactions", "forgetting" and "negligence".

Three of the participants reported concurrent use of the pill with a contraceptive implant as a fail-safe, anxiety-reducing combination. For example, Participant #004, who was on the pill said that:

> I don't remember taking it regularly and sometimes I forget and would, therefore, prefer to use something permanent such as an IUD, or contraceptive implant.

Some, however, reported problems with the use of the pill and/or the *contraceptive implant*. Participant #003 stated that:

> I have used both the pill and the rod. The pill I find is a pain to remember to take as I work mostly or I am out somewhere I don't remember. The rod causes me to have constant spotting so it did not work out for me.

Condoms

Three participants had prior use of condoms and their decisions were influenced by both cost and convenience. For instance, Participants #014 and #026 reported having knowledge about where to get free condoms, and Participant #026 stated that "*it's a condom …, you buy [cheaply] 20 for two dollars*". None of the participants nominated coital withdrawal, also known as *coitus interruptus* or the pull-out method, as a form of contraception. Participants #002, 003 and 008 were uncomfortable with the fake/plastic-feeling/sensation of condoms, and difficulties with their consistent use. For instance, Participant #003 said "*people have sex without condoms. They will use it once, but they don't get a new condom if they have sex a second time*". Participant #008 also noted that "*in addition to the*

above reasons [difficulties using condoms], unprotected sex happens eventually, especially when you are drunk".

Some of the female participants expressed their male partner's disinterest in the use of condoms. For example, participant #027 stated:

> Some guys are very understanding of it, but there are some guys who … say that if they don't wear the condom, it increases the pleasure level. And unfortunately, some guys do believe that having that extra pleasure is more important than, let's say, getting a sexually transmitted infections [STI].

Theme 2. Reliance on online contraception information sources

The participants endorsed primary reliance on online sources of information for their contraception use as follows: the internet and social media, family and friends, and general practitioners including General Practitioner (GP).

Online resources

The majority of participants, reported learning about contraception use from online resources. For instance, Participants #006 and #008 reported that the "*internet and social media*" were their primary sources for information on contraception use. As an example, Participant #007 commented that:

> Social media and networking services really play an important role in the [sexual] lives of young people … they facilitate the distribution of educational materials and support relationships between people.

Similarly, Participant #022 also stated:

> Um, I guess we're lucky to be like living with the technology we have, so I can say for our knowledge we can always use the Internet; like we can either search for methods of [like] preventing [unwanted pregnancy] or methods of diagnosing [cervical conditions] as well.

For some of the participants, their social media skills and family intrusions presented as barriers on decisioning how to access information. Regarding information barriers associated with lower social media skills, Participant #012 said, "*it's pretty much (we don't) [get much information] when you have no guiding light, you look for other sources, and the internet is the quickest thing for anybody in our age*".

Participant #011 observed that:

> There's no sort of representation of how to do that. Like, I can't really think of (any resource) …, and your own friends or people around in your school, we're all trying to navigate this. But there's no sort of guiding person who can talk to you about these sort of things … in my experience, that's the only visual medium I had.

In addition to internet sources, other participants (#013 and #014) reported that they might only "*speak with friends who have done it*".

Barriers to social media usage for self-managing contraception use education included data access intrusions by parents or family members. Participant #011 stated in this context that:

> If you had parents who checked your phone or if you had parents who checked your … computer history or you shared a laptop, … these, kind of, become a barrier or it adds, kind of, pressure or stress of where I can access information … I felt like I couldn't make informed decisions because I didn't have optionality in my resources (Participant #011).

Several participants reported awareness of the FPNSW Youth Education Festival to learn about their use of contraceptives. However, although FPNSW [the public provider of contraception services] has a webpage on contraception use services, most participants said they never used the FPNSW's online resources. Only a few participants (#001, 005, 013 and 014) reported having accessed the FPNSW website. However, two of these participants (#004 and #005) said they utilized FPNSW fertility control factsheets. Participant #004 noted that "*factsheets have been very helpful in giving the information I needed … very understandable and reliable*". Participant #005 noted that the FPNSW fertility control factsheets provided valuable information on "*risks of pregnancy and complications*". While participant #014 advised she, "*learnt everything else to do with sexual and reproductive health from a separate facility – Youth Block*".

