



Journal of International Women's Studies

Volume 19 | Issue 6

Article 18

Aug-2018

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Recommended Citation

Andajani-Sutjahjo, Sari; Tinning, Zuabe Manguruc; and Smith, John F. (2018). Exploring Women's Perspectives of Family Planning: A Qualitative Study from Rural Papua New Guinea. *Journal of International Women's Studies*, 19(6), 276-289.
Available at: <http://vc.bridgew.edu/jiws/vol19/iss6/18>

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Exploring Women's Perspectives of Family Planning: A Qualitative Study from Rural Papua New Guinea

By Sari Andajani-Sutjahjo¹, Zuabe Manguruc Tinning², John F Smith³

Abstract

Papua New Guinea has one of the highest fertility rates and lowest usage rates of modern contraceptives in the Pacific, especially in rural areas. Provision of modern family planning services in rural indigenous communities is challenged by geographic distance, organizational logistics, sparse human service resourcing issues, and lack of integration and understanding of the diversity of PNG's indigenous knowledge and practices around reproductive health. Face-to-face interviews followed by two focus group discussions were held with 14 purposively sampled indigenous women and two community volunteers, aiming to explore their experiences of what were termed "modern family planning practices" and the perceived impact of these on indigenous social structures. Narratives showed mixed impacts including women's increased sense of wellbeing and control over their bodies; better childbirth spacing benefitting childrearing and family economic demands; concerns over sustainability of village health services; and frustration about perceived lack of collaborative consultation between service providers and community leadership.

Keywords: family planning, Papua New Guinea (PNG), traditional birthing house, indigenous knowledge.

Introduction

The links between family planning and prevention of maternal deaths and morbidity are long established (Petruney, Wilson, Stanback, & Jr, 2014)—prevention of unplanned and risky pregnancies could reduce global maternal deaths by 40% (World Health Organization, 2015). Modern contraception, including condoms and oral contraceptive pills, was first introduced to women in Port Moresby, the capital of Papua New Guinea (PNG), in 1948 by the Australian Air Force Medical Team and later adopted into PNG national health policy in 1975 (Gunther, 2008). However, progress toward universal access to family planning services in PNG has been very slow. Given the steady but low annual contraceptive prevalence growth rates (CPR) of 2.4% over the 25 years from 1978 to 2011, it would take another 25 years to achieve the much-desired CPR of 50% (World Health Organization, 2014). Currently PNG's CPR at 30% is well below the global average (56%) for low-resource nations (E Kennedy, Gray, Azzopardi, & Creati, 2011; Elissa Kennedy et al., 2013). PNG continues to be amongst countries with both high total fertility rates (TFR) (TFR

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= 4 or more births per family) and high maternal mortality rates (MMR = 250/100,000 live births) (World Health Organization, 2015).

Women living in rural PNG, like other indigenous peers, e.g., from Ecuadorian Amazon, Guatemala and Laos, continue to miss out on much-needed family planning services (Apeng et al., 2010; Bremner, Bilsborrow, Feldacker, & Holt, 2009; Ishida, Stupp, Turcios-Ruiz, William, & Espinoza, 2012; Sanaphay, Daenseekaew, Smith, Eckermann, & Scopaz, 2014). The average CPR of rural women in PNG is 20%, which is half the rate of urban women (World Health Organization, 2010). The difference in rural and urban accessibility is only one challenge to efficient family planning services in rural indigenous communities (Sanga, de Costa, & Mola, 2010). Other challenges include low service accessibility due to distance, poor rural road infrastructure and service costs (Sanga et al., 2010; Vail, 2002). Other personal factors like women's unfamiliarity with the services, cultural and language barriers, and fears of possible side effects (Yamo, 2011), may also influence the decision made by women to access family planning services. Women might refuse to use implants or intra-uterine devices (IUD), perceiving them as intrusive (Smith-Oka, 2009) or unfamiliar (Sanga et al., 2010; Ullah & Humble, 2006; Vail, 2002). A study with Tari indigenous women in PNG suggests that women often feel overwhelmed by modern clinics, which are considerably different, in physical structure and service orientation, to their traditional healing practices, hence women are hesitant to access these services. In 1997, PNG introduced community-based family planning programs to indigenous villages funded largely by international donors (Treva, 2012). Members of local communities were recruited and trained as family planning volunteers to distribute contraceptive pills and condoms.

