Adolescent Unplanned Pregnancy in the Pacific

CHUUK

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The cover image shows a type of *mwaramwar*, called *akenet*, which is very specific to Chuuk. It is special because it represents women as well as the inter-woven and tight relationships in Chuukese culture. The akenet shown here was made by Ophnay Rechy. Photo by Myjolynne Kim.

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Contents

Executive summary

The data presented in this report was collected in Weno, Chuuk as part of a larger study that aimed to understand the contemporary context and realities of adolescents who face unplanned pregnancy and motherhood in three Pacific Island States: Chuuk, Vanuatu and Tonga. Rates of unplanned adolescent pregnancy are high in many Pacific Islands countries. Issues facing adolescent girls with regard to sexual and reproductive health are implicated in social, cultural and economic development, and in human rights imperatives in the region. Young women in the Pacific navigate sexual and reproductive decision-making in increasingly complex social and cultural contexts.

Accounts of the lived experiences and perspectives of the young women and girls themselves are necessary for an adequate understanding of the realities of unplanned pregnancy. Data for the Chuuk segment of the study was collected via face-to-face interviews with 22 participants aged 16–19 and 10 grandmothers or women over age 50. Two focus group discussions with older women were also conducted on Weno. Interviews enquired into personal family and relationship stories and relevant contextual information, including access to sexual and reproductive health services; enablers and constraints to decision-making and action; traditional knowledge and practices of fertility control; and the role of older women in these matters. The sample was non-random and, as such, findings describe this group only and are not generalisable to the wider population.

The interview data showed that contraceptive and general sexual and reproductive health knowledge was very poor among the interviewees at the time of their pregnancy. This lack of knowledge resulted in late confirmation of pregnancy – often after five months – which in turn resulted in delayed presentation for antenatal care, if this was sought at all.

Indeed, access to antenatal and postnatal health care was varied. Those in our sample who had accessed antenatal care had received it from the hospital in Weno. Some participants described that service as helpful and caring, while others had been berated and felt alienated. Numerous participants interviewed in the more inaccessible villages on Weno had had no contact with hospital maternity or other health services. They had given birth in the village and their babies were not registered. At least one of those babies was visibly disabled and, although over two years old, had never been seen by a medical professional. This indicates that there are important gaps in health service coverage and also that the extent of adolescent pregnancy is likely to be significantly underestimated by health care provider data.

The participants described few reliable sources of sexual, reproductive and contraceptive information prior to accessing antenatal services. School sex education coverage was patchy and inadequate. Information shared among friends was often unreliable. Prior to pregnancy, the girls' mothers played no role in sex education and had not talked with their daughters about sex or contraception.

However, mothers played a key role in the girls' experiences of, and decision-making around, adolescent unplanned pregnancy. Mothers were generally the first to recognise or to be told about their daughter's pregnancy and often played key roles in abortion decisions or attempts. Mothers also often helped hide the pregnancy from, or reveal it to, other family members. Within the family, mothers themselves were held as being as culpable as their daughters for the pregnancy. Both mothers and daughters feared that fathers would respond violently to the news of their unmarried daughters' pregnancies. Although they were angry and scared, mothers were the main source of support for pregnant adolescent daughters.

Most participants had been verbally abused and some had experienced physical abuse when they told their families that they were pregnant. However, once born, the babies were generally welcomed into the young mother's family. At that time, the father's family too tended to show an interest in, or stake a claim to, the child.

Most participants had considered or attempted abortion. Abortion attempts include taking antibiotics, boiling water on the stomach, strenuous work or exercise, stomach massage and the use of local herbs. Attempts to cause abortion by the use of traditional herbs and other home remedies may be common and are unlikely to be reported. The traditional herb used to end an unplanned pregnancy was described as being a yellow and bitter *tunnun*[1] preparation. Those who had miscarried as a result of drinking the traditional herbal preparations had not sought any follow-up from the hospital or medical services. Interviewees had not considered and did not know of any medical or clinical termination options. Several of the methods discussed posed serious risks to a pregnant woman as well as to a foetus.

Many participants had become pregnant before they were 15 to significantly older, regular sexual partners. The young age of the girls and the age disparity raise issues of legal consent, as well as suggesting power imbalances in the relationships. However, the girls interviewed did not view their relationships as other than normal and expressed no feelings of being unequal or having been unable to refuse the relationship. By the time of interview, few of the participants had remained in a relationship with the father of their baby, and most lived with parents, or a parent, who supported them in caring for their babies.

The interviewee narratives highlighted the manner in which young girls who were home from school alone were vulnerable to the sexual attentions of older neighbourhood men. Many of the youngest interviewees had been out of school and were regularly home alone before they became pregnant. This indicates that the education system is failing adolescent girls who may not be academically inclined and who may become disinterested, or who are being suspended, expelled or simply 'let go'. Efforts are needed to retain and engage all young people in education.

Family attitude and resources made a difference to the ways in which young mothers were excluded or included in the wider community, as well as to their own economic prospects. Return to study was enabled by family financial resources and the availability of a child carer, as well as the young mother's own ambitions. Many participants from poorer households were socially isolated after having a baby. This isolation was exacerbated if the young mother was in poor health.

The findings of this report indicate the need for sex education programs targeting early adolescents; improved access to clinical and antenatal services, particularly through outreach; education system efforts to retain girls in school; and legal entitlements and practical services that work to ensure access to contraception and abortion and protection from domestic violence for all women in Chuuk, regardless of age.

The data collection team visited several of the more isolated and hard-to-reach villages on Weno, some of which had no road access. It was in these communities that the youngest interviewees, as well as those who had had no previous interaction with service providers, were recruited. An overriding and immediate need indicated by this study is for adequate funding of outreach services necessary to ensure access to health and support services for young mothers and their children. This report specifically urges the funding of a Young Mother and Child Outreach Team to regularly visit rural settlements and the outer islands and to act as a 'mobile service referral hub'. The implementation of the data collection demonstrated that such an approach is viable with a small but dedicated team, given adequate resources.

1 Tunnun is described as a rhizomatic root – a type of ginger that is bitter and yellow.

1 Aims and objectives

This report presents findings from data collected in Chuuk as part of research into adolescent unplanned pregnancy in three Pacific Island States: Chuuk State, Vanuatu and Tonga. Rates of unplanned adolescent pregnancy are high in many Pacific Islands countries. Issues facing adolescent girls with regard to sexual and reproductive health are implicated in social, cultural and economic development, and in human rights imperatives in the region. Young women in the Pacific navigate sexual and reproductive decision-making in increasingly complex social and cultural contexts. Those contexts do not generally enable young women to speak openly about such matters. In acknowledgement of this situation, the *Pacific Women* Advisory Group on Research identified the need for research in order to better understand the experiences of unplanned pregnancy among young women in the Pacific. Researchers and stakeholders with an understanding of adolescent pregnancy in the Pacific gathered in Suva in July 2018 to confirm the need and discuss the brief for the research. Their insights inform the focus and methodology of this study. The research was funded by the Australian government's Gender Equality Fund through the Pacific Women Shaping Pacific Development (*Pacific Women*) program. A research team from the University of New South Wales was contracted to undertake the study.

Data collection at the three sites aimed to shed light on the contemporary context and realities of adolescents in Chuuk State, Tonga and Vanuatu who face unplanned pregnancy and motherhood. An account of the lived experiences and perspectives of the young women and girls themselves is necessary to gain an adequate grasp of those realities. In addition to personal, family and relationship stories, the study enquired into access to sexual and reproductive health services; enablers and constraints to decision-making and action; traditional knowledge and practices of fertility control; and the role of older women in these matters.

The research employed in-depth ethnographic interviews with girls and young women, aged 16–19 years, who have experienced unintended pregnancy and motherhood. The study also investigated traditional and contemporary knowledge around fertility limitation practices, including from the viewpoints of older women, using face-to-face interview methods and focus groups with older women. Data collection was undertaken at three sites in Vanuatu, at three sites in Tonga, and on Weno in Chuuk, including in isolated and mountainous areas.

The findings have direct programmatic implications for the development of culturally informed and age-appropriate sexual and reproductive health, social support and educational services for adolescent mothers and young girls. The need for such services is indicated by high teenage fertility rates (see Table 1, p. 6). The findings also offer insights into the significance of wider health and social policy and programming for this group and contribute to a regional evidence base. Through its methodology, the study centralises the experiences of, and gives voice to, the young women themselves, the wellbeing of whom has human rights and gender equity implications in the Pacific.

The objectives of the research were:

- to understand the issues associated with unplanned adolescent pregnancy from the point of view of young women in Chuuk State, Tonga and Vanuatu
- to understand the social and structural factors impacting young women who experience adolescent pregnancy and motherhood in Chuuk State, Tonga and Vanuatu
- to better understand the use of traditional and other practices of fertility limitation, especially abortion, in Chuuk State, Tonga and Vanuatu, and the impact on the experience of adolescent pregnancy and motherhood
- to give voice to adolescent girls in the Pacific.

2 Literature review

2.1 Adolescent unplanned pregnancy

Adolescents bear a disproportionate burden of poor sexual and reproductive health outcomes in lower- and middle-income countries (Patton et al., 2016). The 2030 Agenda for Sustainable Development includes 17 Sustainable Development Goals. Goal 3 on health and wellbeing aims to 'ensure healthy lives and promote well-being for all at all ages'. The target indicator for goal 3.7 on sexual reproductive health is a reduction of adolescent birth rates. In the Pacific, the Moana Declaration of 2013, as endorsed by Pacific parliamentarians, focuses on sexual and reproductive health and acknowledges the need to prevent unplanned pregnancies and prioritise sexual and reproductive health services for adolescents (UNFPA, 2013b).

The adolescent fertility rate among women aged 15–19 years is far lower in developed Pacific rim countries such as Australia, with an estimated 10 births per 1,000 women aged 15–19 years in 2017 (ABS, 2018), and New Zealand, with an estimated 15 births per 1,000 women aged 15–19 years in 2017 (Statistics New Zealand, 2019), compared to the data provided in Table 1. As indicated in Table 1, Vanuatu has the third-highest adolescent fertility rate in the region. Notably, the Federated States of Micronesia (FSM) has the second-highest maternal mortality rate after Papua New Guinea.

Adolescent pregnancy and motherhood can have long-term negative impacts on the health and social and economic wellbeing of mother and child (Patton et al., 2016; Sawyer et al., 2012; UNFPA, 2013b; UNFPA, 2013c). Adolescence is a time of critical development, as physiology, cognition, psychology and social functioning develop rapidly. Unmet need for contraception, lack of information and lack of bodily autonomy can lead to unplanned adolescent pregnancy (UNFPA, 2013a). Young women tend to bear the burden of adolescent pregnancy and motherhood, which can have a long-term negative impact on their health and social and economic wellbeing (Patton et al., 2016; Sawyer et al., 2012; UNFPA, 2013a). Depression, unsafe abortion, and pregnancy and labour complications are serious health risks due to adolescent pregnancy (UNFPA, 2013a), which is associated with increased risk of low birth weight, pre-term births and stillbirths (UNFPA, 2013b).

The impact of adolescent pregnancy extends beyond that on the individual mother (Sawyer et al., 2012). In low- and middle-income countries, 'health inequities related to social and cultural norms, gender power imbalance, education and socio-economic deprivation affect young and unmarried women in particular' (Bell et al., 2018, p. 5). Any stigma and marginalisation associated with teen motherhood will exacerbate those impacts. Teenage pregnancy often leads girls and young women to drop out of school. It limits income-earning potential for the mothers and can also limit their opportunities and choices (UNFPA, 2013a; Viner et al., 2012). In the Pacific, adolescent fertility and related outcomes have wider implications for development, as well as gender equity and human rights imperatives (Kennedy et al., 2013b; UNFPA, 2013a).

Adolescents are a neglected group in health and social programming (Bearinger, Sieving, Ferguson, & Sharma, 2007), and knowledge on how best to promote adolescent sexual and reproductive health is patchy (Bell et al., 2018; O'Connor, 2018). Much of the critical literature on teenage pregnancy derives from a Western context and focuses on clinical services to reduce adolescent fertility. However, it has been argued that the health and wellbeing of adolescent mothers in the Pacific would be better served by attention to cultural and social features of the society than by a focus on contraceptive technologies (McPherson, 2016).

