

Article

The Importance of Whakapapa for Understanding Fertility

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Abstract: The Māori fertility transition—which saw a shift from high to low birth rates between 1966 to 1976—was one of the most rapid fertility declines observed anywhere in the world. Since then, Māori fertility has hovered around replacement level (2.1 births per woman), somewhat above that of Pākehā (European) New Zealanders. More striking are differences in timing with Māori women bearing their children younger and over a longer duration. This paper sits within a broader research project that asks: What are the important influences that have sustained contemporary Māori fertility patterns? Drawing on Mana Wahine (Māori women’s discourses) and whakawhiti kōrero (interviews) with wāhine Māori (Māori women) this paper highlights whakapapa (genealogy) as an important concept in broadening and deepening our understandings of fertility, and situating individual fertility and reproduction within a broader set of relations.

Keywords: whakapapa; Māori fertility; Māori demography; Indigenous demography; mana wahine; whānau

1. Introduction

The women in the room were aghast. However, the kuia (female elder) was defiant. She had just finished proclaiming that she encouraged her young mokopuna (grandchildren) to have babies because, to her, it was about the survival of her whakapapa (genealogy).

I begin with my own observation of an exchange that occurred some years ago in a religious Sunday School meeting of women. The topic of discussion was teenage pregnancy. A few of the women had expressed their disdain towards young solo mothers because, in their view, childbearing should be reserved for those who were ‘respectably’ married. Others preferred that their daughters pursue education and a career before settling down to have a family. The kuia, however, disrupted their discourse. To her, having children was about preserving and sustaining whakapapa, hence why she encouraged her grandchildren to reproduce, and to start early. It was a rite of passage that the kuia not only expected, but welcomed and embraced. Her position highlights the important, but often overlooked, significance of cultural values for understanding Indigenous fertility. Using a qualitative research methodology, this paper examines Māori women’s perspectives on fertility, revealing a much broader set of understandings than the output of reproduction. What I find are powerful narratives of ‘whakapapa’ as an important concept in making sense of fertility and situating individual fertility and reproduction within a broader set of relations.

2. Whakapapa

Whakapapa is a Māori term that is commonly translated as ‘genealogy’, ‘lineage’ or ‘descent’ (*Whakapapa n.d.*). As a verb, whakapapa also means to “recite in proper order” one’s genealogy, or to “lie flat”, to “place in layers” or “lay one upon another” (*Williams 2000*, p. 259). Similar to how kinships are mapped on a pedigree chart, whakapapa is like the ‘layering’ of generations upon another. Whakapapa, however, is more than a ‘list’ of



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names (Mahuika 2019). Embedded within the concept of whakapapa, is the layering of knowledge or narratives passed down through the generations (Barlow 1991). In short, simple English translations such as ‘genealogy’ do not adequately represent the depth and breadth of meaning, or the potential of whakapapa in te ao Māori (the Māori world). To give a sense of how significant whakapapa is, Rawiri Taonui states:

Whakapapa is a taxonomic framework that links all animate and inanimate, known and unknown phenomena in the terrestrial and spiritual worlds. Whakapapa therefore binds all things. It maps relationships so that mythology, legend, history, knowledge, tikanga (custom), philosophies and spiritualities are organised, preserved and transmitted from one generation to the next. Whakapapa is the core of traditional mātauranga Māori (Māori knowledge). (Taonui 2011, p. 1)

Thus, whakapapa is the binding mechanism or the ‘lifeblood’ through which everything is connected: the physical and metaphysical. Nepia Mahuika writes that whakapapa is paramount in te ao Māori because it is “crucial to assertions of Māori identity and tribal membership” (Mahuika 2019, p. 1). More broadly, whakapapa has been described as a framework of Māori epistemology and knowledge (Mahuika 2019), and is a central feature of Māori research methodologies. For example, Joseph Te Rito (2007) uses whakapapa as a methodological tool to tell his own story of his connections and relationships to his hapū (sub-tribe) and tribal whenua (land).

The preservation and transmission of whakapapa through the generations (Barlow 1991; Taonui 2011) is intimately connected to reproduction, but extends beyond the creation of life to embody the complex relationships between all things. Ani Mikaere captures this well:

The significance of the whare tangata¹ [womb] is rooted in the creation of the world and in the overriding tapu [sacredness] of whakapapa . . . the inherent tapu of each Māori person is sourced in their connection, through whakapapa, to the rest of humanity, to the atua [Gods] and to the environment. (Mikaere 2017, p. 41)

By breaking down the term into its two components, whakapapa can also mean “to become (“whaka”) earth (“papa”)/be embraced towards Papa (earth mother)” (Mika 2014, p. 53). Here, Carl Mika (2014) refers to Papatūānuku (earth mother), a powerful figure that exemplifies the “generative foundation of all life” because “all things are born of her and nurtured by her” (Royal 2007, p. 2). According to Māori cosmogony, the origin of all living things, including the natural world, centres on the union and eventual separation of the atua (gods)—Papatūānuku and Ranginui (sky father) (T. Smith 2012). Pinnacle to their union was the birth of children, including natural phenomena, who then bore more children and so forth (Royal 2007). It is said that through their son, Tāne, who formed a woman, named Hineahuone, out of the earth, became the first female to birth a child (Royal 2005).

Similarly, because of their power to generate life through the whare tangata, wāhine are creators, providers, and nurturers of life—past, present, and future generations (Higgins and Meredith 2011; Mikaere 2017). Ani Mikaere writes that “the survival of the whānau, hapū and iwi is dependent upon the reproductive functions of women” (Mikaere 2017, p. 41). Framed another way, the following well-known whakataukī (proverb) encapsulates the centrality and the mana (power/status/authority) of wāhine, including Papatūānuku, to the survival of humanity (Jahnke 1997; Pere 1982):

He wāhine, he whenua, e ngaro ai te tāngata

By women and land, men are lost.

The significance of reproduction or fertility is also reflected in many te reo Māori (the Māori language) concepts. For example, traditional Māori society is comprised of kinship groupings: whānau, hapū, and iwi. Whānau is often translated as ‘family’ or ‘extended family’ but also means ‘to birth’. Hapū generally refers to a ‘clan’ or ‘sub-tribe’ but also means ‘pregnant’. Iwi is commonly referred to a larger tribal grouping but also means

‘bone’ or ‘strength’. The term *whenua* has dual meanings with reference to *Papatūānuku* and pregnancy/birth because it means both land and placenta.

Clearly, *whakapapa* has a much broader and deeper set of meanings than that connoted by the term fertility—the production of offspring (Weeks 2016). What I am interested in here, is how *wāhine Māori* view fertility. First, I provide a brief overview of Māori fertility trends.

3. Māori Fertility

Aotearoa/New Zealand (NZ) is a useful context to explore these deeper meanings of fertility. NZ is a colonial settler state consisting of two major populations: Māori, who are the Indigenous peoples of the land, and *Pākehā* (New Zealanders of European descent) who form the dominant group. Although their histories have very much been intertwined since first contact, two very distinct demographic fertility histories have transpired. The Māori fertility transition was described as one of the most rapid shifts of its time. Beginning in 1966, Māori fertility underwent a significant decline that eventually saw it converge to a level similar to that of *Pākehā* by the late 1970s (Pool 1991). Although this transition has been framed as an inevitable ‘convergence’ to *Pākehā* fertility, the timing and mechanisms facilitating the change were very different (see Pool 1991; Pool et al. 2007). Following a pattern similar to the Western European transition, the *Pākehā* fertility transition occurred around a century earlier, and was stimulated by delayed marriage. In contrast, the Māori fertility transition was achieved by the universal uptake of effective contraception i.e., the ‘pill’. Even in a contemporary context, where society favours and facilitates low fertility and smaller families, important differences persist. Since the 1980s, Māori fertility has remained fairly stable, hovering mostly above the theoretical population replacement level of 2.1 births per woman, whereas *Pākehā* birth rates have predominantly mirrored levels similar to other economically advanced nations experiencing long-term sub-replacement fertility. Most notably, research has shown that Māori women bear children earlier, and over a longer period of time (Jackson et al. 1994; Johnstone et al. 2001; Didham and Boddington 2011; Stats New Zealand 2017). Similar trends have been identified in other Indigenous nations in settler-colonial states, particularly Canada, Australia, and the United States (Johnstone 2011).