A substantive barrier identified to the delivery of formal health services in PNG is that these services are largely conducted in English or Tok Pisin (the lingua franca of PNG). In addition to English and Tok Pisin, there are more than 850 local dialects spoken in PNG. Thus it is not surprising for both English and Tok Pisin to be foreign to indigenous communities who use local dialects in daily communication and have never formally learned Tok Pisin or English. In the past, health information went through multiple translations, such as from English to Tok Pisin, then to local dialects. Dialects used by indigenous people are also often foreign to the English or Tok Pisin-speaking health workers with consequent communication frustrations between locals and health workers (Yamo, 2011). Rural women's low literacy rate at 46% (versus urban women at 83%) further complicates their ability to benefit from health education materials, typically available in English and/or Tok Pisin (Yamo, 2011).

To date, many PNG family planning studies have overlooked the importance of indigenous knowledge and cultural systems, and traditional gender and social relationships on community's participation in modern family planning initiatives. Further overlooked in the implementation of such services are the views of indigenous women (Hayes, 2010; Hinton & Earnest, 2011) (and men) who have profound and vibrant roles in everyday community life. Many PNG family planning policy and program studies have been largely based on urban communities, or on communities living near the national and regional government centers (Ashwell & Barclay, 2009; Sanga et al., 2010; Vail, 2002) and have bypassed the health needs, knowledge and aspirations of rural indigenous communities. Communities often find these programs confusing as this modern knowledge is not integrated within traditional understandings of their natural environment, family/kinship, or health and community practices (Kies, 1987; Stephens, Nettleton, Porter, Willis, & Clark, 2005). Adoption of modern (foreign) knowledge and practices runs the risk of excluding women (and men) from their cultural roots and traditions, making them feel incompetent and

further marginalizing and alienating them from health initiatives important to them (Dodgson & Struthers, 2005; Ishida et al., 2012).

Policy and programs relating to family planning services need to include the provision of services for men's sexual and reproductive health needs, knowledge, attitudes and practices. A qualitative study was conducted by Kura et al. (2013) to examine men's perceptions of reproductive health services and the capacity of the health sector to include men in these programs. Findings suggested that men had heard of some sexual reproductive health services, including family planning, antenatal care and prevention of sexually transmitted infections, including HIV, but service providers lacked capacity to involve men in reproductive health issues. Men's literacy and knowledge of sexual reproductive health issues are important factors in their support of their wives accessing health services.

This article examines indigenous women's views and experiences of modern family planning. We argue for inclusion of traditional knowledge and practices relating to fertility and gender relationships in family planning strategies with indigenous communities. This article is divided into four sections. We first outline our theoretical framework, which incorporates the indigenous conception of fertility and the power of reproduction. We then argue for the cultural conceptions of gender relationships including the two modes of symmetrical cross-sex (complimentary) gender relationship concepts. Third, we discuss our method. Fourth, we examine how traditional knowledge on fertility, power of reproduction, and symmetrical and complimentary gender relationships contradict the adoption of modern family planning approaches, which potentially lead to confusion and disharmonious gender relationships. We conclude for the incorporation of indigenous knowledge systems and women's collective views to improve current community-based family planning programs.

Fertility and reproduction

Like other highlanders of Papua New Guinea, for the Muningan communities, female fertility is characterized by the 'dirt and danger' of menstrual blood and blood produced during and post child birth. The contempt towards the 'dirty blood' of women post-childbirth also explains the segregation of a husband from his wife, following childbirth. The husband is expected to live in a male-only house or *hausman* following childbirth. Likewise, women are to bear children in secret, far away from her family home, in the birthing house or *hauswaren* (Elapa, 2011; Meigs, 1976).