Table 1: Reproductive Health Indicators for Pacific Island countries[1]

	Adolescent fertility rate (births per 1,000 women 15–19 years)	Total fertility rate (births per 1,000 women 15–49 years)	Unmet family planning rate (percentage of women 15–49 years)	Contraceptive prevalence rate (percentage of women 15–49 years)	Maternal mortality ratio (per 100,000 women 15–44 years)
Cooks	67.7 (2009–13)*	2.7 (2009–13)*	–	48 (2001–05)*	0 (2008–12)*
FSM	44 (2010)*	3.5 (2010)*	44 (2002)*	40 (2009)*	140.6 (2016)[2]
Fiji[3]	23.1 (2015–17)	2.9 (2015–17)	20 (2000)*	38.4 (2013)*	14 (2015–17)
Kiribati	49 (2010)*	3.9 (2010)*	28 (2009)*	22.3 (2009)*	90 (2015)[4]
RMI	85 (2011)*	3.4 (2011)*	2.4 (2009)*	16 (2010)*	105 (2007–11)*
Nauru	94.3 (2011–13)*	3.9 (2011–13)*	23.5 (2007)*	25.1 (2007)*	0 (2011–13)*
Niue[5]	19.9 (2007–11)*	2.7 (1987–2016)	–	22.6 (2001)*	0 (1996–2016)
Palau	27 (2015)*	2.2 (2015)*	–	22.3 (2010)*	0 (2010)*
PNG[6]	68 (2016–18)	4.2 (2016–18)	25.9 (2016–18)	36.7 (2016–18)	215 (2015)[7]
Samoa[8]	56 (2010–14)	5.1 (2010–14)	34.8 (2010–14)	15.3 (2010–14)	51 (2015)[9]
Solomon Islands	77 (2015)*	4.4 (2015)*	34.7 (2015)*	29.3 (2015)*	114 (2015)[10]
Tokelau	29.8 (2006–11)*	2.1 (2015)*	–	–	–
Tonga	31.9 (2016)*	4.1 (2009–12)*	25.2 (2012)*	28.4 (2012)*	124 (2015)[11]
Tuvalu	28 (2012)*	3 (2012–16)*	24.2 (2007)*	31 (2007)	0 (2010)*
Vanuatu	81 (2013)*	4.2 (2013)*	24.2 (2013)*	47 (2013)*	78 (2015)[12]

1 Up-to-date data is not available for all countries. Statistics marked with an * have been sourced from SPC, *National Minimum Development Indicators*. Retrieved from http://www.spc.int/nmdi/maternal_health. Other sources are footnoted.

2 Source: Government of Federated States of Micronesia (FSM). (2017). *Title V 2018 MCH Block Grant Application and 2016 Annual Report. Palikir, Pohnpei: Department of Health and Social Affairs, FSM National Government*. Retrieved from https://mchb.tvisdata.hrsa.gov/uploadedfiles/StateSubmittedFiles/2018/FM/FM_TitleV_PrintVersion.pdf.

3 Unless marked with an *, the source of the Fiji statistics is Fiji Bureau of Statistics (FBoS), Registrar General's Office (Ministry of Justice, CRO) & Ministry of Health & Medical Services (MoHMS). (2019). *Republic of Fiji Vital Statistics Report 2012–2017*. Retrieved from https://www.statsfiji.gov.fj/index.php/statistics/social-statistics/vital-statistics-report.

4 Retrieved from https://pacificdata.org/dashboard/sdg-3-good-health-and-well-being.

5 Unless marked with an *, the source of the Niue statistics is Statistics and Immigration Office Ministry of Finance and Planning Government of Niue. (2018). *Niue Vital Statistics Report 2012–2016*. Retrieved from http://beta.sdd.spc.int/media/212.

6 Unless otherwise indicated, the source for the Papua New Guinea statistics is National Statistical Office (NSO) [Papua New Guinea] and ICF. (2019). *Papua New Guinea Demographic and Health Survey 2016–18: Key Indicators Report*. Port Moresby, PNG, and Rockville, Maryland, USA: NSO and ICF.

7 Retrieved from https://pacificdata.org/dashboard/sdg-3-good-health-and-well-being.

8 Unless marked with an *, the source of the Samoa statistics is Samoa Bureau of Statistics & Ministry of Health. (2015). *Samoa Demographic and Health Survey 2014*. Retrieved from https://www.sbs.gov.ws/digi/Samoa%20DHS%202014.pdf.

9 Retrieved from https://pacificdata.org/dashboard/sdg-3-good-health-and-well-being.

10 Retrieved from https://pacificdata.org/dashboard/sdg-3-good-health-and-well-being.

11 Retrieved from https://pacificdata.org/dashboard/sdg-3-good-health-and-well-being.

12 Retrieved from https://pacificdata.org/dashboard/sdg-3-good-health-and-well-being.

2.2 Adolescent sexual and reproductive health in the Pacific

There is some data on various aspects of sexual and reproductive health in some Pacific Island countries, but the amount that focuses on young people is limited. Within the literature on sexual and reproductive health and adolescent pregnancy, cultural taboos surrounding sexuality and the shame associated with the discussion of sex is a common theme. These taboos discourage communication about sex in families, schools and churches. Consequently, adolescents tend to have limited knowledge about sex and sexuality and limited access to sexual and reproductive health services (Jenkins & Buchanan-Aruwafu, 2006; O'Connor, 2018). The impact of such taboos is also highly gendered, underpinning inequities in sexual relationships and hindering negotiation (Smith, 2019b).

In the Solomon Islands, taboos about the discussion of sex are strong and act as a barrier to discussing sex in certain contexts. These taboos also serve as a barrier in the provision of sexual and reproductive health services (Buchanan-Aruwafu, Maebiru, & Aruwafu, 2003; Raman, Nicholls, Pitakaka, Gapirongo, & Hou, 2015). Buchanan-Aruwafu, Maebiru and Aruwafu (2003) highlighted how discussion of sexuality is regulated through gendered social norms, with shame and gossip playing a key role. Yet, young Solomon Islanders in Auki have developed indirect ways of speaking about sex and sexuality by using slang and metaphors. Similarly, in Papua New Guinea, the shame surrounding pregnancy outside of marriage, and gossip that focuses on the young mothers rather than the fathers, directs the blame for unplanned pregnancy on young women (Kelly et al., 2010).

Research on unmet need for contraception and knowledge and attitudes towards contraception and sexual education has been conducted in Fiji; however, few of these studies focus on adolescents (see Lincoln, Mohammadnezhad, & Rokoduru, 2017; Naidu, Heller, Koroi, Deakin, & Gayaneshwar, 2017; Naz, 2014; Varani-Norton, 2014). One study that focused on the outcomes of adolescent pregnancy in Suva, Fiji found that teenage pregnancy, as in other countries, tends to be high risk and that health interventions should be tailored for young women to reduce adverse health outcomes, including perinatal death (Mahe, Khan, Mohammadnezhad, Salusalu, & Rokoduru, 2018).

Recent Fijian data highlighted the role of emotions in adolescent sexual and reproductive decision-making, calling for greater attention to the subjective views and understandings of adolescents themselves and to the socio-cultural and structural environments that shape them (O'Connor, Rawstorne, Devi, Iniakwala, & Razee, 2018). It was found that adolescents place emphasis on confidence, resilience and access to services, yet adolescent iTaukei women's priorities diverged from this norm in that their priorities focused on preventing shame and preserving their sexual reputation (O'Connor, 2018). At the same time, adolescent women desired agency and freedom in relation to sexual and reproductive wellbeing (O'Connor et al., 2018).

Because they do not require a doctor's prescription, condoms are often the easiest contraception for young people to first access. In writing about factors related to condom use among young people in Tonga and Vanuatu, McMillan and Worth (2011) pointed to a mismatch between condom knowledge and condom use practice and in doing so stressed the role that wider socio-cultural factors – rather than simply knowledge – have on condom use. They noted the way in which the importance of shame regulated behaviour and limited not only access to condoms but also their use: condom use was associated with casual sex and promiscuity and most young Tongan women interviewed expressed resistance to condom use in order to uphold a respectable feminine identity (McMillan & Worth, 2011).

Research among adolescents in Vanuatu also suggests that socio-cultural norms and taboos are the most significant barrier to youth accessing sexual and reproductive health services (Family Planning New Zealand, 2019; Kennedy et al., 2014). Information for adolescents has tended to focus on STI and HIV, while young people have indicated a preference for more information about pregnancy, condom use, puberty, sexuality and relationships (Kennedy et al., 2014). Similarly, research among young Cook Islanders found that they had little knowledge of pregnancy and prevention of STI and that they want knowledge and communication skills, particularly about contraception and teenage pregnancy, to enhance their understanding and decision-making related to sexuality (Futter-Puati, 2017).

A study focused on experiences of teenage pregnancy in the Cook Islands found that participants reacted to learning they were pregnant with denial and fear. Abortion emerged as a key theme, with all participants having considered abortion but none able to obtain one (White, Mann, & Larkan, 2017). This study found that the cultural importance of motherhood meant that these young women also had positive feelings about motherhood (White, Mann, & Larkan, 2018). In the Pacific, children are valued for their contribution to the family as a source of labour and social support. The family structure includes children who have been informally adopted and accepted as part of the family, often but not always adopted from the extended family (Farran & Corrin, 2019). Farran and Corrin (2019) noted that high rates of teenage pregnancy mean that there are also high rates of informal interfamily adoption, but incomplete data makes it difficult to assess the scale of adoption of babies of teenage mothers.

Knowledge about the social and structural elements that frame adolescent decision-making around sex and reproduction in other Pacific Island societies is currently limited. Most data on adolescent pregnancy in the Pacific are quantitative, providing little purchase on factors impacting high rates, or experiences and range of consequences, of adolescent pregnancy.[2] Furthermore, while traditional healers are an acknowledged part of the informal health system in the Pacific (Kennedy et al., 2013a), there are no data on traditional methods of fertility limitation, nor on the role of traditional knowledge in fertility decisions (Kennedy et al., 2013a; Kennedy et al., 2014).

2.3 Abortion in the Pacific

Globally, it is estimated that, among 15–19-year-old women, 3.2 million unsafe abortions take place in developing countries each year (Shah & Ahman, 2012). The stigma surrounding abortion, laws that make abortion illegal, a lack of youth-friendly services, and the constrained agency of young women act as barriers to adolescent women and girls accessing safe abortion services (IPPF, 2014).

Little is known about women's experiences of fertility limitation in the Pacific. Jolly (2002) noted that some women in the Pacific still use indigenous methods of herbal medicines, massage and other means, as well as biomedical preparations, to induce abortion and that little research has been done on abortion practices in the contemporary Pacific. Research on abortion in the Pacific context is needed to better understand practices and links to maternal mortality (FPI & SPC, 2009). As noted by Chetty and Faleatua (2015), access to information about sexual and reproductive health, as well as contraceptive commodities, is difficult and access to safe abortion is simply not an option for adolescents in the Pacific. The International Planned Parenthood Federation has put forth a set of promising practices to

2 Bell et al. (2018) describe plans to undertake qualitative research focused on the social context and the lived experiences of pregnancy for young women and young men to inform the development of youth-specific health promotion responses to pregnancy in Papua New Guinea.

strengthen abortion service provision to young women that includes integration with other youth programs; increasing staff commitment; focusing on confidentiality and autonomy; utilising a harm reduction model; understanding consent laws; peer promotion; applying a buddy system; advocacy by example; and social media and mobile outreach (IPPF, 2014).

There is limited documentation of unplanned pregnancy and abortion in Papua New Guinea (see Sanga, Costa, & Mola, 2010; Vallely et al., 2014). With an estimated 733 maternal deaths per 100,000 live births, Papua New Guinea has an extremely high rate of maternal mortality (NSO-PNG, 2009). A study that examined 21 maternal deaths at Goroka General Hospital between 2005 and 2008 found that 10 deaths (48 per cent) were due to sepsis after birth or following induced abortion. Of the three deaths of women under the age of 19 years, all were due to complications from unsafe induced abortions (Sanga et al., 2010). The study documented the case of a 17-year-old girl who was single, sexually active and facing an unplanned pregnancy. She had never sought contraception, as she thought that it was only available to married women. The girl obtained herbs traditionally used to induce abortion because she felt that her relatives would not accept her pregnancy and because she wanted to continue her education. She died of sepsis three weeks after she attempted to induce an abortion (Sanga et al., 2010). Similarly, another study in Papua New Guinea found that women who induced abortion were significantly more likely to be younger, single and studying, with a pregnancy that was unplanned and unwanted, compared to women who had a spontaneous abortion (Vallely et al., 2014). The study reported women inducing abortion by misoprostol (50 per cent), physical means (22 per cent), traditional herbs (11 per cent), cultural beliefs/sorcery (7 per cent) and other means (9 per cent) (Vallely et al., 2014).