In the fertility literature, the Davis–Blake model (Davis and Blake 1956; also see Bongaarts 1978, 1982) has been the conventional framework for explaining fertility outcomes. Fertility is defined narrowly as ‘live’ or ‘actual’ births, compared to fecundity, which refers to a woman’s ability to reproduce. Hence, the Davis–Blake model focuses on the factors that specifically lead to a ‘live’ birth. The model identifies eleven ‘proximate determinants’ through which social, cultural, economic, and bio-social factors, also known as ‘explanatory factors’, can influence fertility outcomes. The proximate determinants are classified according to whether they influence the likelihood of or exposure to one of the three phases of fertility: intercourse, conception, or gestation. For example, use or non-use of contraception directly affects exposure to conception. Use or non-use could be influenced by cost, access, or attitudes towards contraception. While the Davis–Blake model is useful in terms of exploring the influence of cultural knowledge and attitudes through a proximate determinant on fertility levels, the model stops short in terms of understanding the timing of births. The broader research is interested in how the cultural context shapes decisions around birth timing and, in particular, early childbearing.

A review of the demographic literature on Māori fertility reveals very little attention given to Māori understandings of fertility or Māori worldviews. The problem is partly explained by the fact that most of the studies have been conducted by non-Māori men. Furthermore, most of the post-Māori fertility transition literature has primarily focused on ‘describing’ Māori fertility patterns in comparison to the fertility patterns of the dominant *Pākehā* group (Didham and Boddington 2011; Pool 1991; Statistics New Zealand 2004; Zodgekar 1975). The problem with this approach is that demographers have generally resorted to Western-based approaches and interpretations to explain differences or trends in fertility. Yet, there are increasing calls from within the discipline “for more ‘cultural’

explanations of demographic behaviour” (Szreter et al. 2004). Johnstone (2011) has argued that to better understand Indigenous fertility patterns an “indigenous theory for population change is needed”, one that reflects “social, economic, political, historical and cultural realities” (p. 117).

As a way forward, I draw on Mana Wahine (Māori women’s discourses) to help further our understanding of contemporary Māori fertility patterns. From a kaupapa Māori research standpoint, the absence of Māori worldviews and thinking in demographic research on Māori fertility is highly problematic. Kaupapa Māori research asserts that any research, especially involving Māori interests, should be conducted “by Māori, for Māori, and with Māori” (L. T. Smith 1996, p. 48). This is particularly important to ensure that “cultural integrity is maintained when analysing Māori issues” (Pihama 2010, p. 10). Research across the academy, and especially in a positivist-dominant discipline such as demography (Kertzer and Fricke 1997; Petit 2013; Greenhalgh 1996), has privileged Western ways of knowing while disregarding Māori and Indigenous peoples’ worldviews (L. T. Smith 2021; Axelsson and Sköld 2011; Taylor 2009). While the analysis of fertility is a core undertaking in demography, studies of Indigenous fertility have overwhelmingly been conducted by non-Indigenous demographers deploying Eurocentric theories, frameworks, and tools. More importantly, however, there has been very little consideration of wāhine Māori perspectives in demographic studies of Māori fertility, which seems counter-intuitive considering that ‘fertility’ is a space that is predominantly female-focused. Furthermore, Indigenous women are too often seen as the subjects of research, rather than those with expertise. In response, this research is being conducted by myself, a wāhine Māori researcher. I also draw on Mana Wahine as a framework to address the lack of both Māori and wāhine perspectives in the demography of Māori fertility.

4. Mana Wahine: Reclaiming the Māori Fertility Space

Mana Wahine is the power and authority of women, with mana meaning authority or prestige, and wahine meaning woman. Female authority has always existed in te ao Māori (the Māori world) but emerged as a theoretical and methodological approach in the 1980s/90s, and was largely centred on Māori women’s discourses (Te Awekotuku 1991; Pihama et al. 2019a, 2019b; L. T. Smith 1992). Mana Wahine was developed to respond to the impacts of colonisation on the status of wāhine Māori, and to reassert Māori identity (Pihama 2001). As a framework, Mana Wahine privileges mātauranga Māori knowledges, methods of knowledge creation, and ways of knowing that are specific to Māori women (Jahnke 1997; Pihama 2001; Simmonds 2011, 2014; L. T. Smith 1992). Like Kaupapa Māori Theory (see Pihama 2010; G. H. Smith 1997; L. T. Smith 2021), Mana Wahine challenges dominant Western frameworks, enabling Māori women to push back against the colonial constructs that have ‘othered’ or defined them based on patriarchal and colonial belief systems (Irwin 1992; Pihama 2001, 2020; L. T. Smith 1992; Te Awekotuku 1999). One of the core aims of Mana Wahine is to [re]claim and [re]present the status of wāhine Māori according to mātauranga wāhine. One way to do this is to make “visible the narratives, experiences, in all of their diversity, of Māori women” (Simmonds 2011, p. 11). Given the dominance of Western theories and methodological approaches in the scholarships on Indigenous and Māori fertility, Mana Wahine creates an empowering space for Māori women to articulate their own understandings of fertility, whānau (family), and whakapapa from their own cultural standpoint.

5. Whakawhiti Kōrero: Interviews

The interview materials presented in this paper are one method of enquiry, and are a part of a broader research project that aims to understand how cultural identity shapes contemporary Māori fertility. Earlier analyses applied quantitative methods using NZ Census population-level data to investigate intra-group differences in Māori fertility (Rarere 2018). The population-level data did not provide the depth of information to understand the socio-cultural context or nuances of fertility from wāhine Māori perspectives, and thus a

key purpose of the interviews was to gain deeper insights. With the aims of the broader research agenda and Mana Wahine in mind, this paper brings to the foreground narratives of wāhine Māori lived experiences and perspectives collected through a kaupapa Māori research method called whakawhiti kōrero (hereafter kōrero), which takes the form of a conversation similar to an unstructured to semi-structured interview but is primarily a responsive and interactive dialogue of shared knowledge or learnings that brings “enlightenment to a given situation” (Berryman 2013, p. 271). Prior to the kōrero, the wāhine were provided with an information sheet and informed consent form. The information sheet included a very brief and broad overview of the research topic, interview process, and confidentiality protocols. The consent form specified their rights pertaining to participation, withdrawal, anonymity, review, and ownership of interview data. Although the idea behind whakawhiti kōrero is to have an interactive dialogue, an interview schedule of questions was also prepared to help guide or prompt the kōrero, if required. The wāhine were recruited through whanaungatanga, meaning relationships, kinships, or family connections. In research, whanaungatanga is applied as a process similar to purposive and snowball sampling where the researcher draws on their own familial, social, and/or professional relationships to help identify and invite participants to contribute (Bishop et al. 2014). In this case, the wāhine were recruited from a variety of social and professional networks. A total of eight kōrero were conducted with nine wāhine Māori; one of which involved a mother (age 45) and daughter (age 20) who chose to kōrero together. Six kōrero were conducted in-person at their home or in their workplace, and two via video call due to COVID-19 physical distancing restrictions. Given the small sample size, the views expressed here are not intended to be representative of all Māori. Instead, these views help us to gain deeper understandings of fertility beyond population-level data.

