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Understanding Optimal Perinatal Wellbeing: A Constructivist Grounded Theory Study With An Indigenous Community In Southern Ontario

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Abstract:	Women have historically played an important role in translating knowledge in Indigenous societies, particularly around pregnancy and birth. During precolonial times, this transfer of cultural knowledge had positive impacts on health through the strengthening of families and communities. Against this milieu, we explored elder Indigenous women's perceptions about optimal perinatal health. Using a methodological framework that integrated a constructivist grounded theory approach to data collection and analysis with Indigenous epistemologies, we conducted and analyzed in-depth interviews and focus groups with 18 Six Nations grandmothers. The women told stories about their personal experiences with pregnancy and child rearing, their struggles with prenatal and postnatal complications, and their triumphs during motherhood. They also told stories of what they felt were important factors for upholding optimal maternal and infant health and what specific perinatal health messages they wanted to share with future generations. Through the sharing of these stories, we worked with

	partners in the community to co-create a theory of optimal health for pregnancy and the post-partum period. This paper describes the primary perinatal health beliefs of elder Six Nations women and the communal responsibilities they believe will support the healthy development of subsequent generations.

Introduction

Within a Canadian context, Indigenous peoples encompass three culturally and linguistically heterogeneous groups: First Nations, Metis, and Inuit. According to the National Household Survey (2011), there are over 1.4 million Indigenous peoples in Canada, comprising 4.3% of the total Canadian population. This population is growing, as evidenced by a 20.1% increase between 2006 and 2011 (relative to an increase of 5.9% nationally) (Statistics Canada, 2011) and this change is especially evident among children and youth where a birth rate 1.5 times higher than the national average is noted among Indigenous populations (Statistics Canada, 2008). Indigenous peoples are distributed across over 600 different governments or bands within the urban/rural, on-reserve/off-reserve landscape of Canada, with the largest numbers living in Ontario, the western provinces (Manitoba, Saskatchewan, Alberta, and British Columbia), Nunavut, and the Northwest Territories (Statistics Canada, 2011). According to the Canadian government, reserves are regions of land that are held under the 'Indian Act' and treaty agreements for the exclusive use of a government-labelled Indian band (Government of Canada, Amended 2015).

Indigenous peoples in Canada experience significant health disparities in regards to chronic health conditions such as cardiovascular diseases, arthritis, diabetes, asthma, bronchitis, kidney disease, and cancer (e.g. Anand, et al., 2001; Shah et al., 2000; Yusuf et al., 2001; Sin et al., 2002). The prevalence of chronic conditions is higher in on-reserve communities than off-reserve communities, especially cardiovascular diseases and diabetes (Loppie Reading and Wein, 2009). In addition to health inequities, Indigenous peoples are also challenged by a history that is intertwined with residential schooling and the "sixties scoop" (the taking of Indigenous children and placing them in foster homes or adoption) (Wesley-Esquimaux and Smolewski,

2004). The impact of these practices has led to the loss of language, culture, and traditional ways of living (McIvor et al., 2009), resulting in intergenerational loss and grief (Cull, 2006).

The risk factors for these chronic conditions (e.g. excess gestational weight gain) has been strongly linked to continued obesity in both the mother and child later in life (e.g., Barker et al., 1989; Filiberto et al., 2011). Although there are significant gaps in the maternity experiences and perinatal health status of Indigenous women and children, existing literature shows that Indigenous women experience poorer maternal health status compared to their non-Indigenous counterparts and face disparities with regard to accessing culturally sensitive care. For example, Indigenous women have elevated risk for pregnancy-related complications (e.g. gestational diabetes) and negative newborn outcomes (e.g., low birth weight and high birth weight) (Health Canada, 2003). A recent chart review completed in collaboration with the Six Nations community also shows that pre-pregnancy BMI, excess gestational weight gain, and tobacco use during the gestation period are key areas of concern (Oliveira et al., 2013). These health disparities place Indigenous children at higher risks for chronic conditions, which signifies the importance for exploring avenues for improving these realities.