Men are to avoid female blood. Menstrual blood is believed to stunt the growth of adolescent boys, weaken a man's physical power and endanger the success of his work. Men are taught to avoid any foods traditionally believed to be related to female's blood and reproduction (Meigs, 1976).

Yet on the other hand, observed traditional practices, have been interpreted as men being envious of women's power of reproduction (Bonnemère, 2014; Lemonnier, 2014; Meigs, 1976). Meigs (1988: 400) argues that the men "are not in some respect happy with the rigid sexual boundaries imposed by their culture... attempts to eradicate the differences and to blur the boundaries are abundant." For example, male initiation rituals are practiced to reassure the reproduction of human beings and men's superiority over women in the process of procreation (Lemonnier, 2014; Meigs, 1976). Amongst the Highlands, men's rituals for healing of the sick, also include the imitation of female menstruation (Meigs, 1976), believing that although menstrual blood is dirty and dangerous, it is also the source of women's rapid growth rate that is observed immediately after menarche, when girls have growth spurts. Meigs (1976) observed the rituals of

men's imitating menstruation through bloodletting for treatment of ailments, like pain, swelling, and internal pains amongst the Hua Here, they believe that the ailment was caused by a hardening blood clot, which is known as a *kupa* and it can be healed only by bloodletting. Men also eat plants that produce a red juice (to imitate female's menstrual blood) that is believed to have the power to unblock a blood clot. Secretly however, the Hua men might eat possum, which is believed to be associated with women, and red *pandanus* leaves, to grow faster.

Another characteristics of female fertility is women's fears of a blood clot condition. Therefore, women are fearful of having irregular menstrual flow. Women on the other hand would avoid such plants like the red *pandanus* leaves for fears of excessive menstrual flow. For the same reason, eating possums, is believed to be extremely dangerous for women.

The third characteristics of female fertility in PNG may also include women's deliberate effort to mimic men's fertility quality believed to be dry, hard, infertile, [and] slow growing. For example, during menstruation and after giving birth, the Hua women eat small bits of brown and dried though leaves (Meigs, 1976) to reduce menstrual or blood flow following childbirth and for contraception. For example, the Hua women, are very proud of having a small quantity of menstrual blood flow. Menopause is therefore, aspired to as it brings to a close the 'uncleanliness, embarrassment of menstrual blood.

Another concept of fertility offered by Lemonnier (2014), suggest fertility as an integral part of the wider cosmic fertility towards the maintenance of individuals health and protection for their community. For the Ankave, for example, fertility rituals and ceremonial exchanges go beyond merely human reproduction; rather their rituals focus on the protection of family members and communities from negative powers, or, when they go to battle against evil spirits or malevolent individuals. The Huli would perform fertility rituals as a means to protect their community from natural disasters, such as drought, floods, landslides, earthquakes and famine (Ballard, 2000), which are considered to influence decline in cosmic fertility (Ballard 2000).

Symmetrical and Complimentary Gender Relationships

Bateson's argument for two modes of same-sex (symmetrical) and cross-sex (complimentary) gender relationships is particularly important in understanding dynamic gender relationships in Melanesian culture (Lipset, 2008; Strathern, 1988). Bateson contested the metaphor of male gender domination as a distortion to male-female relations. Strathern (1988) concurred with Bateson's argument and introduced the term personhood 'dividual' (1988:13; Lipsett p. 224). The personhood *dividual* implies that in each individual (Carsten, 2004), there are relationships which are made of same-sex and cross-sex, such as between father and son, and husband and wife. Melanesian society defines an individual person to be a collective individual defined by her various roles, social positions, and historical events. Those roles and social positions are mobilized by ritual performances, ceremonies, and past and present historical events. For example, the qualities of men and women are distinctive and defined across generations, and are drawn out of what roles and duties are given by the society to men and women (Strathern, 1988).