The kōrero were audio-recorded, and ranged between 30 and 120 min long with seven of the kōrero at least an hour long; therefore, providing ample and rich ‘data’ to analyse. The recordings were then transcribed in edited form (rather than strict verbatim) by a professional service provider and myself, the interviewer, and then thematically analysed. I went through a manual process of identifying, analysing, and reporting themes within the data. This involved reading each transcript at least four times for the purpose of re-familiarising myself with the material, noting down initial ideas, coding key features of the data, and correcting any errors (especially te reo Māori words) or inaudible dialogue that the professional service provider could not ascertain. Decisions around themes were framed by the overall research questions, and Mana Wahine concepts and theories (mentioned earlier). During this process, I also contacted the wāhine participants for either further clarification or validation of themes. Many themes and sub-themes emerged within and across the kōrero, reflecting a variety of experiences. However, because of space limitations, this paper will only focus on the themes of whakapapa and whānau as important concepts in understanding fertility. This means that not all of their stories will be reflected in this paper because some focused more on other themes, such as the economics of raising children, or the stigmatisation of having many children. Pseudonyms and approximate ages have been used in this paper to protect the identity of the wāhine and their whānau.

6. Wāhine Māori Fertility Narratives

6.1. Continuation of Whakapapa and Whānau

The topic of fertility stimulated a keen interest amongst the wāhine, shown by their desire and willingness to talk about the topic openly and freely. Karlene (age 38) provides insight as to why fertility is popular by alluding to how it is intrinsically linked to Papatūānuku, and its connection to and continuation of all things:

We have such a hardcore² thing around birthing. Birthing is amazing too because it is really related to the environment and the way the world operates and that continuation of things and whenua-ki-te-whenua³ and all those things, like we come from her and we go back to her and all those things. Fertility is really interesting for that stuff. When I’m dealing with what I’m dealing with for our

whānau and stuff like that and to think about how that continuation has been disrupted, it is going against the natural flow of the world almost. (In-person interview, November 2018)

The topic also stirred interest for many of the wāhine because for them, it is about the continuation and survival of their whakapapa, which Karlene alluded to in the previous quote. Here she refers to the disruption of a genetic condition that affects the males in her bloodline, because if not detected early and managed, it can be fatal. However, procedures that enhance 'fertility' chances gives Karlene a sense of hope in 'saving' her 'whakapapa':

We are now in a process where we are looking at having our condition put on the new-born screening list so the little heel prick test that you get when your baby is born, they are now going to screen for this condition. What is absolutely amazing about that is that we will be able to help so many more children way before they get to a point where they might lose their lives . . . With the new-born screening testing, if they have children now it can get picked up easier and I can connect with them [wider whānau] and I can help them to secure our whakapapa in ways that really count.

Karlene recounts six generations of her whakapapa with the disorder, which is carried through her maternal line. She then shared a story of how the disorder came to be in her whakapapa. It is said that a long time ago a "woman was stolen" by Karlene's iwi (tribe) from another iwi. In retaliation, the other iwi had placed a 'curse' on the woman so that if she birthed sons, they would die, and therefore, discontinue her whakapapa. Karlene explains that males represent a chiefly position in her iwi:

Like you know how the males were the ones that were able to be like rangatira [Māori chiefs] in certain forms and have many wives and spread their seed very far or whatever. With the male line discontinued then it would be sort of a woman, you know but then you would have to have girl babies to carry on the line.

Karlene is grateful to be a survivor of that whakapapa:

What interested me about what you [to the researcher] were doing was that it directly related to what I was talking about and what I'd been going through, the fertility and what I think about when I think about how I'm a survivor of all this stuff. Fertility has been kind of luck of the draw where I'm here today. If I had been a boy, if it was my father had been a carrier and he could have died.

For mother and daughter, Kaiora (age 45) and Hana (age 20), bearing and raising children was encouraged in their whānau because it was about replenishing the whānau (family), hapū (sub-tribe), and iwi (tribe). Kaiora states:

Well I've been brought up in a family, I've got six sisters and one brother. I have a majority of a female family. We were always encouraged and brought up to have children when we were of the age and have a partner that was able to look after us and look after the family, and encouraged to have lots of children! I think the reasoning for that was so that we could replenish and keep our family name going and replenish our iwi [tribe] and hapū [sub-tribe]. So I guess that is the kind of teachings that I continue today with my own children, encouraging them to be able to grow up with their children now while they're kind of young, but also the career in their lives will always be there afterwards, and their studying. I have always encouraged them to do what they feel is strong in their hearts and to follow that. (Teleconference interview, September 2021)

Rearing and nurturing identity within the whānau plays an important role in fertility decisions. Their whānau have always been "quite open to talk about things". Kaiora believes that being open makes it easier just in case any of her children were expecting:

Because if your whānau aren't people to kōrero [talk] about everything and share everything, then of course if you were to get hapū [pregnant] at a young age you would be so scared to even tell your parents, that you would then possibly make

the decision of having an abortion or not going through with actually telling people, or perceptions of what they might say. Whereas a whānau that kōrero together and does a lot of things together, you will get them coming out and saying things a lot more easier, especially in those hard situations.

Kaiora has also taught her sons about the mana (power/status/authority) of wāhine and reproduction, and again emphasises the importance of replenishing their hapū and iwi:

So for me it was about them being comfortable that this was something natural, and that this is why us as wāhine are built the way that we are built, to be able to have babies and to be able to nurture and look after these babies and to replenish our hapū [sub-tribe] and our iwi [tribe] to keep it going. So yeah, so we've been a pretty open whānau in terms of that, because I want my boys to be able to look after their partners when they get partners, and treat them that same way and understand their partners as well... Yeah, so when I say replenish our iwi and hapū, that is why. It is about keeping our bloodlines alive, keeping them going. In terms of mātauranga Māori and our upbringing, our kids have been pretty lucky that they've been brought up in a balance of both worlds.

Despite the importance of reproduction in te ao Māori, there is also the very real possibility, for various reasons, of 'whare ngaro', in this context meaning no offspring or issue. However, one can still 'parent' or 'mother' even though they may be physically unable to birth children. 'Whāngai' is a Māori customary practice, similar to adoption and/or fostering, where a child/children are raised by someone other than their birth parents, who is usually a relative (Keane 2011, p. 1). There are various reasons for the practice of whāngai, one of which is to 'gift' children to couples who cannot have children (see Keane 2011), and therefore to help preserve whakapapa (Glover et al. 2008). At the time of the interview Tāniko (age 43) has not been able to conceive or birth her own children. She was in her mid-30s when she met her current husband and his two young daughters. Although she has taken on the role as 'mum', Tāniko has always wanted to birth her own "blood". With time against her, at age 38, she and her husband started a fertility programme involving assisted reproductive technology. At the time of the kōrero, nothing has since emanated but she is still hopeful. It is a sensitive issue for her, and she is learning to accept that she may never be able to have her own children. Having children was always on the cards for Tāniko, which is partly linked to her beliefs around life purpose and the inherent potential of womanhood:

I want to know or feel what it is like to be a mother. I think that is one of the greatest callings on the earth, is to be a mother. I know that if I don't have it in this life, I know that I'll be eligible and be able to have that in another life—hopefully. I have two daughters at the moment, and I don't call them my step-daughters 'cos [because] my current husband of 5 years is; our understanding between us is that our girls have two mums. So they have a biological mother and they have me. We don't call it step or whāngai [foster/adopted child]. It's just mum. (In-person interview, May 2018)

Ideally, Tāniko wants two boys so that her daughters get "to experience being older sisters". However, her most important reason for wanting children relates to whakapapa, in particular, to have her own blood:

And, to have my own blood—you know. To be blood of my blood. To be able to have a really intrinsic close connection with another human being is kind of what I'd love to experience. And I believe it comes from birth. Having your own. It's an intrinsic connection; through birth. Through shared whakapapa. Yeah shared living—life experience; shared traits; shared talents; mannerisms. Yeah I want to experience that as a mum. To know what that's like. And to experience that with a partner. My current partner; he'd be really good with babies. But, I don't know if want to leave this world without having children; biologically. I'm thinking

on that. I don't really want to leave this world without not having a child. A biological child. You know, kind of, that's where my head is at.