An important factor that influences maternal and child health status are cultural perceptions and health beliefs that guide behaviour. These factors can impact women's decisions about nutrition, physical activity, and infant feeding practices. Across cultures, a crucial feature of optimal perinatal behaviours is the central role played by experienced elder women. These women play a double role as advisors to subsequent generations and as caregivers and support personnel for children and families. These two facets of elder female roles lie in harmony, contributing to the intergenerational transmission of cultural norms and the assurance of optimal

development (Jernigan & Jernigan, 1992; Gryboski, 1996; Bender et al., 2000; Aubel et al., 2004; Piperata, 2008).

We designed a qualitative study to supplement the aims of a larger quantitative study, Aboriginal Birth Cohort (ABC) study. The ABC study aims to better understand the major antenatal maternal factors (e.g., pre-pregnancy weight, gestational weight gain, dietary intake, physical activity, and smoking exposure) associated with newborns' adiposity and cardio-metabolic factors (Wahi et al., 2013). We wanted to further explore the influences of maternal health behaviours by understanding the perinatal health perceptions of grandmothers and elder women who play important roles in the care of young children and the transmission of health knowledge.

Research Context

Our research team has maintained a collaborative relationship with Six Nations of the Grand River since 1999 (e.g. Anand et al., 2001; Oliviera et al., 2013). The Six Nations of the Grand River is the largest community of First Nations peoples in Canada. Composed of approximately 25 650 Haudenosaunee people, 12 271 reside within the borders of the 190 km^2 reserve. The Six Nations community is a matrilineal society where women are at the head of the clan and often play leading roles within the community, particularly around the transmission of culturally-rooted health knowledge. The reserve is also home to a diversity of local businesses, artistic services (e.g. cornhusk doll gallery, pottery), athletic programming (e.g. lacrosse), recreational facilities, and culturally-rooted health services that are run by community members.

The Six Nations community experiences socioeconomic hardships that include unemployment, low income, and low educational attainment; these factors are strongly

associated with obesity, tobacco use, type 2 diabetes, and cardiovascular disease (Anand et al., 2006). In addition, socioeconomic status (SES) is likely associated with maternal and paternal health behaviours such as the decision to breastfeed, prenatal dietary intake, and tobacco use during pregnancy, and physical activity patterns during the entire perinatal period. Low SES is also associated with maternal health during the postnatal period including mental health conditions (e.g. depression and anxiety), as well as domestic violence (Séguin et al., 1999; Bohn et al., 2004). Indigenous women in Canada are more likely to be low-income, have greater social inequities, and greater psychosocial stressors compared to non-Indigenous women. It is probable that lower SES interacts with other risk factors such as nutrition, physical activity, alcohol and tobacco use, all of which contribute to adverse birth and newborn outcomes (Kramer et al., 2000).

Study Design

The purpose of this study was to qualitatively explore the perinatal health beliefs of elder Six Nations women and work with the community to develop culturally-meaningful avenues for translation of the knowledge co-created by this research. To build upon our research team's collaborative relationship with the Six Nations community, the primary researcher (SK) spent substantial time engaging with the community and taking a vested interest in learning more about Six Nations culture and heritage (e.g. through participation in a community immersion program).

The first phase of this study consisted of relationship building, which included regular community meetings, group planning sessions, and the development of a Six Nations advisory group to provide culturally-specific guidance throughout the research process. This core group provided leadership with project planning, participant recruitment, data collection, analysis, and knowledge translation (including data dissemination). The advisory group also helped create an

integrated methodology that combined grounded theory with Indigenous epistemologies. We have more fully described the development and implementation of this integrated methodology elsewhere (Authors, 2016).