Family and friends

Participant #002 nominated her "mum" as the first communication line when reporting on the role of the family in her contraception use decisions since "*she knows more than my friends*". However, this was a minority view. Most of the participants reported discomfort with parents as sources of information on contraception use. For instance, many believe that existing beliefs (cultural and religious stance) stigmatized talking to parents around sexual and reproductive health. For example, participant #010 expressed:

> My parents never really spoke about it at all. They just completely avoid the topic. They never have any discussion with me about anything, like any sexual health at all. It's just a topic that was completely avoided. For example, periods (menstrual cycle) was never something in my family that was talked about … Is contraception an option?

Similarly, Participant #003 said of her mum: "*I don't like talking to my mum, she can be a bit judgmental . . .* " This view was supported by participant #011:

> For me, I had to create those safe spaces, whether that be with friends, whether that be with trialing GPs and then seeing who's comfortable to have these conversations, who's listening to me. My parents aren't a part of that space. I can't, I don't feel I can talk to them.

Participant #001 and #013 suggested friends as their first-line contact, and participant #002 stated "*you would find out from friends*". Similarly, participants #006 and #009 also noted that they have "*learned from their close friends and school*" about their contraception use. However, Participant #008, said she used the "*internet and social media*", discounting friends for information sources for their lack of trustworthiness:

> I've stopped asking my friends if they used contraception because I know some of them typically don't use anything most of the time even though I know we may be at risk of pregnancy or STIs due to unprotected sex.

GP and family planning nurses

Several participants reported consulting general practitioners or family planning nurses for contraception use-related matters. For example, participant #003 mentioned consulting her GP. She noted:

> I went in specifically for contraception, so [it] wasn't a spontaneous conversation. The doctor said they could put the rod in [tube] but we had no other discussion. I felt more comfortable getting it put in here.

Participant #007 also reported she had "*talked about contraception with a nurse at a medical clinic*" and "*used the internet*". Some participants said they decided to see a GP (missed menstrual period was to be perceived as a pregnancy predictor), while one said she might go for a blood test through a GP. For instance, Participant #004 stated that "*if it [home pregnancy test] was positive, I would go to the GP for a blood test. I regularly do pregnancy tests while on Implanon*". Participant #003 said to have used a medical facility for test kit and usage, "*My GP informed me about the choices, and I had a termination earlier this year. We had no financial support and we were too young to have a baby*". She said it was painful and distressing to get an abortion.

However, a male participant reported being uncomfortable with consulting a GP as a source of information on contraception use. For example, #024 expressed the awkwardness around visiting his local GP for support regarding his sexual health. He stated

> . . . so what I think is that although I do trust my local GP, the relationship after that [consultation] it will be different. It's not the same because there's always going to be that awkwardness afterwards. So, in my opinion, I would go to a different GP for that kind of stuff.

Theme 3. Preference for easy-to-access contraception services

Participants suggested that they prefer to use easy-to-access contraception services that provided them with the most discretion and assured privacy. Most perceived the public contraception services as difficult to access. For instance, only eight (32%: #001, 002, 003, 004, 014, 016, 019 and 027) reported using FPNSW services.

Social stigma influences

Participant #003 said of the FPNSW health workers that they are "*friendly and helpful*" so she felt "*comfortable*". However, she also noted that "*people have access to it [FPNSW] but they don't choose to use it. They won't go out of their way. I think some people are embarrassed to access it*". Some of the participants were uncomfortable attending FPNSW for fear that their family and friends might stigmatize them for using public contraception services. Another example was Participant #004 who said that she avoided going to the FPNSW offices because "*lots of people are hanging out from the front of the building*". As such, she "*avoided being seen by others using family planning services*". Participant #003 commented that "*if a parent finds information from the FPNSW they have a preconceived notion that you are sexually active*".