Janice (age 67) emphatically states: "Because they didn't believe in not trying to have [children]!" She was referring to her parents and their generation. Janice came from a big whānau of at least 16. Her mother had lost a few, and there were quite a few whāngai kids, a customary practice of adoption and fostering. Back in those days, it was the 'norm' to have big families. Janice shares how she asked her mum one time, "How come you had so many kids?" Her mother's response was: "I don't know, I got pregnant and that was it". Janice reflects on her mum's answer:

I don't think they even thought about it. It wasn't planned. There was no birth control, and if they did have I don't think they wanted to use it. I believe from what my mother says, I believe that. (In-person interview, July 2018)

Janice explains that times were different back then, and especially points out that whānau were resilient: "Yeah, I mean it is a flippant way of saying it but I think they just went with the flow". Her mother and father coped with their many children because things "weren't as expensive as they were" and "it was easy to grow off the land". The kids helped work the land, and they never starved nor wanted for anything. Did it have anything to do with the aroha (love) for kids that Janice alluded to earlier in her kōrero? She says "Oh, that too. It had to be that!" especially for the number of kids her mother had.

Even though they did not end up 'having big families' themselves, Janice observes within herself and amongst her siblings the same kind of aroha for kids that her parents had. For example, Janice has only ever birthed one son, and legally adopted two. However, when talking about her kids, she also includes her seven whāngai. Many of her siblings also had whāngai. I ask Janice why they embraced so many whāngai. The answer was simply, "aroha".

It has only been in recent years that Diane (age 53) has been engaging more with her whakapapa and reconnecting with her extended whānau members, iwi, and hapū. I asked about her upbringing, and commented that there is this perception that Māori have 'big' families. Diane disagreed with my comment and exclaimed that there are just two of them: her and her brother. However, what unfolds during our kōrero is a constellation of relationships: Her whakapapa of who is who, how they relate, and the nature of that relationship. It is a 'story', not just a list of names. After telling me about her background, it becomes clear that her whānau goes beyond her and her brother. Diane is so passionate about her whakapapa that she is eager to help me understand by showing me an art-piece she created that represents some of her closest whānau members. It is interesting because she uses motifs that represent a particular whānau member. For example, her Pākehā grandmother is represented by an 'anchor' because she comes from Wales. A fish-hook (mataua) and a treble clef represent her musically talented Māori father. She points to the many photos on her walls—her tūpuna (ancestors), aunties, uncles, cousins—the living and the dead. Diane showed me her whakapapa book that she is organising after attending a whānau reunion. It is clear that her whakapapa is her extended whānau.

6.2. Whakapapa: Importance of Maintaining Names

Reproduction not only meant replenishing the whānau but also keeping the "family name going" (Kaioara, age 45). In her study of Māori names, Joelie Seed-Pihama (2017) states: "Ingoa tangata (personal names) are an expression of te reo Māori (Māori language), Māori identity, and tino rangatiratanga (self-determination)" (Seed-Pihama 2017, p. i). Other wāhine also talked about the importance of retaining whānau names through the generations. It also meant remembering prominent names of ancestors in their whakapapa lines. Sometimes children were named after significant events pertaining to their iwi or hapū.

Karlene (age 38) clarifies that Māori were identified by their iwi. Some were named after significant events or people, for the purpose of remembering one's whakapapa:

We never had second names [surnames] until colonialism. We had only first names because we identified our last names were our iwi, that was how we were identified by our whānau... That was my own understanding. I am a descendent of this, the name you can call me by is this, but then again with naming, you look at Joeliee's mahi [referring to Joeliee Seed-Pihama's PhD research] and she talks about how people get named after events that have happened, people that are important, all sorts of tikanga [protocols] around that, so you are only carrying a name to remind you of something else that is more important than self.

Mother of 12, Rāhera (age 41), said it was definitely about carrying on the whānau names, so much so that she has ensured a third of her offspring carry her own whānau name:

Well with my four little ones, they've got my last name [surname], where my boys all carry on my last name, the four oldest boys got their father's last name and then my four youngest have got my partner's last name. To me, carrying the name on is quite important, if they keep it still floating on in there. (In-person interview, October 2018)

It took concentration to record the names of Diane's six children. Diane was very patient and deliberate as she carefully spelt out their lengthy names. All but one are known by their nicknames. However, most of her children's proper names are a mixture of Māori, Cook Island Māori, Hawaiian, and Native American. One child has four middle names. Another has three. Most importantly however, their names have deep and personal meaning. I recognise two of the Māori names. They are the names of the captains of two prominent waka (Māori canoes) of the 'great migration' across the Pacific Ocean, of whom Diane is a descendant. One time, Diane's uncle rebuked her for using such prominent ancestral names. In her defense, she exclaimed that she did not understand the significance or tikanga (protocols) around name-giving:

Yep, so when I gave him those names, I did not understand the significance of name-giving. So that's something that I've learnt. My uncle just ripped a big one up my bum⁴ about a few months ago when I went down to see my dad's brother. [Her Uncle said] "You shouldn't have named him those names . . . da-da-da-da-da . . . [you] didn't ask! (In-person interview, May 2018)

She acknowledges her ignorance as being because she was raised by her Pākehā grandparents.

6.3. Influence of Whānau

The sharing of pregnancy and birthing experiences showed the support that most of the wāhine received from their whānau from the time of pregnancy, and also how the whānau played a role in influencing them.

Irene (age 75) felt the safety and security of her whānau when dealing with the shock of falling pregnant at age 17. Irene had a promising future ahead of her, having excelled throughout school, and had aspirations to attend a top New Zealand University to undertake a career in dentistry, a field where there is very little Māori representation. She shared how it was very overwhelming for a young wāhine because not only did it change her life and crush her career aspirations, but it also came with the prospect of being judged and shamed at the time. After asking her to explain more, she says that there was a social stigma of having a child out-of-wedlock during the 1960s. However, her situation was amplified more so because she was an active member of a religious institution that promoted sex and procreation only within marriage:

Being 17 and that happened to me after being accepted into university. The prestige of being accepted to where I wanted to go was amazing and then suddenly finding that all changed and I've got this baby growing inside me. I think, I'm 17, my life can't be over, this is where I was. You don't want to talk about it because back in those days, it would have been 62/63 [1962/1963], the stigma was quite relevant. The stigma stuck, people looked down on you and it wasn't an accepted

thing to be in that situation. I didn't even want to talk about it with my family at first, but because I always felt safe in my family, I did. (In-person interview, September 2021)

Despite the challenges, Irene emphasised that her whānau were her biggest support.

Karlene's fertility decisions, however, were to some extent complicated by the influence of her whānau. Knowing the implications of the genetic disorder in her whakapapa, Karlene revealed that her mother did not want her to abort her first pregnancy because it would be her mother's first mokopuna and fulfill her mother's desire to be a grandmother. Karlene did not abort but said that it was "not ok!" for her mother to intervene in her decision-making process. However, when the wider whānau found out that Karlene terminated her third pregnancy, the whānau did not take it very well. It was not something that they wanted to talk about. In hindsight, Karlene reveals an important point that may resonate with many whānau Māori:

That wasn't a thing that we did. It is not natural, it is not a Māori style of thing that we talk about doing. In my whānau, we don't talk about abortion as a thing that people do. We always talk about 'da da' [so and so] is pregnant and having a baby, 'da da' [so and so] is pregnant and having a baby . . . Yeah, we all have our babies. We just have babies. We just keep popping out babies.

Hana is enjoying the experience of being a new mum to her 10-month-old girl. It is very clear throughout the interview that Hana and her partner have the support of their parents, and the whānau, to raise the baby. It was clear from the time of announcing her pregnancy, right up to birth, that the whānau were supportive and happy. For example, when it was time to birth, "it was a really whānau atmosphere" and "everybody had their own job to play"; the uncles would do the "Uber runs", Hana's siblings would sing waiata (songs), and everyone would karakia (pray) together. The positive whānau atmosphere was created to help Hana stay calm and to make it a nice atmosphere for when baby arrived. Hana's mum, Kaiora, is enjoying her first mokopuna. Interestingly, during the interview, Kaiora makes a quip to Hana (with Hana's partner in the background) to give her more mokopuna.