Elder Six Nations women who self-identified as grandmothers were eligible to participate in this study. Participants were not required to be biological grandmothers, as many older women from this community identified themselves as grandmothers if they fulfilled a caretaker role in their families and community. All participants provided oral and written consent to participate, and the study received research ethics approval from the Hamilton Integrated Ethics Board (REB ID: 12-152) and the Six Nations Research Ethics Committee.

The recruitment strategy was designed and executed with the support of the advisory group. The primary researcher attended a variety of local gatherings (e.g., community health fairs) to share information about the study and invite women to participate. Women were also invited by the advisory group.

Data were collected through audio recorded interviews that lasted on average 60 minutes. Oral interviews were transcribed verbatim by the first author. We used the iterative process of data collection and analysis common to grounded theory approaches (Charmaz, 2014). Recruitment proceeded until theoretical saturation, i.e., the point when the research team agreed that additional interviews would not lead to new information or insights.

Analysis consisted of a staged coding process completed by three individuals: two qualitative researchers and a community member. The three coders worked both independently and together to code and analyze all interviews. Data credibility was achieved through four clarifying and member-checking interviews with participants. Audio reflections, writing of post-

interview memos, and diagramming throughout the research process helped the primary researcher gain reflexive self-awareness of subjectivities, standpoint, and avenues for increasing the level of deep listening during the interviews and focus groups.

Findings

Three focus groups and seven individual interviews were conducted with 18 grandmothers. Four of these 18 grandmothers participated in supplementary member-checking interviews. See Table 1 for detailed information on the demographic characteristics of the interviewees.

The Community-Embedded Model of Perinatal Health

Many interviewees expressed that they did not receive as much perinatal health advice as they had wanted. Instead, they learned primarily through observation, listening to stories told by family (including their own grandmothers) and friends, and simply "being on their own". A common reflection of the reproductive years of this generation of grandmothers was that a woman would be on her own once she got pregnant and was just "supposed to know what to do." Many of them described their own mothers as "private" and "very close-mouthed," about the topic of pregnancy and prenatal health. This reality created an environment where they had to "learn for themselves," read books, and do the best they could with the information they had. Some may have wanted to ask more questions but did not feel like they had the freedom to inquire further.

"*When I was pregnant with him I wanted to know things but I didn't know, didn't have anybody to ask. My sister already had kids before but she never talked about it, she never talked about anything. And my mother was really close mouthed about a lot of*

things, she never really talked much about anything and so what I did was, I read a book by Elizabeth Bing, the Mom's method. I read that book from cover to cover when I was pregnant with my son and I still have that book."

Many grandmothers went on to explain that personal choice, personal ability, and specific context play important roles in directing maternal health behaviors. Learning to listen to your body (regarding rest, sleep, exercise postnatally) is rooted by personal choice and an element of trial and error. Rigid health recommendations are not optimal for everyone as "every *body* is unique". As a result, a balanced understanding between content and context is needed to make ideal health decisions. Grandmothers seldom interfere or self-impose advice on their children or grandchildren. Instead, teachings are worded very respectfully and often shared as a story or through behaviors and actions. In addition, many grandmothers felt they would only give advice when they felt it was the best time for the recommendation to be considered seriously, as "there is a right time to give advice." Many also encourage learning from experience, learning from mistakes, and independence, which was described as "one of the best gifts you can give your child." Grandmothers often use their own personal experiences to help counsel or teach. The process of learning from experience includes learning through observations (through watching family members, being around babies from a young age). Also, there is recognition that advice on optimal prenatal and postnatal health behaviors can change over the years, which means there many opportunities for learning health advice from the stories or behaviors of subsequent generations.

When asked about optimal health behaviours, the grandmothers expressed three primary beliefs for optimal perinatal health and six local community-level responsibilities that help set

the foundation for raising healthy generations. These communal factors are embedded within society—locally and broader.