This paper aims to analyze how the traditions of knowledge and practices surrounding (in)fertility, reproduction and gender relationships, influence Muningan women's (and men) perception and participation in modern family planning programs. We argue the failure to acknowledge and understand traditional and local knowledge, attitudes and practices of fertility and gender relationships will result in social disharmony, and potentially weakened community resilience and participation in family planning services.

Methods

This was a descriptive qualitative study using in-depth interviews and focus group discussions to purposively select a sample of rural indigenous women and to examine their views and experiences of community-based modern family planning in light of their traditional cultural knowledge and practices.

Research context and recruitment of participants

The study was set in Muningan, one of eleven villages within the Nawaeb District of Morobe Province of PNG. Muningan is a small community of 200 people. The village is a 1.5-hour drive from Lae, the capital of Morobe Province. Village houses are made from local bush wood, with long cane leaves or grass for roofing, and they are built on family-owned land, or, according to customary land practice. Houses are clustered in a circular fashion to allow space for community gatherings with a meeting hall and church at the village center. The village has a pre-school and elementary school, but the nearest high school is 25-30 miles away (a full day walk); the nearest health post is about a four-hour walk away. The community can largely survive day to day outside the cash economy, with cash for paying school fees, health services and transport derived from occasional sales of crops and farm's produce (i.e. chicken and pig). Villagers grow vegetables, fruit and bush food for their daily food needs and catch some fish from the local rivers. Meat is not a daily food item and only eaten at special events (e.g. weddings), or, occasionally when there is disposable cash income. Village activities are mostly carried out as a family, in groups, or at community gatherings, not as individuals.

Participants

Participants were purposively selected to include married village women at child rearing/bearing age range (20-39 years), who were accessing community-based family planning, and who could read and speak fluent Tok Pisin. Fourteen housewives agreed to participate and all of them had lived most of their lives in Muningan, having either been born there or had joined their spouses there. Families ranged in size from one to five children, with the youngest child for each woman ranging from one to eight years old. Upon arrival at the study field, the second author (ZT) first visited the PNG Family Health Association and was introduced to the only family planning volunteer in Muningan, Mr. Basa (pseudonym). Mr. Basa was the husband of the Muningan village birth attendant (VBA). The Basas then introduced ZT to a few potential participants who were their clients at the time. The snowball technique was then used to recruit more women. Each woman interviewed was asked to inform other women in the village about the study who they knew were using contraceptives and accessing services from the family planning volunteers. ZT stayed in the village during the duration of the data collection. Interested women would visit and contact ZT directly. The data collection was conducted in Tok Pisin by ZT who was born and raised in PNG, spoke fluent Pidgin and Tok Pisin and was very well aware of the general social etiquette, practices and customs in PNG. ZT was a nurse and had completed a nursing degree in Australia. She is very familiar with the family planning programs in PNG. The first and third authors (SAS and JFS) together had more than 40 years of experience working in the area of women's reproductive health in the Asia-Pacific region, including in PNG, Indonesia and West Timor, Thailand, the Philippines and Laos.

Data collection

The in-depth interviews and focus group discussions were conducted at times and places convenient to the participants—mostly at the house veranda, in the morning before women went to work in the field, or in the afternoon after they returned from the field. Interviews lasted about an hour, and group discussion lasted up to 1.5 hours. All responses during the interviews and group discussions were manually recorded in a field notebook, handwritten by ZT. The participants declined consent for the discussions to be digitally recorded. ZT also took notes of the data collection process and other observations deemed to be relevant for the interpretation of the data. Participants were informed about the aim of the study, the potential benefits or harm and confidentiality. The consent form was written in Tok Pisin and given to the women. At times ZT offered to read the consent form to the women and the Village Birth Attendant had it translated to the local dialect to facilitate a clear understanding of participants' rights in the research and what was required from them. When agreed, those who could sign would sign the consent form and those who could not sign had one of their fingers inked and then printed on the consent form to agree to participate in the research.