A 2015 study conducted by the Vanuatu Family Health Association focused on induced abortion in Vanuatu, examining attitudes and practices of communities and key informants (health providers, herbalists, chiefs and legal representatives). The study respondents cited consumption of lemon fruit, *kastom* medicine, vigorous exercise, inserting objects into the uterus and taking contraceptive pills as being methods to induce abortion (Tao, Ssenabulya, & Van Dora, 2015). Respondents from urban areas suggested that the reasons why a woman might have an abortion included fear of parents or others finding out (14 per cent); insufficient resources (10 per cent); continuing career/school (7 per cent); incest (5 per cent); rape (4 per cent); too many children (2 per cent); and other reasons (7 per cent) (Tao, Ssenabulya, & Van Dora, 2015). A study on recent family planning in rural Vanuatu found that when abortion arose during discussions on unplanned pregnancy, the dominant perception was that it is morally wrong. In-depth interviews were conducted with 12 women, with one woman noting that she had terminated her own pregnancy and another describing her unsuccessful attempt to access an abortion (Family Planning New Zealand, 2019). While discussing the scenario of unintended pregnancy among Fijian youth, some participants said they would keep the pregnancy a secret and they would consider seeking an abortion, despite accessibility to safe abortion being limited (O'Connor, 2018).

Context-specific strategies are necessary to create an enabling environment for adolescent sexual and reproductive health and the wellbeing of adolescent mothers in the Pacific (Kennedy et al., 2013a). These strategies must be informed by the lived experiences of young women. Yet research on the topic seldom includes the voices of adolescent mothers themselves (Barcelos & Gubrium, 2014; Mann, Cardona, & Gómez, 2015).

3 Methodology

3.1 Research design

This research addresses methodological and empirical gaps in knowledge about unplanned adolescent pregnancy in Chuuk State, Tonga and Vanuatu. The findings are intended to inform the development of targeted health and social policy and programming; raise the profile of young women's voices; and, consequently, help further human rights and gender equity in the Pacific.

The study was designed to produce ethnographic data on issues associated with adolescent unplanned pregnancy and motherhood in Chuuk State, Tonga and Vanuatu. Ethnographic methods produce detailed or 'thick' (Geertz, 1973) description and prioritise the subjective realities of the research participants (Glaser & Strauss, 1967), characteristics that are important when we seek a nuanced understanding of factors affecting decision-making and underpinning behaviours, and the meanings of actions and events in the lives of participants. Ethnographic methods are increasingly used in development research (see van Donge, 2006) and in public health and service user research (Stahler & Cohen, 2000; Ratner, 1993).

Qualitative in-depth face-to-face interviews were conducted with young women (16–19 years old) who have experienced unintended pregnancy in Chuuk State, Vanuatu and Tonga. The collection of personal story data enabled the mapping of issues related to adolescent unplanned pregnancy and motherhood, as they have played out in the lives of 63 young Pacific women. In acknowledgement of the ongoing cultural importance and use of traditional medicines in many Pacific countries, the study includes enquiries into traditional as well as contemporary means of fertility control and the role and viewpoints of older women in those three countries.

Focus group discussions are highly effective means of revealing accepted group norms. Because of this, focus group discussions collect a different type of information than can be garnered from private interviews, and the opinions and views expressed in these discussions may even be at odds with the personal beliefs and experiences of the individuals who are part of that group.

3.2 Ethical approvals

Prior to the commencement of fieldwork, applications were submitted and approvals were obtained from the UNSW Human Subjects Ethics Committee, UNSW Australia, the FSM Department of Health and Social Affairs Institutional Review Board, the Tongan Government and the Ethics Committee of the Ministry of Public Health Vanuatu.

3.3 Data collection and analysis

The study aimed to produce nuanced accounts of a range of factors impacting on the experiences of unplanned adolescent pregnancy and motherhood, and to explore the key thematic areas. Data was collected through 20–25 face-to-face interviews in each country with participants 16–19 years old who have had an unintended pregnancy. Participants were recruited through convenience and snowball sampling. Interviews followed the General Interview Guide method and were conversational in style. Interviewers first asked the young participants to tell their own story. Further open-ended questions enquired into how the participant managed unintended pregnancy and motherhood; the consequences of the pregnancy; access to information on fertility control; access to and use of both traditional and contemporary knowledge around fertility control; and enablers and barriers to decision-making and action.

Interviews were voluntary and all participants were provided with verbal and written information about the study and gave verbal and written consent to be interviewed. Interviews generally took approximately 30 minutes and most interviews were recorded. The majority of interviews were conducted in the participants' first language by local research assistants who had been trained for this project. A smaller number were conducted in English by a chief investigator. The training of research assistants focused on the aims of the data collection; principles and practice of qualitative data collection; ethical considerations when collecting data on sensitive subjects; and child protection during research. All research assistants, interviewers and translators engaged on this study signed a strict confidentiality agreement prior to beginning any work on the project.

A total of 94 face-to-face interviews and five focus groups discussions were conducted in Chuuk State, Tonga and Vanuatu during June and July 2019. This included:

- 63 face-to-face interviews with 16–19-year-old young women who had experienced unplanned pregnancy
- 31 interviews with women who were over 50 years of age or grandmothers
- five focus group discussions with women who were over 50 years of age or grandmothers.

Interviewers debriefed with a chief investigator following each interview.

In each country, local Pacific women interviewers were trained and employed. The data collection documents and instruments, as well as the interview contents, were discussed constantly with those interviewers. Pacific early career (academic) researchers were involved in the analysis of data.

3.4 The study in Chuuk

The Federated States of Micronesia (FSM) is comprised of four states. According to the 2010 FSM Population and Housing Census, it has a population of 102,843 people. Chuuk has the largest population of the four states, with 48,654 people (46 per cent of the FSM population) and is the poorest state in FSM. There are 23 inhabited islands in Chuuk State. Geography and population spread present challenges for the development of health and economic infrastructure and for service delivery. Chuuk State (formerly known as Truk) covers an expansive area and includes the administrative centre on the island of Weno, 15 volcanic islands of the Chuuk lagoon, and 14 outlying atolls and low islands. The population of Weno is approximately 14,113, which accounts for 29 per cent of the population of the state. Of the total population, 48.7 per cent are under the age of 20 years (SBOC, 2010). According to the 2014 Family Health and Safety Study, at a national level 32.8 per cent of women had experienced family or sexual violence in their lifetime and 24.1 per cent had experienced it within the last 12 months (FSM Department of Health and Social Affairs, 2014). The rates of violence against women are higher in Chuuk than the national average, with 49.9 per cent – one of every two women – having experienced violence and 42.6 per cent having experienced it within the past 12 months (FSM Department of Health and Social Affairs, 2014). The national adolescent birth rate is 46 per 1,000 women and the adolescent birth rate for Chuuk is 48 per 1,000 women (UNFPA & SBOC, 2012). There are no specific criminal provisions on abortion in FSM except in Chuuk State, where abortion is criminalised and penalties of up to nine years' imprisonment may be imposed on anyone involved in the act, including the mother – except where the woman's physical health is at stake (Jalal, 2010).

Sexual and reproductive health research is very limited in Micronesia generally. Most data has focused on Guam. As there is a dearth of journals, other than the irregularly appearing *Pacific Health Dialog*, that will publish sexual and reproductive health data on the region, peer-reviewed, data-driven research is too scant to provide an adequate view of contemporary SRH in Micronesia (Smith, 2019b). The little published literature that there is on Chuukese sexual and reproductive health has tended to focus on Chuukese women as migrants.

Complications during pregnancy, delivery and postpartum are major causes of death for FSM women (FSM, 2012) and Chuukese women have some of the worst reproductive health outcomes in the region. The maternal mortality ratio was 140.6 per 100,000 live births for FSM in in 2016, as compared to nearby Guam, which was 29.1 (FSM, 2017; GovGuam, 2017) and the Neonatal Mortality Rate for FSM was 14.1 per 1,000 live births, compared to Guam's rate of 7.6 in 2016 (FSM, 2017; GovGuam, 2017). Maternal and infant deaths are not consistently reported in the FSM, including Chuuk, so actual numbers are likely to be higher. The extent to which prenatal care and other health care-seeking behaviours for sexual and reproductive health are underutilised by Micronesians may be attributed to a discomfort with biomedicine and feelings of shame, and may also be due to limited access (Smith, 2013). Although there is great variation across Micronesia, data suggests a rise in sexually active youth (Smith, 2013).

Data collection for the Chuuk study took place during July 2019. Three local research assistants received intensive training and were engaged to work on the data collection. Data was collected on Weno, including from isolated rural and mountainous areas. In total, 32 face-to-face interviews and two focus group discussions were conducted in Chuuk. Of the face-to-face interviews, 22 were with participants aged 16–19 and 10 were with grandmothers or women over age 50. The two focus group discussions were with six and eight older women, respectively. Five young mothers who registered interest in being interviewed had to be declined because they were younger than 16 years of age.

Integral logistical support for recruitment and data collection was provided by the Chuuk Women's Council (CWC). CWC is an umbrella organisation for different women's organisations promoting women's leadership and education on health and gender issues in Chuuk. The mission of CWC is to assist women in becoming more productive and self-sufficient members through programs to enhance the social, economic and physical wellbeing of women and their families. The local research team for this study was chosen from CWC outreach and counselling staff who had previous experience in working with vulnerable populations. The team began the snowball recruitment through approaches to young mothers known to them because they had engaged with programs at CWC. Those young women then directed the team to other potential participants. Older women participants were recruited initially through CWC. Those participants were then asked to invite other grandmothers who they thought might be interested.

All data collection documents, including the Participant Information Sheets and Consent Forms, were translated from English to Chuukese. All interviews were conducted in Chuukese. Signed consent was gained for all interviews. In addition, consent was verbally confirmed and recorded. All but two of the 32 interviews were recorded. Two interviewees declined to be recorded but agreed to be interviewed and extensive notes were taken. The interviewees who declined said that they were too shy about their voices to be recorded.

All interviews were translated from Chuukese into English and those translations were then rechecked against the original audio files and verified. All potentially identifying data was deleted or altered at the time of transcription. Translated and transcribed files were coded by at least two different researchers and code categories were generated independently. Code identification was attentive to the dominant themes that emerged from the interviews, as well as topics laid out in the study's terms of reference. Initial data sets were compared for each category, final codes were confirmed, and coding trees and coded data sets were created. As the interview numbers were relatively small, all coding and set compilation was done manually. This manual method has the advantages of facilitating a high level of familiarity with the transcripts and allowing the consideration of the interviews as individual cases, as well as in data fragments.

4 Results and discussion

4.1 Experiences of unintended pregnancy and motherhood

This study is grounded in young women's and girls' experiences of pregnancy and motherhood. While the results presented here highlight experiences that were common among the participants in our study sample, we also present and discuss divergent experiences.

In the following section, data on key topic areas are described and summarised.[3] Particular attention is paid to the range of experiences and views expressed, as well as to commonalities. There is a heavy focus on the use of direct quotations in order to give strong voice to the participants. All names have been changed and the names assigned to the quotations are *not* the participants' real names.

This study sample is non-random and as such it cannot claim, nor was it intended, to be statistically representative of all unplanned adolescent pregnancies in Chuuk State. Throughout the reporting of results, words such as 'a few', 'some' and 'many' are used instead of exact numbers. The consequent imprecision is deliberate and intended to prevent misinterpretation or misrepresentation of the data. Documentation of exact numbers or percentages of participants who reported the same experience, circumstance, practice or belief could otherwise be taken to suggest, erroneously, that such percentages are generalisable to the wider population.

4.1.1 Reactions to unintended pregnancy: guilt and fear

Nearly all the young participants in this study described being afraid, guilty and ashamed when they found out that they were unexpectedly pregnant. Participants typically described the following kinds of reactions:

> *I was afraid and scared my family would find out, and I didn't know what to do.*
>
> (Grace, pregnant at 16)[4]

> *I went to my mom and apologised to her for what I've done.*
>
> (Erin, 17)

> *I felt afraid and scared of my mother and brother, who I respect deeply.*
>
> (Faith, 17)

Expressions of guilt were strong in these narratives. The participants positioned themselves as wrongdoers in a variety of ways. Grace said:

> *I felt scared that they'd come to investigate me, I was afraid the police would come.*
>
> (Grace, pregnant at 16)

3 The interviewees emphasised different elements of their own stories and, as those emphases differed slightly between the three country data sets, the topic headings vary slightly between the country reports.

4 Pseudonyms have been used to protect the participants' identities. In some cases, the age of the participant when pregnant is noted where it is relevant, rather than their age at the time of the interview.

As the age of consent to sex has recently been raised to 18 years in Chuuk, it is possible that Grace thought that she herself, rather than her older lover, had been breaking the law.

However, despite the trepidation, not all of the young women were unhappy at the prospect and reality of motherhood:

> *She [a cousin] touched me. She told me I was pregnant. I wasn't scared. I was happy … I was happy because I would have a child.*
>
> (Hope, pregnant at 13)

Irene, 18, also said 'I felt happy when I was pregnant', despite it being a surprise. Her family and boyfriend were also happy about the news.