Community Level factors: The grandmothers voiced six primary areas of concern for the development of a healthy future generation. These areas of concern are communal responsibilities that help set a strong foundation for raising healthy Six Nations families: 1) access to healthy/safe food; 2) strong social support networks for mothers; 3) access to resources for postnatal supports; 4) physical activity for children; 5) teachings around the impact of maternal behaviours during pregnancy, and 6) teachings around spirituality/positive thinking. In particular, many grandmothers discussed the importance of healthy food at length, touching upon concern over: 1) the use of contaminants, toxins, and pollutants that enter the food chain as a result of industrial processes; 2) the manipulation of food that once grew natively on the land; 3) the negative impacts of the immoral ways that animals are sacrificed for meals; 4) new childhood allergies as a result prenatal food choices; 5) lack of knowledge around familial medical histories which can impact food choices (especially during pregnancy); 6) food security and access to healthy local foods; 7) sugary carbonated beverages being fed to young children; and 8) the lack of reverence toward traditional teas. The need for healthy food options, along with the five other communal responsibilities, are essential to upholding optimal perinatal health. This is expressed through the grandmothers beliefs around pregnancy and the early postnatal period: 1) pregnancy is a natural phase; 2) pregnancy is a sacred period for the mother and the unborn child; and 3) the requirements of immunity, security (trust), comfort, social development, and, parental responsibility for optimal perinatal health.

Pregnancy is a natural phase of the life cycle: Many grandmothers perceived the state of pregnancy as a natural course of life that is neither an illness, a medical problem (typically does

not require medical intervention), nor a condition which should be treated as a "comfort zone" or where one should "baby themselves". When asked what advice she might give a pregnant woman, one grandmother said: *"Don't sit for too long, don't be lazy, move around. You are not sick."*

This understanding of pregnancy as a normal phase of life not requiring medical intervention was identified through the grandmother's exhortations to avoid behaviours typically associated with illness such as being sedentary for long periods of time, "lazing around," and eating more food than usual. Grandmothers were clear in their belief that the state of pregnancy should not be equated to a state of illness and should not result in an intermission from normal healthy habits (eating well, working hard, and getting enough physical activity). Excess rest was expressed by many to be unhealthy for the pregnant woman and for the growth pattern of her unborn child. Instead of "laying around" one should continue rising with the sun and keeping up with their pre-pregnancy chores and work life. This practice of staying active and maintaining normal routine was explained as maintaining optimal health in four different ways: 1) a pregnant woman must stay active so that her body is ready for the job of childbirth; 2) staying active during pregnancy helps to ensure that the baby does not "settle" in a position that makes delivery difficult; 3) avoiding sedentary behaviours helps to prevent too much weight gain, which can be difficult to get rid of postnatally; 4) staying active helps avoid the development of large babies. Grandmothers describe optimal prenatal health as a balance between rest and exhaustion; one should avoid resting in excess ("laying around") and moving around or participating in too much physical exertion ("exhaustion").

"And they can work and everything too, I think. You don't really need to baby yourself. Because to me, pregnancy is a normal process. Maybe they need to baby a little bit

toward the end of the pregnancy when you need an afternoon nap or pillows to support your belly."

"I don't think [the problem] *is too much sleep though. I think it's being lazy and not getting the exercise and moving around because if you are sitting or laying around doing nothing then your body is not going to be ready for the job of having a baby. It is a big job."*

Pregnancy is a sacred period for both the mother and the unborn baby: Pregnancy was oftentimes described as a symbol of a special spiritual state. It is a time where the pregnant woman and the unborn child are on the verge of two different spiritual worlds and their fates are not easily guaranteed. When describing the uncertain nature of pregnancy, the grandmothers explain that a mother should not be too prepared or too anxious for the baby's arrival.