Fourteen women, the village birth attendant (VBA) and the two family planning volunteers were interviewed. ZT used semi-structured interviews to ask about the women's views and experiences of modern family planning. Of note here, ZT, through her initial contact with a few women, noted some hesitation and uneasiness of the women to the direct questioning style. Using her cultural sensitivity and judgement, ZT decided to change her approach to social dialogue and personal engagement through storytelling and shared personal experiences. For example, ZT told them about her family, her parents, and her connection with the community through her former grandfather's work as a missionary in Muningan and neighboring villages. ZT's insights and astute decision to adjust her data collection approach proved to be effective, as the women became more relaxed towards her and were willing to share their experiences on family planning.

Following the completion of all 14 individual interviews, two group discussion sessions were conducted with the same participants. In each group discussion, a group representative was elected to organize the group meetings and the venue. Both of the groups decided to gather in a small *hauswin* (a bush huts with no walls), used for families to relax and cool off in the afternoons. Each group discussion session began with ZT presenting a summary of previous in-depth interviews (and removing all of the references to names) in Tok Pisin and inviting the women to discuss and clarify, and then make suggestions for future improvements in family planning services in Muningan. The group representative acted as the mediator and translator to translate the research questions to the women in their local dialect. To allow for intimate discussion among the participants themselves, they discussed the research questions in their local dialect, which was foreign to ZT. They then presented their group ideas to the group representative who had it translated to Tok Pisin for ZT. This open inclusive discussion allowed all participants to express their views and opinions comfortably in their own dialect. Regardless of literacy level or level of Tok Pisin language proficiency, the women were able to fully participate and express their ideas informally, in the manner that was comfortable and culturally appropriate to them.

Data analysis

Written interview and group discussion notes were analyzed using descriptive thematic analysis (Elo & Kyngas, 2008). Notes were read and re-read, and open-coding and in-vivo coding were used to cluster data into groups and categories with similar categories eventually being collapsed into main themes.

Research ethics

This research was reviewed and approved by the Auckland University of Technology Ethics Committee (AUTEC #13/80). Following this ethical approval, research permission was sought and approved by the Director of the Morobe Provincial Family Planning Volunteer Organisation.

Findings

In-depth interviews and group discussion data provided rich coverage of women's experiences and views on impacts of modern family planning practices on their own lives, families and communities and their aspirations for sustaining these in culturally appropriate ways. This section illustrates women's (and men's) confusion with and contestation against the practice of modern family planning, and indirectly they argued for the incorporation of local knowledge and practices into the family planning programs.

Family planning, menstrual blood and childbirth

Menstrual blood and blood flow post-childbirth are believed to be dirty and dangerous. Participants' perception and acceptance of modern contraception, especially the oral contraceptive pills, strongly reflected the fears of dirty blood during menstruation and post childbirth. Participants expressed a sense of relief for being able to control childbirth. All participants chose to use oral contraceptives because it was believed to be the best method which would not affect their regular menstruation. They were all very fearful of irregular menstruation believing that it would cause blood clotting which would make women sick. Some had been using oral contraception for between four and 15 years. It was believed that a healthy woman would get rid of *blut nogut* (bad blood) through menstruation. Interestingly, all participants, from stories heard from female relatives and friends, believed that injectable contraceptive was the worst method; participants Cesu (aged 23) and Goreyu (aged 39) said that depo injections could make a woman sick, stop her menstruation and cause a blood clot condition in her womb. Goreyu's friend for example, had used the depo injection and had cause her irregular menstruation flow for about three months. She became very sick and was taken to the city hospital. Goreyu believed that her friend had had a blood clot condition where the accumulation of menstrual blood in her womb had caused the health complication.