Waimihi (aged 61), birthed 6 children and had her first when she was 17. Waimihi explains that she was lucky because "in those days you had your parents" for support and "things were a lot cheaper". Waimihi also shared how her parents responded joyfully to the news of a mokopuna, their first:

Mum and them were rapt. Dad was rapt because that was his first. When she was born, that was their little sunshine. (In-person interview, October 2018)

Waimihi's daughter, Rāhera, is not one of the 'average'. She has birthed 12 children over her lifetime, whose ages range from 3 to 22 years old. Rāhera had her first when she was 20 years old. Rāhera does not socialise much with her friends, as she prefers to be around her immediate whānau, who have been her greatest support. Some people are shocked when they find out how many kids she has had, and even go so far to ask "when are you going to stop?" She does not worry much about what other people think, including her uncle, whose religious values influenced how he 'counselled' her about having children:

My mum's brother, her older brother. He wanted me to stop having children and get married, because he was [a member of the Church]... I think once he became [a member of the Church] and he did the thing, he wanted everyone to change their ways.

On the other hand, Tāniko's whānau and friends just expected her to get pregnant:

I was very promiscuous . . . so there wasn't pressure . . . everyone just expected me to be the first . . . get pregnant at 14/15 [age], have heaps of kids and end up on the, you know, kinda I dunno, doing the status quo back [in my hometown], which was being on the DPB [domestic purposes benefit]⁵ and having kids. But

that just wasn't my lot. My mates and whānau, did really think I'd be one of those, but I wasn't.

When Tāniko got married in her early 20s, she thought she would get pregnant: I was 25 years, and then I just always thought I would get pregnant; I just always thought I would. And if it was an accident to get pregnant, then that was fine. But I've never been pregnant; never had a miscarriage; I've never; I just haven't been able to get pregnant.

Curiously, I asked Tāniko how her whānau responded when she reached her 30s and still had not had any children. Tāniko said that her whānau were very sympathetic and encouraged her in a loving way:

Yes. From my siblings/sisters. In a loving way. They wanted to know, "Hey wow, come on, you know, you should be getting pregnant". It wasn't a bad pressure. They actually wanted me to experience that for myself. And you know, my siblings know me well. And they tell me, you'll be an awesome mum when you're a mum.

She reflects on not being able to birth her "own blood":

So that, does play on my mind as I get older. Being young and not having children from birth, and then to teenager, and then to young adult . . . and now I'm in my 40s, and I, it just feels; I kind of have an acceptance about it now, which I didn't have when I was 5 years ago; I wanted to pregnant and have a child; my thoughts are now: if it happens it happens. If it doesn't, I'm ok. I'm not at that point. But I am getting to that point. Moving towards that.

Her siblings have been there to help Tāniko raise her two daughters that she has come to love as her own. Her husband has also helped her to grow into motherhood:

And they [her siblings] support now, with raising our two girls. They're very supporting. Helping to raise our girls. And guidance. And I would go with them if I needed support or tried to work something out . . . He's [her husband] a very patient man who . . . gives me the space, physical/mental space to work through something . . . So he helps me read in between lines.

Diane's in-laws were not so keen on her having any more children after her third, as she had one-year intervals in between each birth. She recalls her in-laws' words, rather abruptly: "Keep your legs closed. You don't need anymore!" I enquired further as to why they would say that. She explains that she was living in poor circumstances at the time amongst her husband's people in a Pacific Island nation. Her husband was earning \$6000 a year and there were many times when they struggled even "to pay a \$12 power bill". She also describes how they had boxes for the kids' beds, and had to save for three weeks just to buy a box of crayons so that she could make ABC books for her kids because they could not afford a \$10 library card. Diane says: "That is why they said don't have any more kids 'cos you can't afford it". It was an "interesting life" but the situation compelled her to be creative, such as learning how to make mattresses from kapok trees and collecting coconut to make coconut cream.

7. Discussion

A major impetus for this research is to address a major gap in the Māori fertility literature where there has been very little focus on Māori cultural understandings of their own fertility trends. The broader research asks: What are the important influences that have sustained contemporary (post-Māori transition) Māori fertility patterns? I especially draw on the voices of wāhine Māori to help answer this question. I noted that Māori are a diverse population, and that the views expressed in the kōrero are not representative of all Māori nor are evenly shared. Coercive state policies of assimilation resulting in the alienation of land, and the suppression of language and culture has had intergenerational impacts on identity and knowledge of whakapapa. The continuing legacy of colonisation

has been traumatising for some individuals and their whānau (families) such that there is a reluctance to fully engage or reconnect with their cultural identity, including learning te reo Māori (Māori language) (Reid et al. 2017; Te Huia 2015).

7.1. Whakapapa and Fertility

Despite having one of the most dramatic fertility declines in the world, the significance of whakapapa endures and manifests in nuanced ways that are evident in the distinctive patterns of Māori fertility. Whakapapa came through quite clearly across the majority of the kōrero in a number of ways. Some wāhine were more explicit than others. For example, Karlene (age 38) used the term whakapapa at least 20 times during our kōrero but she framed it in a way that signified how important fertility is to preserve and to continue her bloodline. However, the challenge for her and her whānau, which in this context could take on both meanings of birth and family, is dealing with a genetic disorder that affects the males in their whakapapa line. Knowing this information has, to a major extent, influenced Karlene's fertility decisions, including abortion, but knowing about the disorder has also motivated her to look for solutions that would "secure our whakapapa in ways that really count" (Karlene, age 38). Other wāhine used terms or phrasing that essentially reflected the concept of whakapapa. For example, Kaiora (age 45) mentioned how she was raised in a family that "encouraged to have lots of children" and that the reasoning behind this was to replenish their family name, and iwi, and hapū. She has taught this same principle to her own children so that it is normalised as a natural life process, that even her own daughter Hana (age 20) felt supported by her whānau during her first birthing experience. As another example, Tāniko used the term blood to signify whakapapa: "to have my own blood... to be blood of my blood". Even though she has not been able to birth her own biological children, right throughout her kōrero, she still discusses the concept of whakapapa as an important reason behind reproduction. In addition, the retention of important whānau or tūpuna (ancestor) names, and/or their tribal histories was also implicated in replenishing or the survivorship of the whānau (family), hapū (sub-tribe), and iwi (tribe or 'bone').

For the purpose of illustrating the essence and powerful potential of whakapapa in its broadest sense, I make an additional but important note here with regards to the methodology in collecting these narratives. Whakapapa was embedded in their kōrero, and was essentially the mechanism through which the wāhine expressed themselves, in the sense that whakawhiti kōrero enabled the wāhine to 'whakapapa' in terms of reciting and/or layering their own narratives based on their lived experiences. An important part of that process is to whakawhanaunga, which, in this context, means to build relationships, and in this case, to build those relationships between myself, as the researcher, and the wāhine. Depending on the nature of the relationship between myself and the wāhine, the wāhine typically began their kōrero with their own whakapapa, that is, their background, and in each case, it started with whānau, that is, their family or birth stories. For example, one wāhine⁶ began layering her story with her birthdate, birthplace, and birth order, followed by a broader story of her siblings and birth mother before proceeding with her own life progression. Similarly, other wāhine built their story by beginning with their childhood, and their position and relationships within their whānau before talking about their own family formation. The topic of fertility itself instantly took one wāhine back to reliving the distressing moments of falling pregnant in her teens, and then dealing with the stigmatisation of birthing out-of-wedlock back in the day. However, for most of the wāhine, going through the process was a means to heal from some of their challenges of bearing and raising children because talking about their lived experiences meant they could reflect and identify the positive aspects of their life course.