"They say that when you are getting ready for the baby to come, not to be too ready. Don't get cribs and all kids of toys and all kinds of gadgets and stuff like that because you don't know how long they [the baby] *are going to be here. And sometimes when you get too many things, they aren't going to stay long. Have the necessities but don't prepare too much."*

Many grandmothers also expressed that the sacredness of pregnancy requires that the pregnant woman stay vigilant, monitor all symptoms that occur in excess, be aware of changes that may occur, listen to her body, and learn from her experiences. Learning from experience is how one learns how to trust oneself but also gains an understanding that the things that are out of one's control will be taken care of by a greater power. For example, when commenting on this

idea, one grandmother said: *"Nature will take care. If you have a craving for food—if you fulfill that craving, it is probably what your body needs. Listen to your body and do what feels right. And don't feel guilty if you make a mistake. Just learn by it."*

The sacredness of pregnancy also reveals how critical the maintenance of balance is to the pregnant woman's wellbeing. This encompasses spiritual, physical, social, and emotional wellbeing. The grandmothers expressed that if all of these factors are balanced, the woman would not be faced with sadness, feeling down, or feeling too excited for the baby's arrival. This concept extends to doing everything in moderation. For example, one grandmother expressed, *"Everything in moderation is the goal. Between extremes. If you go too much the other way too, that's not good for your baby, to develop a normal, healthy baby."*

> *"To me it's more of a spiritual thing. You need balance all around—physical, spiritual, and mental, it all has to be balanced. And I just took time to myself to pray and sort through things and I was fine.*

When discussing postnatal health, many of the grandmothers' advice encompassed a mixed view of traditional understandings and modern medical knowledge. They described optimal postnatal health as a time period that is marked by the building of adequate immunity, security (trust), comfort, social development, and parental responsibility:

Immunity involves making a mindful effort to keep the newborn away from large crowds/sick people and adhering to standard immunization protocols. This is a crucial element in the assurance of a healthy child. Grandmothers consistently expressed the need to give the newborn adequate time to develop their immunological defenses within the boundary of their home

environment before exposing them to new surroundings. For example, one grandmother provided the following explanation:

> *"We were supposed to stay home for the first three months, not visiting other homes or out in public. And mothers don't follow that anymore. If anybody wanted to see the baby, they would come here. There is a double duty of keeping the mother well and the baby not exposed to germs until she has built immunity. [Nowadays] right out of the hospital, they got to go shopping, and do this and do that. They should take more time—to give them a chance to be healthy."*

Security is primarily developed through wrapping, bundling, and "snuggling" the infant and supporting predictable routines. A child feeling comfortable and secure helps to form stronger mother-child bonds, helps with the optimal development of the child's mind (by helping them learn how to stay calm). When describing this, one grandmother said, "*Babies need to feel secure. That's what swaddling does for them. It helps them feel snuggled because they are not used to all this space. When they were inside mom they were all bundled up and if they are still like that outside, babies are more calm."*

Comfort consists of ensuring that the baby is comfortable in how you choose to dress them, treat them when they need to be reassured, and how you choose to support them during sustained periods of sitting (e.g. use of a traditional Indigenous baby-carrier [a cradleboard] instead of a baby seat). Feeling comfortable helps to develop trust, confidence, and the ability to calm oneself. For example, two different grandmothers commented with the following explanations:

> *"I dislike those baby seats. They would be a lot better if they were on a cradleboard. It's better for their bones and spine. It must be uncomfortable for* [the baby]. *They all*

protest, they all cry. That's definitely important. Making sure that baby is comfortable and not just buying things because they are available [and convenient]."

"It just bugs me when people take their babies out, I mean their eyes are new. They should keep them in a darker room for two weeks. But now you see women running around with little stiff clothes on and stiff hats on their little heads. And jeans. Hard jeans on their soft little body. That just bugs the heck out of me."