Oral contraception was seen as the best means to manage pregnancy and childbearing. Honepe (aged 35) explained that "*I could stop pills and get pregnant again ... I could control my body*". As a collective individual, Muningan women, like their peers in other Melanesian societies are given cultural and social roles to perform. Culturally, women in Muningan are expected to participate in a number of economic, social and church activities for the maintenance of their household income/resources, social connections, and spiritual life. Goreyu (aged 39) metaphorically explained the oral contraceptive "*like a mother looking after me, it helped me to spacing childbirths, it kept my body fit, and I could earn money for my family*". Etinue (aged 38) had been using oral contraceptive pills for 15 years and all of her four children were spaced using pills, "*I have been very pleased... it helped me spacing my children ... with pills, there is no problem, and you can manage how many children you want to have and participate in my church*".

Free oral contraceptives obtained from the village family planning volunteers were seen as the most economical and accessible. There was no village health centre in Muningan. Participants

relied on the Muningan family planning volunteers to bring their supplies to Muningan. The Muningan women could also get contraceptives from a neighboring district clinic (3 hours walk from Muningan) or the city hospital. Etinu (aged 32) was very content with the services provided by the village family planning volunteers and she doubted she would have had received the same quality of service from other clinics in the district or the city hospital. Due to the cost of travelling and poor road infrastructure, a few of the participants did not like the idea of travelling to the city to get contraceptives; Cesu (aged 23), “*going into town to access family planning services was quite difficult as we were in the village and we could not afford bus fares.*” At the same time, family planning services in the city are not free and very expensive. For example the cost of the depo injection on the city hospital is about three times of those in the district clinic. Participants were also aware that they could go to a nearby district clinic for other types of contraceptives. Yet services at the district health clinic were unreliable “*sometimes when we arrive health workers are not there at the district clinic to serve us*”. At the same time, participants were only interested in getting oral contraceptive pills which could be easily obtained free from the Muningan family planning volunteers.

All participants sent their children to one of two local primary schools but had send them to the city for secondary and tertiary education incurring extra financial pressure to pay for school accommodation and transport. Participation in the family planning programme had helped women increase their participation in cash market activities and to send their children to schools for good education. Goreyu (39) was grateful that after her participation in the family planning programme, she was able to space her children and to earn money for her family. Family gardens and farms were also under pressure to generate cash income to pay school fees and transport. Increasingly families were selling their farm produce to the city. Boeng (age 22) said, “*school fees are getting expensive these days so spacing will give time to save for each child’s education*”.

Childbirth as dirty and dangerous

The loathing of dirty menstrual blood around childbirth underpin at least two birthing practices for the Muningan: the women give birth in secret and in a separate house far away from their families (*hauskarim*); husbands leave the family house and live in *the hausman*, the house for men only. All participants believed that giving birth at home was inappropriate, as they did not want to pollute their house and risk the health of their families with the dirty blood post childbirth. (Boeng, aged 22) was adamant that “*women needed to give birth in secret and separately from her family*”. At the time of this research, all participants were disgruntled about not having a special birthing house or *hauskarim*. According to the village volunteers and some participants, the building of *hauskarim* had fallen out of favour since the introduction of modern contraception and homebirth by the village birth attendants (midwives) in rural clinics. Dona (aged 28) said, “*If hauskarim is built, women could give birth in a proper place where the nurse may assist and we also perform safe rituals for mothers and babies*”. A *hauskarim*, made of local wood, bamboo and kunai (long grasses), had traditionally been built by the community away from the main village to give women a ‘secret’ space to give birth. Women would go to the *hauskarim* close to the time of the delivery, accompanied by a female relative for support, and stay there with the newborn for a few weeks or months to recover. In the group discussion, some participants proposed extending the function of the *hauskarim* to be a family planning station for the Muningan community, so the family planning volunteers could use it as the storage for the contraceptive pills. Historically, a *hauskarim* existed in conjunction with a *hausman* (house for men only). In the past, a husband would lodge for up to three or five years in the *hausman*, to give his wife the time and space to

look after the newborn until the child was mature enough to feed herself/himself. During this period, the father would still visit the family house during the day and help out with food-gathering, collecting wood for cooking or childcare. He would return to the *hausman* in the evening (Agyei, 1989).

