Résumé

Les croyances en matière de santé des femmes du Vieil Ordre Mennonite de l'Ontario rural au Canada

Ewa M. Dabrowska, Judy Bates

Cette étude qualitative vise à explorer les questions de santé touchant les femmes appartenant au Vieil Ordre Mennonite, une communauté ethno-religieuse fermée établie en Ontario rural au Canada. C'est la première fois que des femmes issues de ce groupe, qui parle l'allemand pennsylvanien, un dialecte du haut allemand, participent à un projet de recherche sur la santé. Les auteures s'appuient sur un cadre d'analyse des effets du lieu sur la santé pour étudier les perceptions de ces femmes vivant dans une région où l'environnement est contaminé. Elles concluent que la socialisation religieuse a inculqué chez elles un système de croyances ainsi qu'un attachement au lieu qui les amènent à considérer ce dernier comme un espace sanctifié, qui serait protégé des effets sur la santé que peut entraîner un milieu hautement toxique. Un phénomène que les auteures décrivent comme « les effets du lieu modelés par les croyances ».

Mots clés : Vieil Ordre Mennonite, allemand pennsylvanien, santé des femmes, rural, lieu

The Health Beliefs of Old Order Mennonite Women in Rural Ontario, Canada

Ewa M. Dabrowska, Judy Bates

The purpose of this qualitative study was to explore women's health issues in a closed, ethno-religious Old Order Mennonite (OOM) community in rural Ontario, Canada. This is the first time that conservative OOM women from this community, who speak Pennsylvania Deutsch, a High German dialect, have participated in health research. The theoretical framework of "place effects" on health is used to examine how OOM women perceive their health in an environmentally contaminated area. The authors conclude that the belief system and attachment to place developed through the religious socialization of these rural OOM women have created a presumed sanctified space protected from the health effects of a highly contaminated environment. They refer to this phenomenon as "belief-informed place effects."

Keywords: Old Order Mennonite, Pennsylvania Deutsch, women's health, rural, place, ethnography

Background

Marginalized ethnic groups whose culture sets them apart from contemporary Canadian society can present challenges to nurses, midwives, and other health professionals (Hall & Kulig, 2004; Kulig, Babcock, Wall, & Hill, 2009; Kulig et al., 2002). These challenges may be exacerbated when such groups live in a rural environment that has a long history of industrial environmental pollution. This article examines understandings of health among women from an Old Order Mennonite (OOM) community in a highly contaminated area of rural Ontario. Conservative religious beliefs and isolation from the outside world are central features of this OOM group, who speak Pennsylvania Deutsch, a High German dialect (Horst, 2000) often referred to as Pennsylvania Dutch.

Theoretical Framework

The theoretical framework of belief-informed place effects is applied to examine conceptions of health experienced by rural Mennonite women in Woolwich Township, Ontario. Geographical variations in conceptions of health can be accounted for using compositional, contextual, and col-

lective explanations (Macintyre, Ellaway, & Cummins, 2002). Collective explanations, such as those associated with "religious affiliation, kinship systems, domestic division of labour, gender, age" and culturally appropriate roles within the family and the community, have been shown to be important in accounting for sociocultural differences in conceptions of health in various places (Macintyre et al., 2002, p. 130). The characteristics of place can inspire spirituality and tranquillity and may alter conceptions of health within a community of believers (Gesler, 2003). The valuing of place is not something that individuals are born with, but it can be learned through a process of religious socialization (Mazumdar & Mazumdar, 2004). We propose in this article that the belief system of OOM women and their attachment to place, developed through religious socialization, have created a presumed sanctified space that protects them from the negative health effects of a contaminated environment. We refer to this phenomenon as "belief-informed place effects."

Literature Review

Numerous scholars have developed theories concerning the environment and its impact on the health and well-being of people physically, socially, culturally, and politically at a variety of geographical scales (Day, 2006; Elliott, 1999; Krewski et al., 2008; Wakefield & McMullan, 2005). An approach grounded in health geography introduces "place and landscape" as a theoretical framework for examining how perceptions of environment may be related to place in explaining health inequalities (see Curtis, 2004, for a review). Studies of the ecological landscape or of the distribution of physical or biological environmental risk factors include investigations of environmental health disasters such as a recent outbreak of E. coli in Walkerton, Ontario (Harris, 2004), and an examination of environment–health links in the Canadian Farm Family Health Study (Arbuckle et al., 1999). Exposure to environmental chemicals poses significant hazards to physical health (Schettler, Solomon, Valenti, & Huddle, 2000) and may cause behavioural and lifestyle changes among residents of rural/remote areas (Leipert & George, 2008). For example, in a study with a First Nations group living on a reserve near Sarnia, Ontario, Mackenzie, Lockridge, and Keith (2005) found that the "close proximity of this community to a large aggregation of industries and potential exposures to compounds" (p. 1295) could influence the sex ratio of the Aamjiwnaang First Nation. However, examination of an ecological landscape does not provide a full understanding of how environments can influence health, particularly when health is defined as total well-being, in the cultural context of communities.