Social development consists of ensuring reciprocal communication (making eye contact and talking to the newborn) to help promote social growth and development. Social development through active communication helps to teach important skills that will help them learn how to form satisfying and trusting relationships. For example, one grandmother explained the importance of social development with the following description:

"Social development. [The baby] *knows who are and all. He sees you, hears your voice, that's one things that I told my grandchildren, talk to your baby. If you are going to change him, tell him that. He knows the tone of your voice, and if you keep talking to him, he's going to respond. Eventually. So that's the social development at a young age. Cause they are born with that wonderful thing called a brain and they start to think right away. You might not know it, but they do."*

Parental responsibility includes being accountable for the child that you have brought into this world. It includes being available for them and helping them become the "productive people they were meant to be". Although the grandmothers recognize that returning to work postnatally is a personal choice for each individual woman, they do encourage the behavior of staying home with the baby instead of having someone else watch them—especially during the first year,

which is a crucial time period for building a strong bond. It was consistently stated that a mother should take responsibility for her children. In addition, parental responsibility also encompasses ensuring that mothers are ready to raise children before conceiving, that they can commit time for them once they arrive, and that mothers continue to be "there for them" during challenging times such as parental separations. Below are two explanations provided by different grandmothers on the importance of parental responsibility: *"She should stay with the baby instead of having someone else watch them. If it was up to me to tell my daughter to stay home with her kids, I would tell her to stay home as long as she could with them."*

> *"There's quite a bit of abuse separation you know. A lot of men leave their wives and it could be the other way around too with leaving their husbands with the kids and taking off. You see a lot of that. We were always there for them. You have to be there for your children."* (Individual interview 6)

Through this research, we developed a theoretical framework (Figure 1) to showcase the relationships that exist between the grandmothers' perinatal health beliefs and their surrounding environments, including communal and societal factors. This framework shows the micro-meso-macro level influences on perinatal health beliefs. Societal factors embed community-level factors, with both influencing individual health perceptions and maternal health behaviours. This framework highlights the cyclical nature of influence: elder women's views on perinatal wellbeing are shared with and impact the maternal behaviours of younger women via oral stories and their own personal actions. Similarly, younger women's maternal behaviours are also shared with and impact the health beliefs of elder women via the behaviours they see and the stories they hear from subsequent generations.

Knowledge Translation

During the relationship building phase of this project, we held several meetings with a Six Nations artist/performer and a non-Indigenous film-maker. Between January and August 2015, we worked to design, distill, and craft the research findings into a contemporary, culturally-meaningful film. It is available for public view on various social media outlets including Facebook, Twitter, and YouTube (https://goo.gl/rCvOYb and https://goo.gl/J1aYiE). This integrated knowledge translation piece has received several thousand online views and has been praised by the Six Nations community and by Western scientific researchers. In January 2016, the film was awarded a 'Video Talks Prize' from the Canadian Institutes of Health Research (Institute of Human Development, Child and Youth Health) (CIHR, 2016). The development and creation of the film is further described elsewhere (Authors, 2016).

Discussion and Further Directions

Much of the perinatal health advice provided by the grandmothers in this study is a merged view between traditional knowledge and Western medicine. For example, many grandmothers addressed the importance between immunity and optimal postnatal health in a way that included keeping up with standard immunizations (Western biomedical advice) and also keeping babies at home for the first three months so that their immunity can develop properly (traditional, cultural knowledge). The amalgamation of a multiplicity of knowledge in the grandmothers' health perceptions and advice is also seen as they addressed other aspects of optimal postnatal health and concerns around the negative implications of excess gestational weight gain. As a result, the wealth of knowledge that is available through the stories and advice of many elder Six Nations women represents a fruitful opportunity to include grandmothers as key support persons in the care of pregnant women and families with young children. They are a

trusted group of knowledgeable women who are able to understand, appreciate, and incorporate multiple sources of knowledge and deliver it in culturally-meaningful ways. Thus, within an Indigenous context, tailoring public health programming and interventions to include elder women's voices can improve the impact and uptake of health information during the perinatal stages.