Faith described the happiness of having a baby being tempered by shame. She said:

> *I was so happy with the gift of my daughter. When I looked down on her, I felt happy. I also was embarrassed to go around because everyone would see that I was a young girl and I was already a single mother, no husband.*
>
> (Faith, 18)

4.1.2 Delayed discovery of pregnancy

In many cases, someone else had noticed the pregnancy before the girl herself. Mothers of the young women were nearly always the first to know. As one participant said:

> *What happened was, my mother asked me whether I was pregnant. I told her I don't know. So she told me she'd look at my breasts, she had a look at them, and she saw signs that I was pregnant.*
>
> (Carla, pregnant at 18)

Faith became pregnant at 14 and did not realise she was pregnant until she was six months along, despite the fact that her mother:

> *could recognise that I was different – my body was different – but I had no idea since I didn't feel anything. She asked me if I had had sexual intercourse with boys, and I lied to her, I said no.*
>
> (Faith, pregnant at 14)

She explained her denial as being based in fear, saying 'I think I was too afraid, deep down inside'. Grace, pregnant at 16, also said 'my mum told me that she could see that I was pregnant'. Julia's pregnancy at the age of 16 was also first diagnosed by an aunt at four months. Similarly, Audrey (aged 18) said 'when I got pregnant, she knew but I didn't know'. Another young woman said:

> *A cousin, she saw I was pregnant and I was seven months. But me I had no idea, I didn't realise. When I was seven months, with a small tummy it wasn't obvious.*
>
> (Hope, pregnant at 13)

One of the grandmothers, Kate, was the first to notice that her granddaughter was pregnant. Another young interviewee was diagnosed at the hospital when she went to see about her fatigue.

4.1.3 Parental reactions

The participants struggled with their decisions around to whom they should disclose their pregnancy; how their parents, family and friends would react; and who would provide support or punishment. However, immediate family members, particularly mothers, were almost always the first to know. Bella explained:

> *I didn't want to tell various other people, because I just wanted to tell my family and parents, cousins and siblings, I shared with them so they can give me advice on things.*
>
> (Bella, pregnant at 15)

Within the family, mothers themselves were held as being as culpable as their daughters for the pregnancy of an unmarried girl or young woman. They either helped the girl break the news to the rest of the family, or tried to help her hide the pregnancy:

> *I returned home to my mother and I whispered to her – because I could only tell my mother – but as for my father, I was afraid for him to find out … When [my mother] found out, she said she would tell my father, ask a pardon on her behalf.*
>
> (Hope, pregnant at 13)

Naomi, whose daughter (now 17) became pregnant at 15 years of age, explained:

> *I was afraid when I started noticing she might be pregnant. When she told me, I felt so scared. I was scared because I was afraid of my family, my family members are very strict on unwed mothers. … Our family blamed it on me, it was my fault for not looking after her.*
>
> (Naomi, 57)

Most participants said that both they and their mothers were very fearful of the man of the house finding out. In these narratives, mothers had sometimes colluded with daughters to hide the pregnancy from the husband, or they had encouraged – and even attempted – abortion. When there was no mother in the household, other older women present had behaved as if they would be held responsible. One participant said that the aunt she lived with tricked her into drinking a local herb that caused her to miscarry.

Marion, an older woman, was afraid of her husband's reaction to their daughter's pregnancy. She said:

> *I thought I would hide it from my husband. … My husband is a drunk, so I was anticipating him beating me up, and us having to hide around out of fear.*
>
> (Marion, grandmother)

Another grandmother, Kate, also told that she was 'afraid of my husband, that he would beat me up and beat her up too'.

Despite the common fear that fathers would respond violently to the news of their unmarried daughters' pregnancies – several girls said that their father had threatened to 'chop my head off' if they became pregnant – in most cases, the father reacted to the news without physical violence and eventually accepted the pregnancy. Marion described her husband interrupting her attempt to terminate her daughter's pregnancy:

> *As I was pouring the hot water, my husband came and saw what was going on and he told me 'Don't even think of aborting her baby'. Then I knew he had already noticed too. He understood. So I was grateful, because I was so worried that her pregnancy would create conflict between us.*
>
> (Marion, grandmother)

Naomi, on the other hand, was concerned that her granddaughter would harm herself. She kept a close watch on the girl throughout the pregnancy because:

> *She spoke of killing herself and the baby, but I told her not to, it's a sin.*
>
> (Naomi, 57)

Despite the fear and trouble it had brought them, mothers were in most cases the main source of support for pregnant daughters. As Faith, 18, said, 'no one bought pampers [diapers] or anything, it was only my mother'

4.1.4 Abortion attempts

Religious beliefs precluded the consideration of abortion for several participants. As Audrey, 18, said, 'It is a sin to abort'. Other young women articulated that:

> *Nothing came to my mind about aborting my child, because I am afraid to sin.*
>
> (Bella, pregnant at 15)

> *I felt miserable and scared … I thought of having an abortion. And then I was scared to abort the gift from God, so I did not go through with the abortion.*
>
> (Olivia, 17)

> *I felt afraid, anxious and I thought of aborting it. I did tell my mother, but she said not to do that because it's immoral. So from then on, I didn't think about it anymore.*
>
> (Erin, 17)

But most other participants had considered or attempted abortion in some fashion. Those attempts included taking antibiotics, strenuous work or exercise, massage and local herbs. When the attempts failed, several participants then resigned themselves to the pregnancy being 'God's will'.

Often, the responses and attitudes of others altered the desire for abortion. Before she had told her mother that she was pregnant, Erin had wanted to terminate her pregnancy. She said:

> *I tried taking pills, but it didn't work.*
>
> (Erin, 17)

While Erin's mother's reaction deterred her from further efforts to miscarry, the reaction of Pearl's mother led her to then consider abortion. Pearl said:

> *My mother was angry, so then I thought of finding something to abort, like taking pills or to abort through rubbing/massage.*
>
> (Pearl, pregnant at 13)

Pearl decided on antibiotics, as she had heard that they would cause a miscarriage:

> *Some girls that's what they would do. As soon as they'd find out that the person won't ask for marriage, then they would start taking antibiotics, to reduce the chance that the foetus inside our belly survives.*
>
> (Pearl, pregnant at 13)

While the massive dose of antibiotics did not terminate the pregnancy, Pearl had complications and the baby has a disability. It is unknown whether this was a result of her abortion attempts.

Julia had a miscarriage at four months after her female relative gave her a herbal drink that was later identified as tunnun. Julia said:

> *She woke me up, my auntie, she told me to wake up to drink a drink. But I had no idea [what it was] … I thought it was something else, but when I drank, the next morning I woke up to being sick.*
>
> (Julia, pregnant at 16)

Another participant described efforts to induce a miscarriage that were based on the type of strenuous physical exertions that pregnant women were usually told to avoid. She said:

> *I did so much, I worked harder, washed more clothes, carried heavy items so that I could kill the baby, I was so afraid. I didn't eat or take anything, but I worked really hard, just so I can have a miscarriage.*
>
> (Faith, 18)

Other participants described means they had heard of that could induce a miscarriage, such as Chuukese local medicine, stepping on the stomach, and taking aspirin or 'amox' (amoxycillin) or other antibiotics. Pearl told us that her sister had 'jumped around in the sea and then had a miscarriage'.

Older women in the family sometimes assisted in abortion attempts. Their feelings about abortion were often ambiguous too. Kate was worried about her 13-year-old granddaughter's reputation and also her own husband's reaction. She was also concerned about the morality of her actions, as well as her ability to do it. She said:

> *I thought of aborting her child. But then I thought of my responsibility, it's not a good thing. I don't know how to do it – just rubbing the stomach.*
>
> (Kate, 52)

Marion had actively encouraged abortion:

> *I thought of how poor we are, and the fact that she was not married. I told her to abort it. My daughter was not too sure about it, but I convinced her to take a look at her friends.*
>
> (Marion, grandmother)

During one of the interviews with older women, Theresa, a 64-year-old grandmother from one of the outer islands, told a tragic story of adolescent pregnancy, fear, secrecy and infanticide. When Theresa noticed that her 12-year-old granddaughter was pregnant, it was too late for safe abortion by any means she knew. Theresa's husband was the village pastor. The father of the baby was a relative. The grandmother tried to protect herself and the girl by hiding the pregnancy and binding the girl's stomach. She thought that no one else in the village knew, but later found out she was mistaken and that the girl's pregnancy was known to many in the village. She recounted:

I told her that now we're in trouble because your [grand]father will chop my head off … We hid it from my husband until her month came to deliver. I told her to go to the bush and give birth. She went outside – but blood was just flowing from her. So we went to the ocean. She gave birth to the baby, and I told her to quickly put it on the rock, so the sea would take it, it can drift away and we can return home … The baby was alive … I encouraged her to do that because I didn't want anyone else to know, especially my husband … We went back to our house, she went back to her room, I went back to my room. The baby drifted away when the tide came. The next morning, the children were playing and saw the baby. They called out. Everyone heard it. My heart was beating heavily. They [villagers] buried it. But someone went to the police. One of the women whispered to the girl's [grand]father not to keeping asking questions around – because it belonged to him [was his family]. He was so disturbed, like, he didn't know what to do … He blamed it on her sisters. I was very afraid. But he didn't beat me, the women and our [grand]daughter, he didn't. … I admitted to him that it was because of his vow to chop our heads off if something like that ever happened.

(Theresa, 64)

4.1.5 Relationships with family and community: abuse and isolation

In these interviews, the girls worried about immediate family and it was the mothers who expressed the most concern about wider family and community attitudes. Ruth was upfront about having worried what the community would think of her adolescent daughter's pregnancy and how it would reflect on herself. She explained:

As a mother, I had responsibility in church, so I felt really bad … What concerned me are my roles as mother and in church.

(Ruth)

On the other hand, Lynn, 17, who was pregnant to her steady boyfriend at the time of being interviewed, said that, despite having being scared to tell them, her parents did not make a lot of fuss. Rather, 'they asked why I was rushing when still haven't finished school, that's about it'.

Not all family members took the news so well. Julia was abused and mistreated by the older female relative with whom she and her father lived. She told us:

She cursed me, she would swear at me. She told me I was a dog. That's what she told me. But me I was quiet, silent because when she was talking to me, she was very loud, but I was afraid that the man [father] would find out.

(Julia, 16)

Although Julia was beaten and jeered at by her aunt, she hid it from her father because she was too scared of how he would react. She said:

> *I cried silently because I couldn't cry as loud because I was afraid of my father, in case he asked why she beat me up. I did everything so that he wouldn't know.*
>
> (Julia, 16)

Julia told the interviewer that although she was frightened to find herself pregnant, she had very much wanted to have the baby. She was left in a state of grief and distress when her aunt tricked her into drinking the tunnun, which caused a miscarriage.

Other participants had also experienced abuse when they told their families that they were pregnant. Although the pregnant girls were terrified of their father's response, it was most often their mother who verbally abused them. Brothers also handed out beatings:

> *My brother would attempt to beat me, but my mother had apologised to him on my behalf.*
>
> (Erin, 17)

Many of the participants, especially those from poorer families, found themselves socially isolated after having a baby. In one of the rural villages, the young mother of a visibly developmentally disabled infant had isolated herself and the baby in her house and did not go out. The desire to avoid the gossip attendant on young unmarried motherhood was compounded by her fear of exposing her child to the judgement and gossip of others in the community. Erin, 17, also lamented having no social life and said that she missed her friends because she did not go out anymore. Another explained that:

> *When I was pregnant, I would stay home, I didn't want to go anywhere else. I stayed home until I gave birth and then I stayed in and cared for my baby – from delivery until he turned one. I was relieved when he was older, I could leave him behind and I could go out once again.*
>
> (Hope, pregnant at 13)

4.1.6 Relationship with father-to-be

Many of the participants in this study became pregnant before they were 15 and many of their sexual partners were significantly older. Pearl became pregnant at 13 after a drunken sexual encounter with a 20-year-old. But most of the participants were pregnant to regular partners. However, few of them had remained in a relationship with the father of their baby.

Sometimes the father-to-be left the village or the country to pursue his own aims, as happened to Faith:

> *He left me when I was in the seventh month. He left for Hawaii to go to study. Of course, he must have known [about the pregnancy] because he was much older than I am.*
>
> (Faith, 17)

Many relationships fizzled out after the birth of the baby, as one participant noted:

> *As time went by, he would still come and see me. When I gave birth, he'd continue to visit. But now he's married.*
>
> (Audrey, 18)

Grace, 16, said that the father of her baby never saw the child, despite living nearby, because he was living with his wife.