Gender relationships

As noted earlier, Strathern's (1988) specified the personhood 'dividual' concept of gender-relationship in the Melanesian culture to include same-sex (symmetrical) and cross-sex (complimentary) relationships. This concept might still be relevant today and has underpinned gender values and relationships in Melanesia. The qualities of a man is specific and it includes his inherited roles, social attitudes, practices and relationships he has with his father (symmetrical) and the relationships he has with his wife (complimentary). A similar formula is also applied with a woman. Traditionally, Muningan men and women had different roles in building the *hauskarim*. The *hauskarim* was seen as a cultural protection for men against *blood nogut* (dirty blood post-parturition). Interestingly, conversations in the discussion group marked the introduction of family planning in the community as the moment when men stopped helping the women to build *hauskarim* and refused women's requests for help. Ame (aged 35) felt frustrated: "*the men didn't want to support us and the family planning volunteers, they wouldn't cooperate*". Boeng (aged 22) said "*our husbands wouldn't listen to us or the family planning volunteers, they ignored us all, that's why we were without a hauskarim*".

Participants felt their male peers and leaders now acted as if they were ignorant of the women's needs. Participants suggested lack of consultation between the family planning programmes and local communities had influenced this, especially with male leaders and the men in the communities. A few participants surmised: "*Men might feel like an outsider, they might think the volunteers were introduced by the organisation (a named NGO), so couldn't the organisation take responsibility as well in providing facilities?*" Here, it was obvious that the participants were concerned about how the men had been behaving in response to the introduction of modern family planning. This suggested confusion and disruption of cross-sex relationships between men and women. The introduction of modern family planning had disrupted traditional gender relationships and complimentary male/female roles and practices around fertility and childbirth. It appears that Muningan men felt displaced and confused, as family planning had been heavily focused on women and excluded their participation. Men might have assumed that women's fertility was well controlled by family planning and building a *hauskarim* became irrelevant. Thus, introduction of modern health practices, health technology, and other modern lifestyle transformations into Muningan might have had disrupted existing gender relationship indigenous knowledge and practices. In addition to the effects of modern family planning practices on traditional gender relationships, participants also raised the often-competitive nature between government-funded versus privately funded family planning services and lack of consultation with community leaders. The women wanted any introduction of new services into Muningan to include consultation with their community leaders. They expressed concern and skepticism over the number of maternal health and family planning services provided by a mix of private providers, government, and nongovernment organizations (NGOs), all introduced without any engagement and consultation with the village elders/leaders. Some participants questioned the legitimacy and genuine intention of programs, especially those introduced by private organizations and NGOs and they had encouraged others not to attend those services. In the FGDs participants suggested the *hetmeri* or *hetman* (women or men leaders/elders) as the guardians of local knowledge and

community gate-keepers should be key partners and facilitators for any new health initiatives. These community leaders are well respected for their wisdom and the best means to adopt new knowledge or practices should be synchronize with existing local knowledge and traditions. Participants also noted the lack of local women's voices and local knowledge in service decision-making challenging program and policy developers to engage authentically with existing socio-cultural knowledge bases and community leadership structures.

Discussion

Our study reflects a culture clash between the introduction of modern family planning practices (and practitioners) and PNG traditional knowledge and practices around fertility, childbirth, sexuality and gender relationships. Although modern contraception was introduced to PNG's urban capital in the late 1940s, rural indigenous communities' access to family planning services is much more recent (last 30 years). Contraception usage rates are still low, and service provision is challenging due to geographical distances, and organizational and operational issues. We found these rural indigenous women were all positive about the pragmatic benefits of modern contraception, however, it had come at significant cost to traditional meanings around reproductive knowledge, beliefs and practices and gender relations underpinning those.