For many Indigenous peoples, birth is considered a communal event that is celebrated and believed to strengthen relationships between families and the local natural environment (Benoit et al., 2003; National Aboriginal Health Organization [NAHO], 2008; Kornelsen et al., 2010). This view supports the grandmothers' belief that are many community-level responsibilities that are required to uphold optimal health for pregnant women, young children, and families. These communal factors are the responsibility of the entire community—from local residents to key leaders and administrative authorities. Upholding communal accountabilities (e.g. ensuring the access to healthy local food) helps ensure that community members have access to the resources that can help them attain improved health status. There are many teachings regarding the significance of maternal nutrition, which was commonly considered a community responsibility. However, the disruption of traditional lifestyles and diets brought on by the legacy of colonization and associated environmental degradation has been linked to a growing epidemic of obesity among Indigenous peoples (Young et al., 2000; Lix et al., 2009). As food symbolizes more than nourishment for the body, the cultural and spiritual meaning around familial gatherings, the connection to the land, and the treatment of the animals that are sacrificed for our meals play an important role in how a community conceptualizes the idea of healthy food. The grandmothers' concerns around food include many factors that are also current Canadian concerns: pollution, contamination, and modification. These concerns

should be addressed using a community-based approach that benefits from multiple knowledge sources, including experts such as elders. Initiating and supporting such dialogues can help develop feasible and equitable plans to improve the limitations prescribed by low socioeconomic status.

Many grandmothers also identified postnatal care and support to be very important in the assurance of optimal health, particularly in regards to postnatal weight loss and mental wellbeing. Several described having a baby as "a crisis," a time where the mother needs much support from family and friends: raising healthy children was described as a communal effort. As a result, communities need to have adequate resources to help support these needs. This is additionally significant because other studies demonstrate that Indigenous mothers described postnatal weight loss as "important but hard," and wanted improved culturally-relevant knowledge and community-based support and services (Valliantos et al., 2006). These services could include more options for childcare, improved transportation on the reserve, and having well-trained Indigenous and non-Indigenous health care providers that can offer culturally-safe support to women during the perinatal period. This will allow Indigenous women to access and create their own unique birth plans, working together with staff who understand their cultural needs. They can also work together to set up strong support networks so that women are well taken of during the postnatal period (e.g. childcare so that women can have time to engage in physical activity). Because these concerns are vital to securing a healthy life for subsequent generations, it is important to work with closely with different community experts and policy-based stakeholders to develop a sustainable plan to address these issues in a timely fashion.

To further our understanding about how to help support optimal health for pregnant women and newborns, it would also be informative to interview new mothers, pregnant women,

and others who are in their familial circles (e.g.: their intimate partners, aunties, uncles, cousins, grandfathers, etc.). This would allow learning about optimal support strategies that are desired by pregnant women/mothers and give insight into the potential barriers that prevent the upkeep of these strategies. It can also improve the understanding of how familial networks are currently providing support during the prenatal and postnatal period and identify opportunities to optimize that support piece. In addition, completing interviews with 1) Six Nations program developers who are involved with the establishment and facilitation of traditional and non-traditional health programs directed to pregnant women/newborns and 2) health care providers who work closely with pregnant women in the Six Nations community, we can better understand the gaps between the advancement and the acceptance of information that promotes optimal maternal health behaviors.

Conclusion

Overall, this study contributes to the limited literature that is currently available on elder Indigenous wor for the Six Nations community and perhaps for other Indigenous communities in Canada. This includes the community-embedded framework that highlights the influences between the beliefs of the grandmothers and the maternal behaviours of young women within the community through oral storytelling and the modelling of optimal behaviours (actions); beliefs and behaviours exist within the milieu of community-level influences and societal factors. In addition, it also contributes to the evidence that supports the inclusion of elder women in the perinatal decision-making process—Six Nations grandmothers are well equipped to amalgamate a multiplicity of knowledge (Western and Traditional) and want to be more involved in the perinatal care of future generations in a respectful way that does not deviate from the personal desires of pregnant women.