Parents sometimes opposed the partnerships. In Audrey's case, attempts to contribute made by the father of her child were rebuffed:

> *He would come and bring food, but Mama and Papa do not want that. He wanted us to get married but they didn't want us to.*
>
> (Audrey, 18)

Although the couple may not have maintained a relationship, the baby's paternal family was sometimes interested in caring for the child. Hope did not reveal her pregnancy to her boyfriend's parents because they did not approve of her. Once her son was born, however, the father's family found out and wanted contact with her baby son. Hope was offended by this turnaround in attitude:

> *[Baby's father] said that he would take me, but his mother and sister didn't like me – until I gave birth. They were happy to see the child, but I think they shouldn't be happy with my child because they didn't like me.*
>
> (Hope, pregnant at 13)

Julia said that after finding out she was pregnant, her boyfriend had initially wanted to marry her. She had been too scared to allow him to ask her father's permission:

> *I told him [I was pregnant] and he asked whether my papa would accept his love for me. I said I don' t know.*
>
> (Julia, pregnant at 16)

However, after Julia's aunt gave her a herb drink and she miscarried, Julia's boyfriend held her responsible for killing the child and ended the relationship:

> *He told me that what we [my aunt and I] did was sinful … From there, we stopped talking. From there we no longer had a relationship.*
>
> (Julia, pregnant at 16)

A few relationships had been founded on the pregnancy. However, in those cases, the partners were happy about paternity.

Lynn, 17 and currently pregnant, said that the father-to-be is happy about it and they are planning a future together. Irene, 18, was happy when she discovered she was pregnant. Her boyfriend was also happy. While they had settled into a normal family relationship, they were not living together at the time of the interview because he was working in Guam to support the young family.

Kate said that her granddaughter became pregnant at 13. She was relieved when the boy asked to marry the granddaughter because it would preserve the girl's reputation. She said, 'I let her get married, because she was pregnant, I didn't want her to have a bad reputation'. The girl miscarried at three months, but the young couple still got married. Her granddaughter is now 17. Marion, on the other hand, was more concerned with education. When her daughter became pregnant at 17, Marion said, 'I don't like the boy, I don't want them to get married, I want my daughter to focus on her studies'.

4.1.7 After birth

Even when the pregnancies were unwelcome, the babies almost invariably were well received. Most participants described miserable pregnancies but were happy about the baby. Once her baby was born, Erin, 17, said, 'I felt happy, grateful to God'.

Most of our participants lived with parents, or a parent, who supported them in caring for their babies.

Pearl, 17, said that although her parents were angry through her pregnancy, they now care for her child as if it was their own. She explained that 'it's like they have become the parents for the child, like their names are written on the child'.

Sometimes the paternal grandparents also want to bring up the child, once they see and recognise it. Sarah, 64, said this happened to her granddaughter's child:

> *The baby's father's mother came by after the birth and wanted to see whether it was really his kid. She then offered to adopt. The baby is now with the boy's mother. She wanted to care for the baby, especially because she denied it at first. She took her when the child turned one. The other grandmother begged to take the child. My [grand]daughter was ok with it.*
>
> (Sarah, grandmother)

Other babies of single mothers in the study had been invited to live with wealthier relatives in Hawaii or elsewhere in the United States of America. Such invitations were not always welcome or accepted, as Marion related:

> *A cousin in Hawaii wanted to take the baby. [The pregnant daughter] wasn't too happy after the Facebook messenger conversation … I think the cousin wanted to help her so she can go to school.*
>
> (Marion, grandmother)

She went on to say that, 'Even though I am old, I will care for the baby. I want my daughter to continue her schooling.' Whether or not she returned to school, the parents of the participants in this study usually provided financial support to the young mother and child who continued to live with them.

4.1.8 Aspirations: hopes, plans and fears

Young participants were asked what was good and what was bad about being a young mother. They were also asked about their hopes and fears for the future. Nearly all the interviewees cited their baby as being the best thing about young motherhood. One young woman added:

> *The negative side of it is, my child is left without a father. I have no one to support me either.*
>
> (Faith, 18)

Financial worries were common among the participants. They worried for themselves, for their parents, and for their children. For example, Pearl struggled to support herself and her disabled fouryear-old child, even with her parents' help. She identified her biggest concern as being:

> *When [the baby] has no clothes but I can't afford to take care of it … I am afraid when the baby is sick or when it's not growing.*
>
> (Pearl, 17)

While many of the participants did not highly value their own schooling, one of their key concerns they identified was the financial ability to ensure that their children got an education and the opportunity to be good community members. Carla described her aspirations as bringing up her children 'well'. This meant that they would be able:

> *to get an education, to live a Christian life and to help support their parents as they grow up and return their care to their parents.*
>
> (Carla, 18)

Audrey simply said, 'I would like him to go to school'.

In most cases, the young participants' ambitions and hopes for themselves were simple and immediate, as evident in these responses:

> *I think of going out.*
>
> (Diana, 16)

> *I only think about being together with the boy in happiness and peace.*
>
> (Lynn, 17)

One participant dreamed of opportunities abroad. She said:

> *I'd like to go to the US or Hawaii … I want to go find opportunities to help the family. Our extended family.*
>
> (Hope, pregnant at 13)

Most participants wanted to be able to support their own household – with or without a partner. While the main hopes of many were expressed vaguely, as in Pearl's desire 'for some [wealth/resources] to be able to support myself on my own', a few participants expressed the more specific aims of returning to study or work so that they could improve their financial position and expand their social life. Erin summed up the hopes of many:

> *I wish to go back to school, to go out with my friends and wish to get married and have my own family.*
>
> (Erin, 17)

4.1.9 The role of older women

As demonstrated in previous topic sections, older women in the family were usually the first to know about the pregnancy – often because they recognised the signs – and they also sometimes encouraged or assisted with an abortion. Older women were also held responsible for the behaviour of girls in their care. Their own reputations were implicated in an adolescent girl's unplanned pregnancy and they themselves might also bear the brunt of male anger. Despite this, older women were markedly absent as sources of reproductive information or advice on sexual relationships prior to a girl's pregnancy. It was only after antenatal visits, where the topics had been introduced in a professional setting, that older women began to discuss reproductive matters and offer their own advice on pregnancy and motherhood.

Despite the trouble it brought them, older women were the key providers of practical support to pregnant adolescent girls and were inevitably reconciled to the baby. Sarah's granddaughter was 12 when she became pregnant (she is now 17). Sarah described her mixed feelings underpinned by her understanding that, although it was frowned upon, her granddaughter's situation was not unique or uncommon:

> *Although I was scared, I also felt grateful. It has happened to many others. I was happy that I would be holding another baby.*
>
> (Sarah, 64)

4.2 Social and structural factors

This section discusses the social and structural factors that impact on adolescent experiences of unplanned pregnancy, as these emerged through the interviewee narratives.

4.2.1 Exclusion from education

Access to education after pregnancy was highly variable among these participants. Some of the participants quit school during their pregnancy. Faith explained that it was the reaction of her classmates, rather than that of authorities, that had driven her to leave:

> *I was in school when I was pregnant, until it became very visible … The reason why I left school was because I was embarrassed with my classmates, they started to say 'that girl has a big belly'. So I would feel afraid and embarrassed about what I had done. And my tummy had become very visibly big. So, I thought of leaving Chuuk because I was embarrassed. Even though I found the courage to still to go school, even with the visible tummy, I still strongly wanted to go to school until I gave birth. But then my classmates would gossip and criticise me, so that's when I thought of leaving.*
>
> (Faith, pregnant at 14)

Bella was in school when she became pregnant at 15. Although she felt criticised at school, she returned to school after having her baby. This was not possible for many other participants. Although Faith wanted to return, she could not because she had to care for her baby:

> *When I had the baby, I thought of returning to school when I saw that I no longer had my big tummy. The reason though why I didn't return to school was because no one was there to take care of my baby. My mum told me since you chose to disobey me, you have to be the one to care for your baby. I will support and feed you both but for you, you need to bring up your child. It's gonna be you.*
>
> (Faith, 18)

Julia, who was pregnant at the age of 16, felt that she would not be welcome back at school. She said, 'I thought about it, to go back to school, but the principal is not happy with me'.

Not all the participants were forced to leave school due to pregnancy. Lynn, 17, was pregnant at the time of the interview and was still in school. Others, such as Diana and Julia, had been content to leave school once they found out they were pregnant. Many do not wish to continue to study. Audrey, who was in the ninth grade when she became pregnant and quit school, said:

> *My parents wanted me to go back to school, but as for me, I don't want to go back to school … I can't be bothered. I just want to stay home.*
>
> (Audrey, 18)

Others had already left school before they became pregnant. Hope was only 13 when she quit school and stayed home. She became pregnant soon after. Hope said that she had left after getting into trouble:

> *Because I disrespected my teacher, I got suspended and then I never returned, I didn't want to return … I don't know, maybe, I couldn't care less.*
>
> (Hope, pregnant at 13)

Some participants had been able to choose how long to continue schooling through their pregnancy and a couple did manage to resume study. Returning to study was enabled by family financial ability and by someone else being available and able to care for the baby during the day. More commonly, participants saw no reason to stay at school once they were pregnant and they did not desire to return. A surprisingly large number of participants had already been excluded from school at a very young age, before they became pregnant. In particular, many of the participants who were recruited from rural village areas had left school at younger than 15 and, at the time they became pregnant, were staying alone in the home while their parents worked.

Exclusion from school had effects beyond those of social isolation and limiting educational opportunity. Young girls who were home from school alone appeared to be particularly vulnerable to the attentions of older men. These were neighbours who knew that the girl was home alone and who would begin to visit the house during the day. Members of the data collection team witnessed at least one older man (a neighbour) turning up at the house where a girl was home from school, acting proprietorially, and expecting the girl to go 'somewhere' with him. The man did not appear abashed or deterred by the presence of older female interviewers. The girl appeared happy to see him and complied with his request, simply inviting the team to return at a later time. When interviewed, she described the relationship as being consensual.

4.2.2 Contraceptive knowledge and access

The participants had very little knowledge about contraception. Some were aware of condoms, but they did not use them.

Many of the participants not only did not know about contraception before they became pregnant, but also did not understand that they could become pregnant as a result of their relationships with men. In addition, there was a very low level of understanding of pregnancy symptoms. Most participants had not received any contraceptive and reproductive information until after they were pregnant. Participants said:

> *I know there are those items from the hospital like condoms and other medicines we take so we can have sexual contact but without conceiving a baby. But that's only after being [pregnant] – now I start to understand, since I have a child.*
>
> (Bella, pregnant at 15)

> *I now understood how babies come about. I didn't even know then that when we go with men … [I thought] nothing would happen, no pregnancy, [I had] no fear of what could happen.*
>
> (Faith, 17)

> *After my pregnancy, then I found out about them [condoms].*
>
> (Pearl, pregnant at 13)

Some of the participants had heard about condoms at school, but those who had left school at a young age missed even this most rudimentary information. Participants were not aware of other contraceptive options prior to antenatal visits. None of the participants had had contraceptive or sex education from their mothers or from other older family members. Marion, one of the older women, said that, to this day, she had not ever talked about contraception with her daughter:

> *I don't know if she knows about condoms. I assume she would know.*
>
> (Marion, grandmother)

Access factors and relationship norms also limited condom use. Even when the young participants did know that there were such things as condoms, they often said that they were not available locally, that it was difficult for them to travel to town, and that they felt too embarrassed to ask for condoms. As one young woman explained:

> *It's not hard [to use condoms] but sometimes, I don't have time [to go to town to get them] and I felt ashamed to go ask for them.*
>
> (Bella, pregnant at 15)

Despite being very young, most of the participants had been in regular sexual relationships when they became pregnant. Their patterns of condom use followed patterns known to be typical of many steady relationships, where condoms are used only the first few times the couple has sex.

4.2.3 Antenatal and postnatal health services

Access to antenatal and postnatal health care was varied. Some participants accessed care and felt that it was useful. Others said that they had been told off, made to feel shame, or otherwise treated roughly because of their age. Some did not access any care at all. Those in our sample who had accessed antenatal care had received it from the hospital in Weno. Bella described the most typical experience of the service:

> *I went to see public health for a pregnancy check-up visit. They advised me to make sure I come to appointments, so I know whether my blood is sufficient, and to ensure no complication throughout the months … It's easy because of course I know where the hospital is and I live on this island of Weno. They were helpful to me.*
>
> (Bella, pregnant at 15)

Bella added that she had considered going overseas to deliver because she heard that the hospital was not clean, especially the children's section. While Bella was satisfied with the care she received, other young women said that they were not treated well at the hospital:

> *They called me names, that I'm giving birth without a partner. But, it's already too late – because I know I am to blame.*
>
> (Pearl, pregnant at 13)

In a small population, confidentiality was sometimes a concern. Diane felt obligated to disclose the name of the father for the first time during her hospital check-up because it was asked in an official capacity. She explained:

> *When I went to check at the hospital. The women who helped me was a relative of mine. She asked me 'who is the father of the child?'. So I told her.*
>
> (Diana, pregnant at 16)

Few of our interviewees had accessed any antenatal or sexual and reproductive health services before six months into their pregnancies. Some had never received clinical or other medical services. Carla did not go to the hospital until late in her pregnancy because she was on an outer island. But Audrey, who lived on Weno, had also never used a medical service. She said, 'I stayed home until I gave birth'. Similarly, Grace, pregnant at 16, said, 'I never went to the hospital … I gave birth here [in the village]'. Similarly, numerous participants interviewed in the more inaccessible villages on Weno had had no contact with health services at all. They had given birth in the village and their babies were not registered. At least one of those babies was visibly disabled and, although over two years old, had never been seen by a medical professional.