The subjective burden on the daily routine

Participants perceived the publicly provided contraception use services to require too much effort to access, in part due to scheduling difficulties in order to access them. For instance, Participants #003 and #006 also pointed to having difficulty accessing FPNSW contraception services because these services were available only during working hours when they are engaged elsewhere, such as at work or in school.

Some of the participants noted that school-age youth experienced a subjective burden to their use of contraception services from family "*curfew-like routines*" (Participant #003) which interfere with their use of contraception services. For example, they referred to "*routinized school drop off and pick up for stay-at-home*" by family members as denying them "*the opportunity seek contraception use services with the local agencies*" (Participant #014). They perceived this problem to be compounded by their "*discomfort seeking parental*

consent to access sexual health support services", potentially "*raising parental suspicion about whether they were sexually active/their sexual activeness*" (Participant #019). Participants #012, 013, and 015 conveyed similar experiences, which had an impact on their access to information, support and awareness of contraceptive options.

Discussion

We aimed to explore contraception use decisions of Australian CALD youth, the contexts in which they made those decisions, and their priority contraception tools and services. Findings might inform contraception use decisions by the CALD youth.

Our findings suggest that personal and physical reactions to active biomedical contraceptives might influence the adoption and retention of contraception by CALD youth, perhaps more than lessons learned from others, or the demonstrated efficacy of a particular contraception regimen (Parr & Siedlecky, 2007; Polis et al., 2018). Moreover, reactive approaches to pregnancy prevention such as the use of pregnancy test kits, elective abortions, and use of pregnancy tests while on contraceptive implants suggests a need by some of the CALD youth to optimize the prevention of unwanted pregnancy (Frohwirth et al., 2016).

Contraception choices made by the CALD youth were determined by their sense of usefulness and dependability, as well as their sense of mental health wellbeing from using contraceptives they were comfortable with or were perceived as anxiety reducing. Moreover, female youth prioritized the effectiveness of contraception, which is a concern shared by male youth (see Brown et al., 2011; Dehlendorf et al., 2013). The literature suggests that misconceptions and misunderstanding [such as perceived invulnerability to pregnancy], erroneous assumptions about the side effects of contraceptives, and fear of negative health consequences serve as obstacles to consistent and effective contraception use (Alenoghena et al., 2019; Durowade et al., 2017; Frohwirth et al., 2016). Moreover, some of the female CALD youth reported having anxieties about safety with contraception use (see also Hall et al., 2015).

These findings underscore the importance of having online resources of information on contraception use for Australian CALD youth. Previous studies have reported on the influence of information technology resources in youth contraception decision-making (Guldi & Herbst, 2017; Yee & Simon, 2010). Information and communication technologies are becoming increasingly important in meeting young people's health information needs (Decker et al., 2015; Guldi & Herbst, 2017; Peskin et al., 2015). Increased broadband access, for example, explained at least 7% of the decline in teen birth rates between 1999 and 2007 (Guldi & Herbst, 2017). As a result, young people have a positive perception of technology and media resources for their contraception use education aimed at reducing unwanted pregnancies and encouraging their sexual well-being. Nonetheless, sources of information about contraception use have varying degrees of accuracy (Korda & Itani, 2013; Minichiello et al., 2013), suggesting a need for contraception use literacy education with the youth.

Overall, these findings reflect that while good relationships with the service providers were essential to influencing the CALD youth decisions to use contraception services (Dehlendorf et al., 2013), practicalities of their life situations and routines influenced decisions to access services. Anxieties about being known to family members as using contraception were a significant barrier to accessing contraceptive care and services, a key component of current unwanted pregnancy rates (Ngum Chi Watts et al., 2015; Skinner & Marino, 2016). We noted evidence to suggest that CALD youth preferred the internet and social media as contraception information sources compared to in-person sources of information, likely due to social anxieties regarding discussing their sexuality with family and peers.