These wāhine narratives in this research also enhance and add to the many other voices, including the kuia mentioned earlier in this paper, that have emphasised the importance of whakapapa in fertility decisions. A study of Māori attitudes to assisted reproductive technologies also highlighted "whakapapa as an essential human and cultural resource, placed at the centre of consideration regarding relatedness and the appropriate

use of [assisted human reproduction]" (Glover and Rousseau 2007, p. 117). Although the broader 2005–2006 study (see Glover et al. 2008) focused on Māori attitudes towards reproductive technologies to deal with infertility, their interview participants expressed similar sentiments as the wāhine in this research:

Women, too, tied fertility and sexual identity together through the perpetuation of whakapapa: 'we are here to propagate the next generation, your whakapapa'; 'women are produced to have children . . . to keep the whakapapa going'; 'we're put on this earth for a reason and it's to carry on whakapapa, and a lot of us take it very, very seriously'. (Glover and Rousseau 2007, p. 122)

In summarising these statements, the authors note: "Here we see whakapapa being closely tied to reproductive ability, appearing in fact as the thing that was to be reproduced—made obvious in the one statement, 'your child is your whakapapa'" (Glover and Rousseau 2007, p. 122). Similarly, a collection of Māori experiences of fertility and infertility in He Kākano (Hiroti 2011) highlighted the contribution of whakapapa to nurturing Māori society: "For many, the yearning to contribute to the whakapapa of whānau, of hapū and of iwi is paramount. Nothing is more important than nurturing, to have the opportunity to share aroha, knowledge and whakapapa with uri [descendants]" (Hiroti 2011, p. iii).

Mātauranga wāhine, and hence mātauranga Māori, literature helps us to understand further why whakapapa is central to human reproduction. As mentioned earlier in this piece, Ani Mikaere (2017) speaks extensively about the position of wāhine in the pre-colonial te ao Māori, and how this has been severed since the colonisation of Aotearoa New Zealand. She particularly expands on the role of wāhine as whare tangata, and how they are critical to the survival of whānau, hapū, and iwi. Hope Tupara (2011) notes the intertwining of birth and whakapapa, and emphasises how central these concepts are in te ao Māori:

Whakapapa (genealogy) forms the foundation of Māori philosophy. Birth is the instrument by which whakapapa is created. All things are related through whakapapa—the gods, natural phenomena, humans and all other living things. Whakapapa provides a way of understanding the universe and its past, present and future. (Tupara 2011, p. 1)

In reviewing the literature on Māori teenage pregnancy, Leonie Pihama (2011) similarly echoes the centrality of fertility to the sustaining of life:

The place of pregnancy and birth is clearly central within a whakapapa based society. The nurturing of future generations is fundamental to the collectives survival and sustenance of such societies. (Pihama 2011, p. 1)

7.2. Whānau and Fertility

Central and woven through many of the wāhine narratives was the abiding presence and influence of their wider whānau (family). This indicates that fertility, in its broadest sense, is not an individual (or a couple's) matter, nor is it an isolated event or process. The wider whānau have a collective responsibility and vested interest in the raising of children. Leonie Pihama et al. (2019c) notes: "Traditional practices of childrearing centred on concepts such as 'Matua Rautia', which calls for collective responsibility in the nurturing of children and places emphasis on the collective in ensuring wellbeing for children. Matua (parent) and rau (hundreds) reflects the philosophy that raising a child is not an individual endeavour, but rather a job for the whole community" (Pihama et al. 2019c, p. 5). What also matters in fertility decisions are those who have gone before (ancestors/tūpuna) and those who are to come (posterity/uri). All whānau members have an interest, to some extent, in the wellbeing and survival of their whānau. These ideas were reflected in all of the narratives presented. In a few cases, some whānau discouraged wāhine to birth more, such as in Diane's (age 53) case. Not reported in this paper was Diane's views about today's younger generation. When reflecting on her own struggles in birthing and raising six children, she voices that young people today should "wait". Diane was not alone in

her opinion. Waimihi (age 61) and Rāhera (age 41) also hoped that their tamariki (children) and/or mokopuna (grandchildren) would get an education and job first before settling down to have a whānau. In most cases however, whānau members generally expected or supported child-bearing.

7.3. Theorising Māori Fertility

Another important reason for this research is to centre the lived experiences and perspectives of wāhine Māori. This is important in terms of the broader objectives of Mana Wahine. Not only is it to privilege and make visible wāhine Māori voices, but to also respond to Eurocentric interpretations of their own fertility. Presenting these narratives in this paper helps to fulfill these objectives, albeit, because of space limitations their stories in their entirety could not be sufficiently represented. However, overall, their voices echo and re-emphasise the broader reasons for fertility and reproduction: whakapapa and whānau. The voices of the wāhine Māori in this research project, along with other wāhine Māori-based studies (Glover and Rousseau 2007; Hiroti 2011; Mikaere 2017; Pihama 2011), provide a cultural resource as to how we should view Māori fertility in the field of demography, bearing in mind, however, that these views are not evenly shared or representative of all Māori.

This discussion encourages a much wider concept of fertility than one finds in the mainstream literature. Demographic theories focus on family formation processes that lead to a fertility outcome, that is, a live birth. As mentioned earlier, fertility is defined very narrowly in the field of demography, and are primarily interested in measuring a live birth. The stories of the wāhine, supported by mātauranga Māori literature, suggests fertility means something much bigger in te ao Māori, and involves the wider whānau. In the case of Tāniko (age 43) for example, her desire to birth her own biological children is still a very real desire. In the meantime, she is still mothering her husband's daughters as her own. T. Smith (2012) uses the term "aitanga" to mean offspring or progeny. In breaking the word down, ai meaning "to produce or procreate" implies the potential to reproduce (T. Smith 2012, p. 3). Whānau input also plays an important role, and even before the event of a conception. As stated earlier, fertility is not an isolated or individual decision. Fertility is strongly interconnected with whānau, hapū, and iwi. Thus, it is clear that whānau (immediate and extended) play an important role in the pre-natal and post-natal care of children.

When viewed within the Davis–Blake framework, whakapapa is an important 'explanatory factor', however, there is still more research to be done in terms of understanding how it influences one of the proximate determinants, and therefore, the different phases of fertility, i.e., intercourse, conception, or gestation. 'Fertility' is also fundamental to the survival of the Māori population. The demographic history of Māori tells us why reproduction has been important for their survival. Ian Pool's (1991) work in Te Iwi Māori refers to the "Decades of Despair, 1840–1901" where survival of the Māori population "hung in balance" (Pool 1991, p. 61) primarily because of high mortality. However, slowly but surely, from the 1920s, and especially after World War II, the population recovered brought about by high fertility, and decreasing mortality rates. As of 30 June 2021, the Māori population in Aotearoa NZ is estimated at 875,300, comprising 17 percent of the national population (Stats New Zealand 2021). Māori are considered to be a "closed" population (Pool 1991), although a significant proportion with Māori ancestry live in Australia. Fundamentally, however, the growth or survival of the Māori population depends on births. Perhaps, the demographic history of Māori, and the current composition of Aotearoa New Zealand's population provides a broader context as to why some may 'encourage' their whānau to reproduce? It is a much more complex matter that does need further explanation, of which whakapapa and whānau are indeed significant pieces of the puzzle. What we do know, however, is that we need to rethink how we go about understanding and interpreting Māori fertility. Demography does provide or point towards some of the answers in terms of understanding the broader population trends, and in some sense, the wāhine narratives

enhance some of the literature, but most importantly, adds an important dimension to understanding Māori and, more broadly, Indigenous fertility patterns.