In general, the girls were reluctant to present at antenatal services and needed encouragement and support to do so, even when they were in town and access was not difficult. Lynn, 17, who was pregnant when the interview was conducted, admitted that she had not gone to the hospital. She explained that she was 'busy with summer school'.

4.2.4 Gender and family roles

Many of our participants had been in early adolescence when they became pregnant. They had known little about the consequences of sex or about contraception. Many had become pregnant to men who were much older. Often these men were neighbours and sometimes they were married. Despite this, the girls had inevitably felt guilty and described themselves as bad and at fault. This was understood specifically as meaning that the girls had disobeyed their mothers and undermined their fathers. Victim blaming and shaming has also been noted in research with older Chuukese women (Smith, 2019b). Young participants described having been passive in the face of the abuse they received. Such passivity is consistent both with feelings of guilt and with subjection to harsh treatment by others – to act otherwise would constitute open rebellion and exacerbate the anger directed at the girl.

Culturally defined gender imperatives and family duties and responsibilities underpinned some of the worst abuses and anger directed at the young participants. Older women, not just young girls, were frightened of the reactions of men in the family. Whether or not it was warranted, that fear drove women and girls to desperate and dangerous measures, including unsafe abortion practices and infanticide. When a young unmarried daughter had gotten pregnant, her father was positioned, in these narratives, as the key person who had been transgressed against. Participants described finding it particularly difficult to disclose pregnancy to the men in the family – not only because they feared their reaction, but also because of a deep sense of having wronged them.

As these participants explained:

> *I did think about how to tell him and apologise because of my pregnancy … Like, when I was with my father, one night, I would call him: 'Papa …' but I was afraid. I was too shaken to even speak. He would ask me 'What?'. Then I would say 'Nothing'. I would put off telling him.*
>
> (Julia, 16)

> *First and foremost, I felt I had wronged my brothers. I couldn't bear it when they would come and ask, 'What's this? No father?'.*
>
> (Faith, 18)

Traditionally, Chuukese girls' first duties are to kin and they have historically been taught that their brothers are the most important men in their lives (Smith, 2019b; Moral, 1998). Traditional taboos around girls and brothers make any communication between girls and male family members very difficult, and also hinder girls' ability to communicate and negotiate with partners around sex (Smith, 2019b).

During the focus group discussions, older women were asked about their views on adolescent pregnancy. They agreed that, culturally, the problem was not about being young but about being unmarried. One grandmother explained:

> *[It is] shameful to be a single mum with no father. No problem about being young and married. It's shameful for the father and brother in particular. The mother will get blamed for not performing her role properly.*
>
> (Erica, grandmother)

This, the women explained, was because it means that the girl had disobeyed the father and disrespected the brother. Therefore, 'we would get angry with [a pregnant girl in the family]. Try to hide the pregnancy from other people – especially in church. Hide it from father and brother.' Several women in the groups said they would advise such a girl to get an abortion.

However, they also pointed out that 'we would be ashamed but on the other hand we would be happy that there is going to be a new baby'. While unmarried and pregnant girls were described as targets of anger, the baby itself was considered valuable. Women in one focus group explained that if the baby is given to the brother, stigma can be avoided and the family relationship can be mended. If the brother is not married, the grandparents will care for the baby for him. They said that this still happens, that the pregnant girl's parents would decide, and that the girl would have no say in the decision. However, in our sample, this did not appear to be the case, as several girls had refused to allow someone else to care for their baby.

The older women also admitted that, despite their anger, once the girl is ready to deliver, women in the family always soften, anger changes to love, and they support her through the delivery. They are always happy to see a baby. These claims are consistent with the experiences of most of the participants in this sample.

The older women in the focus group also agreed that – culturally determined gendered family relations aside – the key problems of adolescent pregnancy were more mundane and practical. They were concerned about the limitations that are placed on the life of a young mother:

> *Children are too young to look after children. Education and health will suffer.*
>
> *[Young mothers] miss the opportunity to go out with other young people.*
>
> (Focus group, grandmothers)

However, while many expressed regret about isolation from friends, few of the young participants cited ambitions for themselves beyond motherhood and achieving financial security. Financial security was most often assumed to be achieved through a relationship with a man. Pearl's statement summed up what many of the young participants told us about their hopes:

> *I want to really carefully look for the head of the family – to really take care of the rest of us.*
>
> (Pearl, pregnant at 13)

Motherhood offered an acceptable social role and gave a meaningful identity to several of the girls who had been aimless at home or excluded from school. Bella explained:

> *I felt happy to be a mom, I have obtained that identity to be a mom. I was happy.*
>
> (Bella, 15)

Perhaps because Chuukese society is traditionally matrilineal, the roles of other women in the family are prominent in all these stories. For the most part, it is women in the family who provide support and refuge to young girls in need. The power and depth of these female relationships is a capacity that could be harnessed to improve access of adolescent girls to information and resources that extend beyond sexual and reproductive health. For these reasons, it is recommended that intergenerational mother and daughter workshops be developed on a range of topics

4.3 Knowledge and practices of traditional methods of fertility limitation

Older participants were asked to talk about what they knew of, and thought about, traditional methods of limiting fertility and spacing family. Questions were framed with reference to methods of 'family spacing', as a notion that is more inclusive than 'contraception'. The young participants were asked if they knew of traditional means of fertility limitation, and if so had they used them. The young participants cited the use of herbs as being traditional. Older women considered drinking tunnun, sojyu, hot pepper or vinegar; steaming herbs on hot rocks, over which the girl squats; medicine made of special leaves; walking on the back; massaging the belly; antibiotics; heavy lifting; and other exercise, such as running and jumping, all to be traditional means of fertility limitation through abortion. They had learned about these methods from friends and older women.

Many of the young participants had sought out traditional methods to end their unplanned pregnancy. A number of participants talked about tunnun. Julia, 16, described the drink that caused her miscarriage as 'tunnun – some kind of ginger'. An older interviewee said:

> *Tunnun [you] wash, pound and drink – and pills from the hospital, I heard from other people – We drink it and it cleanses your body, only between one to two months pregnant – that's when you drink the tunnun.*
>
> (Sue, 55)

Julia shared her experience of inducing a miscarriage:

> *I asked [my cousin], what is this yellowish drink they fix and was told it was tunnun. So she's another one who then knew about it … I took it and drank it, it felt like, when I was laying down, I felt like stomach problems, like going to the bathroom frequently. And in the morning. I could see that I was sick [menstruating] … it looked like big froth. It came out of me.*
>
> (Julia, 16)

Older women also shared their knowledge about traditional methods of inducing a miscarriage. They said:

> *For abortion, I heard they used tunnun, shoyu. It's easy to do it at home because there are no strict restrictions … someone confided in me that she drank shoyu and had a miscarriage … but they said it was an attempted abortion. That's how I heard about the tunnun and shoyu.*
>
> (Marion, grandmother)

> *Mother taught me what to do, she told me to listen. She showed me taboo Chuukese local medicine.*
>
> (Sue, 55)

> *I only know that they abort through massage or rubbing the tummy.*
>
> (Kate, 52)

Theresa explained that the local herbs only work safely in the first three months of pregnancy. She believed that traditional medicine has fewer side effects than contraceptives. She said:

> *I know that we cook the nikemeur[5] and pound the tunnun and we drink one cup, it's quick. The antibiotic is not good. But if it's three months, then it doesn't work anymore. It will not be safe for the mother as well as the foetus … Tunnun is a local medicine. It's the best. We use it when we're sick. But the other one is really bitter, we take the seeds, pound and grate them and squeeze it in water … I believe the local medicine is better than contraceptives you take from the hospital, there are side effects. When you take the injection, you lose hair. You gain weight, pain, get sick, but when you drink the tunnun, nothing else affects you. It only aborts your baby and then your body grows back into its normal self.*
>
> (Theresa, 64)

Other older women similarly compared traditional and clinical medicine while expressing their moral views on abortion. Kate and Sarah agreed that abortion was wrong, but they disagreed over whether clinical or traditional approaches were safer and therefore preferable:

> *Abortion both at hospital and using local medicine is wrong because it's against our faith and religious beliefs. But I do prefer the hospital, because it is clean and safe.*
>
> (Kate, 52)

5 A sea anemone that stings, also known as hell's fire anemone (see Davis, 1999).

Both traditional and hospital forms of abortion are both bad. But local medicine is preferable, the local one is actually good for women, because it helps cleanse. The tunnun is very strong. It cleanses your stomach.

(Sarah, 64)

The practical advantages of using the traditional herb for an abortion were identified as accessibility and privacy:

More people take the tunnun. It's also easy because no one has to know, compared to going and seeing the doctor.

(Bernie, grandmother)

While the older women had various views on abortion, most knew how to recognise, if not prepare, traditional herbs for abortion. Many of the young participants had heard of a traditional herb for abortion, and several had even tried it, but none could provide detail about the leaf and its preparation. Those who had drunk it described it as yellow and bitter. Young participants who had miscarried as a result of drinking the traditional herbal preparations had not sought any follow-up from the hospital or medical services.

While Cambie and Brewis (1997) identify several anti-fertility plants as growing in Micronesia no use of tunnun there is documented. (Although it is possibly listed under a different name). Nor is there any medical or scientific literature on the effectiveness of, or risks associated with the use of Tunnun or other herbs for the purposes of fertility limitation in Chuuk. However there are a range of known risks associated with not seeking medical care following a miscarriage or unsafe abortion.

In the focus groups older women discussed the use of tunnun, but framed it as a kind of hygiene or health practice rather than a contraceptive – although it was used to 'clean' the womb and believed it would bring about miscarriage in very early stages of a pregnancy. While other ethnographic studies have identified practices of abstaining from sex for a post-partum period as being Chuukese tradition (see Smith, 2019b) the women in this study did not mention it.

4.4 Limitations and other considerations arising from data collection

Access to, and for, remote and rural populations remains an issue for service providers, as well as for those who wish to gather necessary local evidence for policy development and service delivery planning. With 23 inhabited islands in Chuuk State, much of the population lives in rural areas and with poor infrastructure. A study that has collected data from only Weno is limited with regard to how well it can represent the experience of, and make recommendations for, girls all over Chuuk State. This study has, however, documented significant, if somewhat predictable, issues. Moreover, it has shown the need to increase and expand efforts to improve health service access and educational opportunities for young mothers and to reduce community acceptance of destructive gender norms, as well as to increase contraceptive knowledge and access for early adolescent girls. While this study makes some specific service provision recommendations and signals the importance of including older women in initiatives, researchers who can remain embedded in the communities are best placed to develop and refine specific programs to further those ends.

Interviews took place in the local language and were conducted by local research assistants engaged and trained for the purpose. In the time frame of this short study, the range of techniques that could be taught was fairly limited.

The methodology of this study was premised on centring the girls' own views and priorities. Consequently, their narratives did not always facilitate full exploration of all the topics and agendas set in the Terms of Reference for the study. For example, as there were no cases among the interviewees of being pressured to marry the baby's father, little could be said about this excepting that girls did appear to have some ability to discontinue a relationship. In addition, the experiences and events of unplanned pregnancy have been explored in more detail than has motherhood. Most participants were new mothers and simply had less to say about motherhood itself. To collect more focused data on issues around young motherhood, it is recommended that the upper age limit of interviewees be extended to around 25 years. Older participants would have gained some 'distance' from what were often very traumatic experiences of their unplanned pregnancy and are likely to be more focused on their lives as mothers.

The topic areas that are highlighted in this report are the ones that were most prominent in interviewee stories. The degree of self-reflection required of participants in order to address certain topics (for example, around sexual consent and negotiation) sometimes proved to be foreign or simply baffling. To press young people, who may already feel 'shamed', on such topics would have risked alienating them and causing discomfort. It may also be that young girls are more circumspect in regard to what they will share with an older woman, and none of our interviewers was of a similar age to the participants.

The main role of focus groups in this study was to scope traditional practices and community attitudes and to signal the issues that should be pursued in private interviews with older women, as well as providing a useful means of identifying, recruiting and gaining introduction to – and gauging the interest of – potential interviewees. However, in Chuuk older women in the focus groups were remarkably open and enjoyed the opportunity to speak out, and to one another, about even highly personal dramatic and shocking experiences. Indeed, they were extraordinarily forthcoming about their own experiences. Despite repeated cautions that the sharing of personal experiences should be kept for private interviews in order to ensure confidentiality, Chuukese

women were determined to share their stories with the other women present. Consequently, the discussions were not only very animated and with much laughter, but were also highly emotional and often very moving. Afterwards, several focus group participants expressed deep gratitude for the opportunity to share and be heard in this manner. These experiences indicate that in Chuuk there is great potential for group work with women on cultural, sexuality and gender issues, especially if attention is paid to the constitution of the group and to ensure the comfort of the participants. It may also be that being brought together by a foreigner or someone in a professional capacity may facilitate the discussion simply by 'authorising' the women to participate in conversations that social conventions might normally prevent.