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Description	Value (n=18)
Total Number of Grandmothers interviewed	18
Mean age (years)	65 (52 – 84)
Median number of Grandchildren	5
Marital status	
Married	4 (22.2%)
Common law	2 (11.1%)
Single	3 (16.7%)
Divorced	1 (5.6%)
Widowed	8 (44.4%)
Highest Level of Education	
Less than High school	2 (11.1%)
High school	9 (50%)
Some College	1 (5.6%)
College diploma or equivalent	4 (22.2%)
Some University	1 (5.6%)
Bachelors degree	1 (5.6%)
Graduate school (eg: MSc, PhD)	0

Table 1. Demographic table of interview participants.

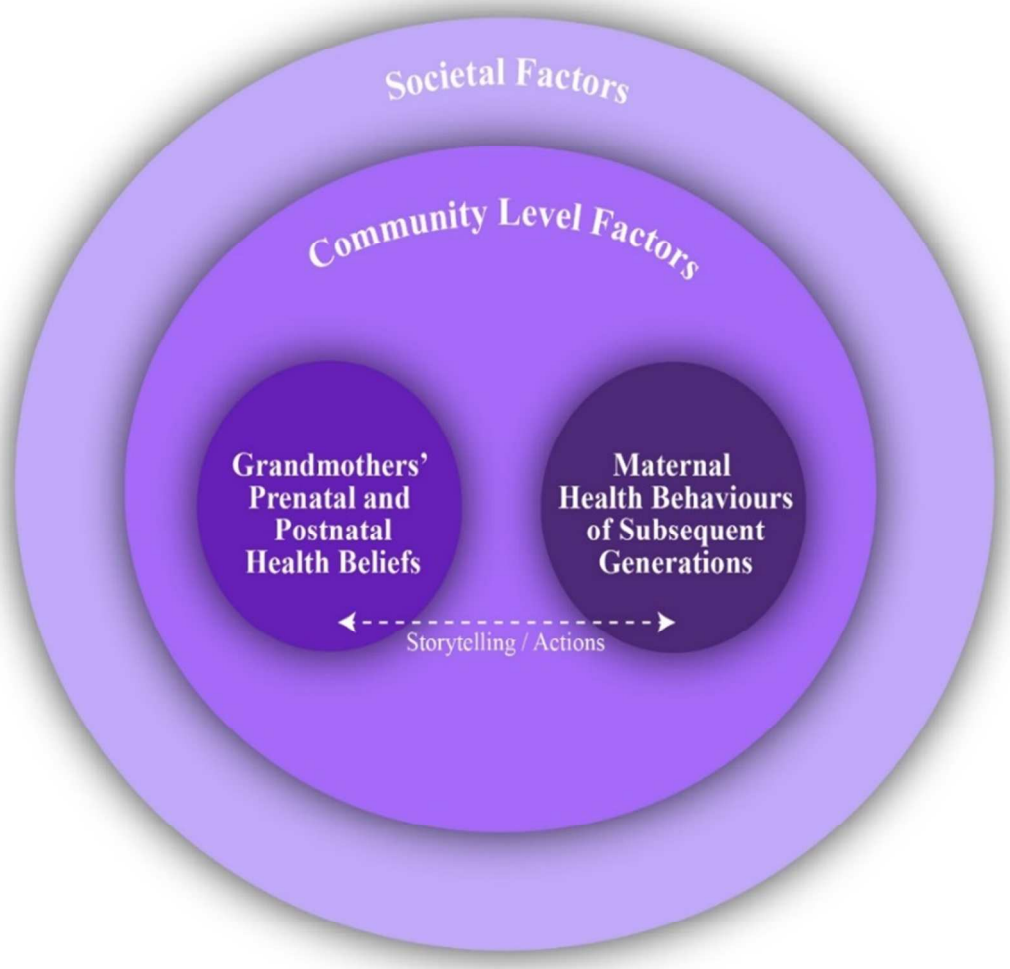

Figure 1. The Community-Embedded Model of Perinatal Health