Implications for youth contraception use support interventions

The evidence from this study indicates a wide acceptance of contraception use by CALD youth and a personal understanding of what works for them. Underutilization of services, rather than a lack of knowledge about contraception and of available services, might explain the increased risk for unwanted pregnancies among CALD youth (see also Gray & Arunachalam, 2015; Lenhart et al., 2015; McMichael, 2013; Ngum Chi Watts et al., 2015; Ralph et al., 2011).

This study provides preliminary data to suggest that contraception use decisions by CALD youth evolve from their user experience, the information sources they access, and cultural safety considerations. Cultural safety in health service utilization is premised on understanding core social norms and the values of the users (Brascoupé & Waters, 2009). In order to better support CALD youth with their conception use decisions, mental health practitioners and sexual health service providers should prioritize improving access to the particular services the youth prefer, with tailoring for cultural safety protections.

A recurring concern by the CALD youth is the anxiety they experience when deciding on alternative contraceptive options, not only because of access issues, but also due to their lack of certainty whether a contraception procedure would be safe and sufficient for them. The mental health implications of contraception use by CALD youth are under-researched, while important to the designing of interventions to support the youth in their use decisions (Hall et al., 2015). The CALD youth address this anxiety in different ways, including "doubling-up" on contraception they currently use or would use. "Doubling-up" seemed to make intuitive sense to some CALD teenagers, while also being a proven approach to reducing risk for unwanted pregnancy and STIs (El Ayadhi, 2017). Dual-use of contraception is low among Australian female youth (Harris et al., 2020), while backup contraception use would be stress-reducing, providing a greater sense of control over their fertility (Commendador, 2007; Parr & Siedlecky, 2007; Rowe et al., 2016), and/or to avoid the stigma that may come with early parenthood (Ntinda et al., 2015; SmithBattle, 2013).

Our findings suggest that patterns of contraception use decision-making are complex, and informed by a wide range of personal and contextual factors which need to be considered in contraception use counselling (Harris et al., 2020; Toffol et al., 2020). Health care providers of CALD youth might counsel to normalize doubling-up practices for those youth who may prefer that approach to contraception, which would reduce unwanted and unnecessary anxiety around those choices (see also Dehlendorf et al., 2013). For instance, CALD youth might benefit from counselling on their choices for contraceptives that would work for their situation and complementary methods, understanding the evidence base for them, and their own response to combinations they may have tried. Shared decision-making with health care providers may then lead to greater confidence and comfort by young CALD in their contraception choices, and willingness to explore alternatives that would work for their personal circumstances (Dehlendorf et al., 2014; Wenze et al., 2015).

Limitations and suggestions for further research

The findings from this exploratory study are based on a small sample size of youth who elected to participate in the study. The possibility remains that other youths who were not networked for this study may report a different contraception use decisions profile. We recommend a replication study to check on the reproducibility of our findings based on the informants we accessed. We also utilized focus groups interviews to facilitate the unique benefit of the youth being able to share their ideas in real-time between each other, allowing for a richer discussion with individual interviewees. However, this also comes with the limitation that some youth may be reluctant to share on some topics out of social desirability concerns. Our reliance on focus group interviews may have created an uneven social dialogue space for some of the youth who may prefer an alternative data collection approach. Future studies should seek to utilize group concept mapping approaches (see Rosas & Kane, 2012), that provide for anonymity of contributions, and with access to unattributed statements to guide discussion and conclusions from the data.

Conclusion

The Australian CALD youth in this sample perceived that they were competent in their contraception use decisions. They preferred the use of online social media resources to influence their knowledge of contraception use, perhaps more so than their social affiliations. The CALD youth self-reported extensive access to online resources and social media-based contraception services to maintain their health; these are increasingly becoming their choice for education on fertility control. The youth also expressed social anxieties regarding potentially violating family cultural norms in their contraception decision choices. The CALD youths preferred easy-to-access contraception services which minimized risk for social stigma. For the Australian CALD youth, the physical accessibility of contraception use services was less of a challenge than their socio-cultural accessibility.

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