Although Weno is not large, roads outside the main centre are very poor. In parts of the island, vehicles cannot travel much faster than walking pace. Roads do not go into all inland settlements. This means that travel from the service centres to much of the island not only is slow, but also requires a sturdy vehicle. The fuel required for such trips makes them relatively expensive. Accessing these villages proved to be a significant expense during data collection. The travel cost and time involved would certainly pose a major barrier to regular engagement with services for many, especially young, people who live outside the main centre. In this study, access to participants outside the main centre of Weno was enabled by the dedication and determination of research assistants experienced in outreach who engaged the rural participants. Indeed, the data collected highlighted a strong need for further concerted outreach efforts, as it indicated that many high need and very young mothers are not accessing the services available in town. Moreover, numerous rural participants had never engaged with services and existing medical outreach services cannot attend to those of whom they are unaware.

5 Conclusions

A number of the findings presented here are consistent with those of earlier reports and studies. Studies have long shown that early adolescent fertility in particular is associated with low levels of sexual and reproductive knowledge, such as not knowing that sex could lead to pregnancy and not knowing about contraception (see, for example, Okonofua, 1995); that being too embarrassed to ask for condoms is a factor in unprotected sex among young people in the Pacific (O'Connor, 2018; McMillan, 2008); and that while experiences of guilt and fear during pregnancy are common, family members are generally accepting once the baby is born (White, Mann, & Larkin, 2018). While not particularly surprising or novel, the recurrence of these findings here indicates that although these factors are well known, efforts to date have not managed to effect significant change in many parts of the Pacific.

This study also points to a range of antenatal, postnatal and maternity service access barriers that are specific to Chuuk and that impact significantly on pregnant adolescents. In addition, the data suggest that official figures on adolescent pregnancy in Chuuk State are likely to be significantly underestimated. The findings of the study highlight an imperative for extra outreach resources in order to engage and include young mothers and pregnant girls in isolated and rural areas and on outer islands. The study emphasises that high costs of transportation and staff time must be taken into account when funding outreach services. As well as demonstrating opportunities for the development of a locally specific delivery of outreach services, this study has also indicated the potential for acceptable ways to improve access to basic sexual and reproductive health information for early adolescents through the inclusion of older women.

The very young age at which many of the participants had become pregnant emerged as a key issue in Chuuk. In isolated areas, the research team encountered numerous girls who were pregnant or were mothers, but who were too young to be interviewed. The experiences of, and issues associated with, girls who become pregnant in early adolescence are likely to differ markedly from those who become pregnant at 18 years old. Very young mothers are likely to have greater needs that are particular to their situation. However, early adolescents are almost always excluded from studies precisely because ethics committees and authorities consider 12–16-year-olds to be more vulnerable, in need of protection, incompetent to provide consent or determine their own needs, and at risk of exploitation than older adolescents.

Similarly, although many of the interviewees in this sample had become pregnant in early adolescence, community resistance to the provision of contraceptive access and sexual and reproductive education to girls at an early age is very likely. However, sexual and reproductive health and contraceptive education for young girls may be more acceptable if it is delivered to both older women and girls together and in a forum that enables the older women to take some ownership of the process. In addition, the conduct of this study indicates that older women in Chuuk are surprisingly open to discussing sensitive or taboo topics in situations where that discussion has been invited and 'authorised'. The hosting of small group meetings or workshops involving aunties, mothers and daughters is also likely to improve, and begin to normalise, dialogue between mothers and their daughters on matters of sex, gender and relationships. Improved dialogue prior to a girl's pregnancy is desirable. This study found that while

mothers played key roles in the discovery of adolescent pregnancy and often also in abortion decisions or attempts, they played no role in sex education prior to the daughters' pregnancies. The facilitation of such discussion may also increase the confidence of both younger and older women to raise or address these issues in other interpersonal or family situations and in wider community fora. In other settings, it has been found that communication between adolescents and a parent about sexual and reproductive issues, particularly prior to sexual debut, improves adolescents' knowledge, attitudes and communication skills and may contribute to delayed sexual debut and increased health service use, particularly among girls (Campero et al., 2011; Clawson and Reese-Weber, 2003; Downing et al., 2011; Hall et al., 2012; Huebner and Howell, 2003; Peltzer, 2010).

Few of our interviewees had accessed antenatal services earlier than six months into their pregnancies. In part, this can be explained as the inevitable result of very late confirmation of pregnancy and the low levels of sexual and reproductive knowledge among the interviewees at the time of pregnancy. However, other access factors were also implicated, as a number of our interviewees had never received clinical antenatal or other medical maternity or postnatal services.

Many young mothers in isolated areas did not access any maternity services or health services for their infants, even when the infants were unwell. In several cases, the babies had been delivered in the village and, at the time of interview, had not been seen by any health service provider. The babies were unregistered.

The participants in this study were recruited from across Weno. Physical access to services is even more difficult from the outer islands. Even when outer islanders have access to a boat, the cost of fuel is a barrier to accessing Weno-based services. In addition to time, distance, financial cost and transport, other deterrents to service use are likely to include being unfamiliar with the hospital and lacking the confidence to go to town alone or to seek services there (see, for example, McMillan, 2008). While pregnant adolescents who are unfamiliar with the town and the hospital may lack the confidence or necessary information to seek assistance, adolescents who live in town may be deterred for other reasons. For example, they may know, or be related to, clinic or health service staff. Confidentiality becomes especially difficult to maintain when family and service provider roles overlap.

Participants in this study reported experiences of discrimination from health care workers both during and after pregnancy, as well as confidentiality concerns. Discrimination and judgemental treatment are likely to contribute to poorer access to health services, which in turn leads to poorer outcomes for mother and baby. Judgemental, uncaring, and disrespectful attitudes of health care service providers shape the perceptions of adolescents about the quality of care and increase their distrust of the service (Nair et al., 2015). Confidentiality in care provision, trust in providers, and comfort and support from providers are key to improving health service use by adolescents. Interventions need to focus on improving these aspects of care (Nair et al., 2015). Key facilitators of adolescent health service use have been identified as improved user–provider interpersonal communication, ongoing communication with providers, role models, cultural sensitivity, and youth-friendly health care services (Nair et al., 2015). It is essential that service provider staff be trained and sensitised on the importance of respecting the rights of adolescents to information, privacy, confidentiality, and respectful, non-judgemental and nondiscriminatory health care.

Condoms are often the first contraceptive used by adolescents, who seldom have access to other options. As condoms offer protection from HIV and some STIs, they have been widely promoted to young people in the Pacific and are integral to 'safe sex' education. Literature on condom use among young people in Pacific settings highlights not only access barriers, stigma and cultural attitudes, but also that condom use is tied up with the way that relationships are defined and is impacted by the power dynamics of those relationships (McMillan, 2008; McMillan & Worth, 2011). Other methods of contraception do not preclude condom use and may give more control to girls. Given the older age of many of the participants' sexual partners, investigation into the ways that young people embark on and establish sexual relationships may be helpful. In this study, the girls themselves were more focused on their partner's actions as a result of the pregnancy.

Distance is a major barrier to service access, but other issues facing pregnant adolescents also appear to be exacerbated by isolation. The need may be higher in rural than urban areas – for example, due to the very young age of many mothers the research team encountered in isolated areas. In addition, while adolescent unplanned pregnancy tends to result in social and educational exclusion, many of the young interviewees had been excluded in various ways – including from school – before they became pregnant.

Studies indicate that education is key to better health outcomes in both women and their children (Ngabaza and Shefer, 2013). Pregnant teenagers are among the most marginalised high school attenders and require specialised policy attention in order to protect their rights (Onyeka et al., 2012). The education system had failed many adolescent girls who may not be academically inclined or who were suspended, expelled or simply 'let go'. This appears to be the result of individual school practices rather than higher level education policy. Efforts are needed to retain and engage all young people and to ensure that they are equipped for meaningful participation in their social world, and this may require some scrutiny of the syllabus. Furthermore, young girls who were regularly home from school alone, especially in rural areas, were vulnerable to the sexual attentions of older male neighbours. Those attentions appear predatory from the researchers' viewpoint, but were not unwelcomed by the adolescent girls who had been excluded from school and were bored and otherwise aimless.

The age difference between the interviewees and their sexual partners in some of these cases was marked. It is to be expected that major power differentials that favour the older man involved with an early adolescent would result from imbalances in levels of sexual knowledge and experience. However, the interviewees themselves did not express any feelings of being coerced, or out of control, in their relationships. The interviewees had little to say about the difference in age between them and their older partner, and they did not appear to be aware of any resultant power imbalances. In addition, it has been shown that young women's ability to influence the course of sexual encounters differs vastly between individuals and between locations (Wood, 2006) and that the nature of the relationship both affects and is determined by the girl's relative agency. The expectation that girls will 'say no' to sex – even if they desire it – can also confuse the issue of consent (Wood, 2006).

The young participants in this study were asked about how they began their relationship with the boy or man to whom they became pregnant. Only one interviewee said that they were both very drunk and that he was not any sort of a boyfriend. None could describe any sort of negotiation and interviewees tended to be nonplussed by questions about it. In the few cases where interviewees could describe negotiation at all, they simply said that the man started to come around to

their house. If family had been home, this would have been fairly traditional courting behaviour. The participants appeared to take for granted that these relationships would inevitably involve sex. The contentions that older Chuukese women understand their bodies as belonging to their husbands, that sexual inequity and coercion become normalised, and that convincing girls to meet for sex was a way in which young men in Chuuk proved their masculinity (Smith, 2019b) might help explain some of this data.

Interviewees had a similar difficulty understanding questions around consent. Legal definitions of sexual consent vary. Scholars differ on whether consent requires demonstration through an explicit external, physical action, or whether consent can be defined by an internal state of desire, or wanting. Indeed various studies have found that young women are themselves usually ambivalent about the 'wantedness' of first sex in particular (see Houts, 2005). Michelle Fine has claimed, in her classic paper on the missing discourse of desire, that '[t]he adolescent women herself assumes a dual consciousness – at once taken with the excitement of actual/anticipated sexuality and consumed with anxiety and worry' (1988, p. 35). Many researchers have since noted the ambivalence that girls feel about sex and sexual debut. However, adolescent sex tends to be conceptualised as necessarily wanted or unwanted, with little acknowledgement of, or allowance for, ambivalence (Muehlenhard & Peterson, 2005).

While sexual coercion and violence are linked to sexual and reproductive (ill) health (Campbell, 2002), issues of consent and sexual violence have not been highlighted in the findings of this report. This is because the study focused on how the girls themselves explained their situation and experience. Thus, it prioritised interviewees' own subjective understandings and framing of their relationships, which they perceived as being consenting – even where legal consent was not possible. Despite the fact that no participants said that they were pregnant as a result of rape, coerced sex or violence, the spectre of coercion remains and more needs to be understood about the age-disparate relationships that involve girls in early adolescence. In Chuuk, the age at which a girl can legally consent to sex was recently raised from 13 to 18 years old. The move was specifically designed to end the practice of marrying girls as young as 13 to older men (pers. comm., C. Stinnett, CWC, July 2019). In addition, it is possible that the most traumatising conditions of conception are also the most secret. Our recruitment method meant that adolescent mothers or young women and girls who had been pregnant were 'identified' by, and thus identifiable to, friends or service providers, or self-identified to recruiters. This would have resulted in an exclusion of the most covert and successfully hidden unplanned adolescent pregnancies.

In addition, it has been argued that violence within an intimate relationship is downplayed and normalised by Chuukese women and is seen as a hazard of marriage (Smith, 2019b). Certainly, a high incidence of sexual abuse and domestic violence has been documented in FSM. In the 2014 FSM Family Health and Safety Study, 17% of women reported child sexual abuse before the age of 15, and 11% reported sexual abuse after the age of 15. Male family members were the most common perpetrators (Leon & Mori, 2014). In the data from Chuuk State, 50% of women reported having experienced physical or sexual violence by a partner at least once in their lifetime, and 34% of Chuukese women reported sexual violence from partners over their lifetime. Having sex because of fear of the consequences of refusal was the most common act of sexual violence reported. A woman's sexual history is sometimes a reason given by a male partner who is being violent (Smith, 2019b). Most women (89%) who reported abuse had never sought help from a service agency, health centre or police (Leon & Mori, 2014).