8. Conclusions

The kuia, mentioned at the start of this paper, disrupted the mainstream discourse surrounding teenage pregnancy and solo parenting by standing her ground. I learnt that day that it was whakapapa that motivated her to influence and encourage her mokopuna to bear children, and as early as possible, because essentially it was about continuing her's and, therefore, her ancestors' bloodline. Although she stood alone on that particular day, this research, along with others, show that the kuia is not alone in her thinking. This concept of whakapapa matters because studies of Māori fertility and current theories or ideas in the field of demography do not reflect Māori perspectives about their own fertility. To address this issue, Mana Wahine empowers wāhine Māori by drawing on mātauranga wāhine and, by the same token, mātauranga Māori, to take a stand and push back against others' interpretations of their lives. Like the kuia, their lived experiences expressed through whakawhiti kōrero re-emphasised the importance of whakapapa in fertility-based decisions, and therefore, fertility outcomes. Thus, the mana, that is, power, status, and authority of whakapapa should not be underestimated or disregarded. However, fertility is a multi-faceted and complex space for wāhine Māori to navigate because they are often taken in the context of their wider whānau and socio-economic aspirations.

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Notes

- ¹ Literal translation of this Māori term is 'house of humanity', which specifically refers to the woman's womb or uterus where human life is formed and developed.
- ² In this context, the speaker is meaning 'staunch', 'steadfast', 'hard-line' or obsessive interest with the idea of birthing.
- ³ Whenua means both land and placenta. In this context, the speaker is talking about the return or the connection of people, as symbolised by the 'placenta', to the land.
- ⁴ Meaning that her uncle rebuked or reprimanded her with sternness.
- ⁵ The Domestic Purposes Benefit (DPB) was a social welfare payment to: 1. Primarily support single parents with dependent children, or 2. to support primary caregivers of the sick and infirm. In this case, Tāniko is referring to the single parent welfare support. Welfare reform changes came into effect on 15 July 2013, and the DPB was replaced with the 'Sole Parent Support' and 'Supported Living Payment' (see [Ministry of Social Development n.d.](#)).
- ⁶ Note: wāhine, with a macron, is plural for women; wahine, no macron, is singular for woman.

References

- Axelsson, Per, and Peter Sköld. 2011. *Indigenous Peoples and Demography: The Complex Relation Between Identity and Statistics*. New York: Berghahn Books.
- Barlow, Cleve. 1991. *Tikanga Whakaaro: Key Concepts in Māori Culture*. Melbourne: Oxford University Press.
- Berryman, Mere. 2013. Kaupapa Māori: The Research Experiences of Research-Whānau-of-Interest. In *Culturally Responsive Methodologies*. Edited by Mere Berryman, Suzanne SooHoo and Ann Nevin. Bingley: Emerald Group Publishing Ltd., pp. 263–85.
- Bishop, Russell, James Ladwig, and Mere Berryman. 2014. The Centrality of Relationships for Pedagogy: The Whanaungatanga Thesis. *American Educational Research Journal* 51: 184–214. [CrossRef]
- Bongaarts, John. 1978. A Framework for Analyzing the Proximate Determinants of Fertility. *Population and Development Review* 4: 105–32. [CrossRef]
- Bongaarts, John. 1982. The Fertility-Inhibiting Effects of the Intermediate Fertility Variables. *Studies in Family Planning* 13: 179–89. [CrossRef] [PubMed]
- Davis, Kingsley, and Judith Blake. 1956. Social Structure and Fertility: An Analytic Framework. *Economic Development and Cultural Change* 4: 211–35. [CrossRef]
- Didham, Robert, and Bill Boddington. 2011. Fertility, Ethnic Diversification and the WEIRD Paradigm: Recent Trends in Māori Fertility in New Zealand. *New Zealand Population Review* 37: 89–104. Available online: <https://population.org.nz/wp-content/uploads/2017/04/Vol-37-for-web-2011.pdf> (accessed on 13 December 2021).
- Glover, Marewa, and Benedicta Rousseau. 2007. Your Child is your Whakapapa: Māori Considerations of Assisted Human Reproduction and Relatedness. *Sites* 4: 117–36. [CrossRef]
- Glover, Marewa, Alvie McCree, and Lorna Dyal. 2008. *Māori Attitudes to Assisted Human Reproduction: An Exploratory Study*. Auckland: University of Auckland.
- Greenhalgh, Susan. 1996. The Social Construction of Population Science: An Intellectual, Institutional and Political History of Twentieth-Century Demography. *Comparative Studies in Society and History* 38: 26–66. [CrossRef]
- Higgins, Rawinia, and Paul Meredith. 2011. Te Mana o te Wāhine—Māori Women. Te Ara: The Encyclopedia of New Zealand. Available online: <http://www.TeAra.govt.nz/en/te-mana-o-te-wahine-maori-women/page-1> (accessed on 10 December 2021).
- Hiroti, Leanne. 2011. *He Kākano: A Collection of Māori Experiences of Fertility and Infertility*. Wanganui: Te Atawhai o te Ao Independent Māori Institute for Environment and Health.
- Irwin, Kathie. 1992. Towards Theories of Māori Feminisms. In *Feminist Voices: Women's Studies Texts for Aotearoa/New Zealand*. Edited by Rosemary Du Plessis, Phillida Bunkle, Sue Middleton, Margaret Wilson, Deborah Jones and Shaista Shameem. Auckland: Oxford University Press.
- Jackson, Natalie, Ian Pool, and Man Chit Cheung. 1994. *Māori and Non-Māori Fertility: Convergence, Divergence, or Parallel Trends?* Discussion Papers No. 3. Hamilton: University of Waikato, December.
- Jahnke, Huia T. 1997. Towards a Theory of Mana Wahine. *He Pūkenga Kōrero: A Journal of Māori Studies* 3: 27–36.
- Johnstone, Kim. 2011. Indigenous Fertility Transition in Developed Countries. *New Zealand Population Review* 37: 105–23. Available online: <https://population.org.nz/wp-content/uploads/2017/04/Vol-37-for-web-2011.pdf> (accessed on 13 December 2021).
- Johnstone, Kim, Sandra Baxendine, Arunachalam Dharmalingam, Sarah Hillcoat-Nalletamby, Ian Pool, and Natalie Paki Paki. 2001. *Fertility & Family Surveys in Countries of the ECE Region: Standard Country Report—New Zealand*. Economic Studies No. 10s. New York: United Nations.
- Keane, Basil. 2011. Whāngai: Customary Fostering and Adoption. Te Ara: The Encyclopedia of New Zealand. Available online: <https://teara.govt.nz/en/whangai-customary-fostering-and-adoption/page-1> (accessed on 17 December 2021).
- Kertzer, David, and Thomas Fricke. 1997. Toward an Anthropological Demography. In *Anthropological Demography: Toward a New Synthesis*. Edited by David Kertzer and Thomas Fricke. Chicago: University of Chicago Press.
- Mahuika, Nepia. 2019. A Brief History of Whakapapa: Māori Approaches to Genealogy. *Genealogy* 3: 32. [CrossRef]
- Mika, Carl T. H. 2014. The Enowning of Thought and Whakapapa: Heidegger's Fourfold. *Review of Contemporary Philosophy* 13: 48–60.
- Mikaere, Ani. 2017. *The Balance Destroyed*. Ōtaki: Te Wananga o Raukawa.
- Ministry of Social Development. n.d. Impact of 2013 Welfare Reform on Benefit Trends. Available online: <https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/statistics/benefit/index.html#Impactof2013WelfareReformonbenefittrends5> (accessed on 10 December 2021).
- Whakapapa. n.d. Te Aka Online Māori Dictionary. Available online: <https://maoridictionary.co.nz/> (accessed on 21 December 2021).
- Pere, Rose. 1982. *Ako: Concepts and Learning in the Māori Tradition*. Hamilton: University of Waikato.
- Petit, Veronique. 2013. *Counting Populations, Understanding Societies*. Dordrecht: Springer.
- Pihama, Leonie, Linda Tuhiwai Smith, Naomi Simmonds, Joelie Seed-Pihama, and Kirsten Gabel. 2019a. *Mana Wahine Reader: A Collection of Writings 1987–1998 Volume I*; Hamilton: Te Kotahi Research Institute. Available online: https://ndhadeliver.natlib.govt.nz/delivery/DeliveryManagerServlet?dps_pid=IE50988625 (accessed on 10 January 2022).
- Pihama, Leonie, Linda Tuhiwai Smith, Naomi Simmonds, Joelie Seed-Pihama, and Kirsten Gabel. 2019b. *Mana Wahine Reader: A Collection of Writings 1999–2019. Volume II*; Hamilton: Te Kotahi Research Institute. Available online: https://ndhadeliver.natlib.govt.nz/delivery/DeliveryManagerServlet?dps_pid=IE50988632 (accessed on 5 January 2022).
- Pihama, Leonie, Naomi Simmonds, and Waikaremoana Waitoki. 2019c. *Te Taonga o Taku Ngaākau: Ancestral Knowledge and the Wellbeing of Tamariki Māori*. Hamilton: Te Kotahi Research Institute.