We found all participants used oral contraception to control childbirth and to sustain their health and wellbeing. The adoption of oral contraceptives appears almost exclusively for the purpose of child spacing rather than family size limitation. The women emphasized the pragmatic advantages of oral contraception in terms of cost benefits, children's education, and social commitments and a greater sense of control over fertility, pregnancy and childbearing. Better birth spacing afforded more opportunity for participation in social, church and market activities important to their sense of social and spiritual wellbeing. A further significant pragmatic benefit was easing family budget pressures related to schooling costs and freeing up time for increasing family income via gardening and market activities.

Yet, modern family planning has undermined traditional birthing knowledge and practices, particularly, previous complimentary gender roles relating to childbirth (i.e. the disappearing of men's motivation for building *hauskarim*). Men stopped building *hauskarim* for women, as they perceived their traditional male role and status had been supplanted by the modern services and providers, and as such, suggested the government or relevant NGOs should build a new modern childbirth facility. Not only did the demise of the *hauskarim* remove the traditional birthing site, but it also overrode long-standing practice of protecting men and family members from *blood nogut* (bad blood) post-childbirth (Bonnemère, 2014; Elapa, 2011). Without *hauskarim*, the women were unsettled by childbirth itself, discussion of fertility issues, and storage of contraceptives. The clash between modern contraception delivery practices and traditions relating to fertility, childbirth and gender relationships conflated previously sacred private matters with the profane issues of daily life. This occurred outside the physical guardianship of the *hauskarim* and social and spiritual care of other women and their traditional knowledge and rituals. The introduction of modern family planning, without the understanding and/or sensitivity to local traditions had inadvertently destabilized long-standing local birth and maternal health practices and gender resulting confusion and resistance amongst some members of the community, as it has also been reported in other studies (Alam, Tasneem, & Oliveras, 2012; Simba, Schuemer, Forrester, & Merriment, 2011).

Cultural beliefs and traditional knowledge about fertility and integrated gender roles need to be understood and incorporated into policy and service planning for community-based family planning in PNG. Service providers' lack of engagement with men in sexual and reproductive health decision making, resulted in poor commitment and support for program delivery, as also found elsewhere (Kura, Vince, & Crouch-Chivers, 2013). Our participants challenged future service planners to engage a bottom-up approach with appropriate local community leaders/elders (i.e. *hetmeri* and *hetmani*) using relevant community venues such as the church meetings (Clarke, 2003; Meigs, 1976; Scaglione, 2003; Weiner, 1987).

The women's position on the modern family planning programme reflects a significant culture clash between modern and traditional cultural knowledge and practices. The women valorized their long-established indigenous socio-cultural values and identity but also had strong aspirations for collaborative processes to leverage the benefits of culturally appropriate modern family planning outcomes. Rebuilding the *hauskarim* was a poignant re-assertion of their gender and cultural identity to better meet their family planning outcomes.

In an era of increasing biomedicalization of family planning in indigenous communities, these women's pleas parallel the intent of Declaration on the Rights of Indigenous People (UNDRIP) (2008) for the protection and fulfilment of indigenous women's rights to sexual and reproductive health and respect for existing cultural knowledge and practices. Thus, it behooves health agencies, policy makers, program developers and health researchers to work collaboratively with indigenous communities to protect and incorporate relevant cultural practices in their health programs (United Nations, 2008).

Lastly, further research in this area is necessary. To avoid the cultural conflicts that have hindered family planning programs in many rural areas and indigenous communities, it is critical to study broader traditions, norms, customs and taboos of the local people. A 'modern' family planning program that improves and takes advantage of some of the traditional methods will be more apt to be accepted by the population than an exclusively foreign one that lacks a corresponding system of meaning.

Conflict of Interest

The authors declare no conflicts of interest.

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