Poor birth outcomes, such as low birth weight, premature birth and post-natal depression, are associated with domestic and family violence during pregnancy (Sarkar, 2008) and women are at an increased risk of experiencing violence from an intimate partner during pregnancy (Jasinski, 2004; Gazmarian et al., 2000). Australian studies have found that young women, aged 18–24 years, are more likely to experience domestic and family violence during pregnancy than are other age groups (Quinlivan & Evans, 2001) and unintended pregnancy is often an outcome of an existing abusive relationship (Campbell et al., 2000). Pregnancy and early parenthood are opportune times for early intervention, as women are more likely to have contact with health and other professionals. As a consequence, gender-based violence (GBV) services need to have policies in place to support pregnant adolescent women.

Data from this study indicates that attempts to cause abortion by the use of traditional herbs and other home remedies may be common and are unlikely to be reported. Most young interviewees had considered abortion and some had attempted it. Interviewees were unaware of safe medical options and many of the methods used by participants pose serious risks to a pregnant woman, as well as to a foetus. Some methods of abortion described as traditional are very risky to the mother. Moreover, these data also suggest that when women use traditional methods for abortion, they do not seek follow-up care. Unsafe abortion is known to be a leading cause of maternal deaths and accounts for 13 per cent of maternal mortality globally (IPPF, 2006; OECD, 2018).

Procedures terminating unwanted pregnancy that are either conducted by someone who lacks the necessary skills or conducted in an environment that lacks minimal medical standards, or both, are defined by WHO as unsafe abortions (Ahman & Shah, 2010). Unsafe abortions put women's lives at risk and are associated with incomplete evacuation, haemorrhage and septicaemia, but also with chronic pain, infertility and pelvic inflammatory disease in the longer term (Butta, Aziz & Korejo, 2003). Generally, women will only seek medical attention following an unsafe abortion if the complications are severe, and they often delay seeking help even then (Butta, Aziz & Korejo, 2003).

Even with improved access to contraceptive services and resources, women and adolescent girls in particular are often unable to control or determine conditions of their relationships and other circumstances of their lives and their need for abortion can be expected to continue. Declining norms of fertility have also been shown to be associated with increased reliance on abortion at the same time as contraceptive service uptake increases (Ahman & Shah, 2010). When abortion is legal, associated mortality and morbidity declines significantly (Singh & Ratnam, 1998).

In order to safeguard the health, wellbeing and rights of women and girls who face unwanted pregnancy, there is a need for legislative change that would make safe low-cost abortion (both pharmaceutical and surgical) available to all women in Chuuk. However, at least in the short term, such change is highly improbable – especially in the light of current United States policy and aid conditions that refuse funding to providers that include abortion services.

In the Pacific, there is no official data on the scale of, or harms caused by, unsafe abortion practices. Advocacy is difficult in this context and there appears to be a lack of political will to acknowledge or address the realities of unsafe abortion. Some data on mortality and morbidity rates attached to abortion attempts in Chuuk might be collected from medical records of presentation for medical care as a result of complications from miscarriage. However, data from this study suggests that many young women and girls will not present at a hospital following self-induced miscarriage and that hospital data is likely to significantly underestimate the scale of covert abortion practices.

5.1 Regional themes

The research in Chuuk was conducted as part of a larger study called Adolescent Unplanned Pregnancy in the Pacific, which also collected data in Tonga and Vanuatu. Due to the diversity of the social, cultural, economic and political contexts that constitute key differences which cannot be adequately measured in this study, we do not attempt any comparisons between the country findings. This section does, however, identify some of the shared themes and issues that emerged from the wider set of data. While we point to common threads, the findings highlight the distinctiveness of each country's data and the importance of attention to local specificity in attempts to address the issues raised.

The need to make sexual and reproductive health services and related resources and information more accessible to adolescent girls, including through the improvement of some health worker attitudes, was common in all three countries. A lack of skills – particularly counselling skills – among service providers is a significant barrier to young people's access to sexual and reproductive health services in Vanuatu (Kennedy et al., 2013a). To varying degrees, the issues of service confidentiality arose in all three countries. In studies undertaken across the Pacific region, concerns about systematic violations of confidentiality, and a variety of reasons for this, have been flagged (see Butt, 2011). However, lack of confidentiality has been repeatedly identified as a deterrent to sexual and reproductive health service uptake (Jenkins & Buchanan-Aruwafu, 2006; McMillan, 2008; Kennedy et al., 2013a; O'Connor, 2018).

Data in these reports also highlighted the need to improve access to reliable sources of reproductive and sexual health information for adolescent girls in all three countries. The data also indicated that different means of providing information are indicated at each site. For example, the research found that social media was used heavily by the Tongan interviewees. The reliance of young Tongan participants on social media, as well as the manner in which it was integrated into their daily lives, highlights its potential as a platform from which to make locally specific and reliable reproductive health, sexuality and service provider information available to Tongan girls. However, while social media was used in Vanuatu, it was not accessed to the same extent by our participants – for whom internet and talk time on mobile and other devices was limited due to cost. The participants in Chuuk accessed internet services less frequently and often could not even be contacted by text. Therefore, it would be a mistake to overemphasise the importance and potential of social-media-based resources for those areas.

In Tonga, most of the young participants had met the father of their baby through social media platforms such as Facebook. The ways that young people embark upon, and establish, sexual relationships appeared to be quite different in the three study countries, with young Tongans connecting in virtual space; young Ni-Vanuatu meeting partners through regular activities, such as work or travel (for example, on the bus or walking); and young Chuukese women appearing particularly vulnerable when staying home alone.

The age at which a female can legally consent to sex with a male is 16 years in Tonga, 15 years in Vanuatu (UNESCO, 2013), and 18 years in Chuuk (UNHRC, 2015). This study suggests that in all three countries, it is not uncommon for girls to become pregnant prior to the legal age of consent. Although the interviewees themselves understood their relationships as being consensual, this indicates a need for improved understanding of the dynamics of, and motivations for, relationships between adolescent girls and older males in the Pacific.

Babies are highly valued in all three societies and motherhood may offer girls not only a respected social role, but also validation as adult women. Other Pacific research has shown that having a baby means leaving the group of girls and joining the adult women (Salomon, 2002). Issues of feminine identity are deeply imbricated in discourses around motherhood among all societies and may be particularly so in Pacific societies.

White and colleagues contended that motherhood is central to feminine identity and culturally signals becoming a woman in the Pacific (White et al., 2018). Salomon (2002) used the term 'obligatory motherhood' to describe how motherhood in Kanak societies is women's preeminent role. Pacific women's organisations have sought to challenge restrictive notions of Pacific motherhood in their advocacy work by drawing attention to the diverse and changing ideals of women as mothers (George, 2010).

Education appears to be deeply implicated in feminine aspirations and ideals. Gendered access to, and average standards of, education differ between Pacific countries (Clarke & Azzopardi, 2019) for a range of historical reasons. Evidence from Tonga suggested a relationship between high general standards of education and girls' expectations of their own lives: the distinctiveness of the Tongan girls' aspirational narratives suggests that raising the educational level of all girls works to expand and raise girls' expectations of self-determination, attaining good employment, and continuing to train and study despite pregnancy and young motherhood.

The participants' narratives show that traditional gender roles are implicated in experiences of unplanned pregnancy in a wide variety of ways. Attention to expectations and norms around adolescent sexual relationships and the resultant impact on adolescent girls will also require attention to young men and to dominant notions of masculinity (Ricardo, Barker, Pulerwitz, & Rocha, 2006).

Even among the apparently more straightforward cross-cutting issues, such as access to information, there will be no one strategy (such as the use of social media) that will be best for all Pacific Island countries. In this set of reports, we have discussed the most relevant factors that have emerged from each specific country's data. Programs and responses must be locally and context specific, and must take into account an often uneven distribution of resources across the region, as well as within the countries, if they are to be effective and acceptable.

6 Recommendations

The recommendations are aimed at policymakers and government ministries with portfolios that include health, education, women's affairs, youth and child welfare, social services and justice; civil society organisations working in the areas of women and children's wellbeing, family and child welfare, gender equality, youth, and sexual and reproductive health; donors; and regional organisations – all of which have a role to play in improving young women's and girls' agency in relation to sexual and reproductive health.

- **Adequate funding for outreach services necessary to ensure access to young mother and child health and social support programs.** This report specifically recommends the establishment and resourcing of a Young Mother and Child Outreach Team to regularly visit rural settlements and outer islands and to act as a 'mobile service referral hub'. The team would engage with and advise young mothers in isolated areas of the services available, putting those young mothers in touch with service providers that can deliver outreach social, health, educational and medical services. Chuuk Women's Centre (CWC) already has the beginnings of such a team with appropriate outreach experience. CWC's current 'Young Mother' activities are seriously hampered by the lack of a dedicated vehicle, the absence of funding for transport and outer island travel, and being reliant on ad-hoc voluntary labour. With adequate funding, these activities could be expanded and formalised to include referrals to a wider range of health and social support services.

- **Strengthening of adolescent girl sexuality education through community-based programs that support mothers and grandmothers in being sources of information and support.** Community-based programs should be conceptualised and developed to simultaneously improve the access of early adolescent girls to health service information, contraceptives and social support; mobilise and support older women in the community to contribute to the reproductive and sexuality education of adolescent girls; and encourage dialogue about the rights of women and girls in ways that identify and challenge harmful gender dynamics. These programs could be delivered through CWC and community clinics.

- **Family and community projects to challenge harmful gender norms.** These projects should follow from, and grow out of, the establishment of women's programs – once women and girls are comfortable speaking about issues of sex and gender, have set an agenda, and have identified some priority action areas. Family and community strength-based projects could then be introduced to foster a wider community understanding of gender norms and dynamics, in order to promote gender equality and challenge harmful gender norms.

- **Provision of sexuality education for early adolescents in schools.** Young girls had limited knowledge of menstrual and reproductive health and contraceptives. Sexuality education in schools should be reviewed and strengthened to ensure that these topics are covered adequately in the curriculum and taught in class. Teachers may require training in how to teach these topics. Alternatively, it may be preferable for external experts to deliver programs in schools.

- **Workshops for health workers to remove access barriers and disincentives to service use created by discriminatory and judgemental attitudes.** Ensure that up-to-date guidelines and protocols are in place. Of particular importance

are policies and procedures to protect adolescents' rights to information, privacy and confidentiality, and non-judgemental care. This should be backed up by training to ensure that health care providers and support staff follow policies and procedures, understand the guidelines and the reasons for them, and know their own roles and responsibilities. Professional education and training on up-to-date protocols and guidelines should be ongoing and recurring. Providers' obligations and adolescents' rights should be clearly displayed in the health facility.

- **Improve access to antenatal and postnatal care.** Antenatal and postnatal care is difficult to access from the outer islands of Chuuk and even in rural areas of Weno and Chuuk. Increasing clinical outreach is necessary to ensure that pregnant adolescents and young mothers obtain the medical services they require. The periodic provision of transport for people from remote areas to attend their nearest health service would also assist.

- **Processes to ensure that policy to retain girls in education is implemented.** The development of such processes is necessary to ensure that individual schools implement policy. Other measures may include removing school fees, follow-up of dropouts, and expanding the syllabus to offer a range of technical, non-academic and practical skills-focused courses.

- **Protection of women and girls from gender-based and domestic violence.** This recommendation aligns with the recommendations from the report *Eliminating Violence against Women (EVAW) in Pohnpei and Chuuk, Federated States of Micronesia: Assessment of EVAW Services and Gaps in Services Section 3 – Chuuk State* (DFAT *Pacific Women*, 2017). Girls and young women need access to refuges and legal protections from domestic and family violence. Due to their multiple vulnerabilities and low resources, pregnant adolescents should be targeted by these services. Information on gender-based violence protection services be provided through medical centres and at schools. Legislation should be reviewed/developed and policed to ensure that both the mother and the child are protected from violence, discrimination and coercion. Domestic violence services, including the provision of safe accommodation, should be available to all women and girls on Chuck. Enhanced understanding in the community and policing of domestic violence are also necessary. Community education programs and police education regarding domestic violence should be developed and maintained. Similarly, the police force itself may need increased education on domestic violence.

- **Repeal of abortion laws.** Unsafe abortion practices are common. There should be evidence-based lobbying for the repeal of laws criminalising abortion and for the provision of safe low-cost abortion (both pharmaceutical and surgical) to be made available to all women in Chuuk. Lobbying should continue to raise awareness of the harms caused by current restrictions.

- **Further research as indicated by the data.** The findings of this study indicate a need for further research in a number of areas: investigation into the ways that adolescent girls in the Pacific embark on and establish sexual relationships, including norms around age disparity; pregnancy among under-16-year-olds; documentation of abortion complications (including morbidity and mortality data from hospitals); and dynamics of early adolescent exclusion from education. The data here indicate that the use of local herbs is traditional and still common, and there is a need for research into these herbs and their efficacy, including risks or advantages of use.

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