- Pihama, Leonie. 2001. *Tiāhei Mauri Ora Honouring our Voices: Mana Wahine as a Kaupapa Māori Theoretical Framework*. Ph.D. thesis, University of Auckland, Auckland, New Zealand. Available online: <http://hdl.handle.net/2292/1119> (accessed on 15 December 2021).
- Pihama, Leonie. 2010. Kaupapa Māori theory: Transforming theory in Aotearoa. *He Pūkenga Kōrero: A Journal of Māori Studies* 9: 5–14.
- Pihama, Leonie. 2011. *Overview of Māori Teen Pregnancy*; Wellington: The Families Commission. Available online: <https://www.thehub.swa.govt.nz/resources/overview-of-maori-teen-pregnancy/> (accessed on 5 January 2022).
- Pihama, Leonie. 2020. Mana Wahine: Decolonising Gender in Aotearoa. *Australian Feminist Studies* 35: 351–65. [CrossRef]
- Pool, Ian, Arunachalam Dharmalingam, and Janet Sceats. 2007. *The New Zealand Family from 1840: A Demographic History*. Auckland: Auckland University Press.
- Pool, Ian. 1991. *Te Iwi Māori: A New Zealand Population, Past, Present and Projected*. Auckland: Auckland University Press.
- Rarere, Moana. 2018. Understanding ‘Higher’ Māori Fertility in a ‘Low’ Fertility Context: Does Cultural Identity Make a Difference? *New Zealand Population Review* 44: 21–47.
- Reid, John, Matthew Rout, Te Maire Tau, and Cheryl Smith. 2017. *The Colonising Environment: An Aetiology of the Trauma of Settler Colonisation and Land Alienation of Ngāi Tahu Whānau*. Christchurch: University of Canterbury.
- Royal, Te Ahukaramū. 2005. Tāne, Hineahuone and Hine. Te Ara: The Encyclopedia of New Zealand. Available online: <https://teara.govt.nz/en/first-peoples-in-maori-tradition/page-2> (accessed on 10 December 2021).
- Royal, Te Ahukaramū. 2007. Papatūānuku—Earth Mother. Te Ara: The Encyclopedia of New Zealand. Available online: <http://www.teAra.govt.nz/en/papatuanuku-the-land/page-2> (accessed on 10 December 2021).
- Seed-Pihama, Joeliee. 2017. Ko Wai toā Ingoa?: The Transformative Potential of Māori Names. Ph.D. thesis, University of Waikato, Hamilton, New Zealand. Available online: <https://hdl.handle.net/10289/11310> (accessed on 5 January 2022).
- Simmonds, Naomi. 2011. Mana Wahine: Decolonising Politics. *Women’s Studies Journal* 25: 11–25.
- Simmonds, Naomi. 2014. Tū te Turuturu nō Hine-te-iwaiwa: Mana Wahine Geographies of Birth in Aotearoa New Zealand. Ph.D. thesis, University of Waikato, Hamilton, New Zealand. Available online: <https://hdl.handle.net/10289/8821> (accessed on 15 December 2021).
- Smith, Graham Hingangaroa. 1997. *The Development of Kaupapa Māori: Theory and Praxis*. Ph.D. thesis, University of Auckland, Auckland, New Zealand.
- Smith, Linda Tuhiwai. 1992. Māori Women: Discourses, Projects and Mana Wahine. In *Women and Education in Aotearoa*. Edited by Sue Middleton and Alison Jones. Wellington: Bridget Williams Books, pp. 33–51.
- Smith, Linda Tuhiwai. 1996. Kaupapa Māori Research: Some Kaupapa Māori Principles. In *Kaupapa Rangahau: A Reader. A Collection of Readings from the Kaupapa Rangahau Workshop Series*, 2nd ed. Edited by Leonie Pihama, Sarah-Jane Tiakiwai and Kim Southey. Hamilton: Te Kotahi Research Institute, pp. 47–53. Available online: <https://hdl.handle.net/10289/11738> (accessed on 5 January 2022).
- Smith, Linda Tuhiwai. 2021. *Decolonizing Methodologies: Research and Indigenous Peoples*, 3rd ed. London: Zed Books.
- Smith, Takairirangi. 2012. Aitanga: Māori Precolonial Conceptual Frameworks and Fertility—A literature review. In *The Gift of Children: Māori and Infertility*. Edited by Paul Reynolds and Cheryl Smith. Wellington: Huia Publishers, pp. 3–37.
- Statistics New Zealand. 2004. Fertility of New Zealand Women by Ethnicity: Based on New Zealand 1996 Census of Population and Dwellings. Available online: http://www.stats.govt.nz/browse_for_stats/people_and_communities/Women/fertility-women-by-ethnicity.aspx (accessed on 15 December 2021).
- Stats New Zealand. 2017. Age-specific Fertility Rates by 5 Year Age Group—Māori and Total Population Annual–June. Available online: <http://archive.stats.govt.nz/infoshare/> (accessed on 13 December 2021).
- Stats New Zealand. 2021. Māori Population Estimates: At 30 June 2021. Available online: <https://www.stats.govt.nz/information-releases/maori-population-estimates-at-30-june-2021> (accessed on 13 December 2021).
- Szreter, Simon, Hania Sholkamy, and Arunachalam Dharmalingam, eds. 2004. *Categories and Contexts: Anthropological and Historical Studies in Critical Demography*. Oxford: Oxford University Press.
- Taonui, Rawiri. 2011. Whakapapa: Genealogy. Te Ara: The Encyclopedia of New Zealand. Available online: <https://teara.govt.nz/en/whakapapa-genealogy/page-1> (accessed on 10 December 2021).
- Taylor, John. 2009. Indigenous Demography and Public Policy in Australia: Population or Peoples? *Journal of Population Research* 26: 115–30. [CrossRef]
- Te Awēkotuku, Ngahuia. 1991. *Mana Wahine Māori: Selected Writings on Māori Women’s Art, Culture and Politics*. Auckland: New Women’s Press.
- Te Awēkotuku, Ngahuia. 1999. Māori Women and Research: Researching Ourselves. In *Māori and Psychology: Research and Practice—The Proceedings of a Symposium 1999*. Edited by Neville Robertson. Hamilton: The University of Waikato, pp. 59–66.
- Te Huia, Awanui. 2015. Kia aha te Māori kia Māori ai? Perspectives Towards Māori Identity by Māori Heritage Language Learners. *New Zealand Journal of Psychology* 44: 18–28.
- Te Rito, Joseph. 2007. Whakapapa: A Framework for Understanding Identity. *MAI Review* 2: 1–10.
- Tupara, Hope. 2011. Te Whānau Tamariki: Pregnancy and Birth. Te Ara: The Encyclopedia of New Zealand. Available online: <https://teara.govt.nz/en/te-whanau-tamariki-pregnancy-and-birth/page-1> (accessed on 13 December 2021).
- Weeks, John. 2016. *Population: An Introduction to Concepts and Issues*, 12th ed. Boston: Cengage Learning.

Williams, Herbert W. 2000. *Dictionary of the Māori Language*, 7th ed. Wellington: Legislation Direct.

Zodgekar, Arvind V. 1975. Māori Fertility in a Period of Transition. *Journal of Biosocial Science* 7: 345–52. [[CrossRef](#)] [[PubMed](#)]