A number of scholars have argued that social dimensions, such as gender, ethnicity, and minority status, are important in the conceptualization of place, since these dimensions contribute to the experience of health (Gesler & Kearns, 2002). The construction of images and interpretation of place in the human mind occur through complex processes and, as Jackson (1989) notes, "the same physical environment has given rise to quite different cultural landscapes because of different cultural processes" (p. 13). Symbolic environments are created by human acts of giving meaning to nature in geographic locations through particular filters of beliefs and values that are grounded in culture (Greider & Garkovich, 1994). People's spirituality, sense of place, and identification with community are critical to the shaping of their perceptions of health. For example, in rural central and eastern North Carolina, part of the so-called Bible Belt where religious beliefs are strong, scholars have identified links between health and religion and have demonstrated that strong religious beliefs and practices are related to better mental health, better physical health, and stronger immune systems, especially in older populations (Gesler, Arcury, & Koenig, 2000).

In her research with First Nations communities in Ontario, Wilson (2003) has recognized the culturally specific, spiritual links between health and place in the conceptualization of wellness by Aboriginal communities. Rural women living in poverty in Canada have limited access to medical care and their poverty precludes good nutrition and access to medical services not covered by provincial health plans (Sutherns & Bourgeault, 2008). We focus on a Canadian rural landscape where gender and ethno-religious identities among a conservative Anabaptist group have rarely (Brunt, Lindsey, & Hopkinson, 1997; Kulig et al., 2009) been the subject of studies by health professionals.

Gavin Andrews (2002) introduces the geographical concept of *place* to nursing research, noting its importance in qualitative analyses of human-environmental interactions in professional health practices. Bender, Clune, and Guruge (2009) acknowledge that among nurses and clients in community work "place matters — as geographical location and lived experience, as demarcation of space, as a site of meaning creation" (p. 129). The theoretical importance of place in health studies is growing, and health research is incorporating multidisciplinary examinations of health inequalities. Macintyre and colleagues (2002) propose three types of explanation for geographical variations in health: *compositional* (characteristics of individuals)*, contextual* (local physical and social environment), and *collective* (sociocultural and historical features of communities). The collective explanation highlights the importance of an anthropological perspective (shared norms, traditions, and values) in creating area effects. The authors argue for a more comprehensive examina-

tion of variations in health, including features of non-material culture such as identity (ethnic, regional, and national), religious affiliation, political ideologies, legal systems, shared stories, kinship system, and domestic division of labour. The multiple perspectives used to conceptualize place effects should be seen as complementary, each contributing to the overall place effects.

Religion affects people's attachment to place — their emotional bonds with places — and imbues places with symbolic meaning (Low, 1992). Religious place attachments are significant in the lives of many people. Physical and social elements of the environment cause the believer and the non-believer to see a place differently and thus generate dissimilar experiences (Gesler, 1996). Religious place attachments affect people's perceptions of security in place, as demonstrated by Jewish settlers in Gaza, where individuals with strong spiritual values have developed the means to cope with extreme situations (Billing, 2006).

One's attachment to place is often developed through religious socialization. It is learned through rituals, artifacts, prayers, stories, and symbols. Children learn from parents, from educators such as priests, and from peers within the community of believers (Mazumdar & Mazumdar, 2004). Religious socialization contributes to one's identification with a particular place, which, as noted by Hummon (1989), extends across generations, thus providing a continuous sense of identity. Theoretically, religious values (Reimer Kirkham, Pesut, Myerhoff, & Sawatzky, 2004), sense of place (Andrews & Moon, 2005), and ethnicity and culture (Clarke, 2004) are important in the context of different health outcomes in communities.

Purpose

This article reports on research conducted among OOM women, members of an ethno-religious minority living in rural Ontario, to elicit their perceptions of health. Using ethnographic methodologies, we examine how rural women perceive their health in a discourse of place. The research question was *How do OOM women living in rural southern Ontario understand their health?*

Old Order Mennonites in Ontario

The Mennonite faith is a Christian denomination that traces its origins to the Swiss Anabaptists of the 16th century. Seeking to escape from persecution and to enjoy religious freedom, some four thousand members of the Swiss Mennonite group immigrated to Pennsylvania in the United States during the first half of the 17th century. Around the year 1800, descendants of these families began arriving in Ontario to establish farms

and agricultural enterprises (Fretz, 1989). In the late 1880s, groups of Mennonites founded several religious communities in rural Ontario. One of these groups established a community called the Old Order Mennonite Church, whose members followed very traditional and strict cultural practices (Snyder & Bowman, 2004). It is women from this group of OOMs who are the focus of the present study.

The OOM Church is an orthodox group whose members are constrained from using modern conveniences in their homes. Land ownership is held individually and generations of the same family work the land together. Horse-and-buggy transportation, traditional clothing, and a legacy of Mennonite quilt-making are outward symbols of their cultural identity. Since they value self-sufficiency and as pacifists have chosen not to engage in war, OOMs believe that they should not make use of federal or provincial social benefits, including the Ontario Health Insurance Program (Peters, 2003). These practices make them responsible for paying 100% of the cost of health care and other government-funded services.

Community Structure

Old Order Mennonites are members of a rural community that is organized on the basis of shared values and norms and strong emotional ties among members — in other words, a *gemeinschaft*-like community (Fretz, 1989). Fretz argues that the Mennonites' long history of religious persecution has shaped their community structures: "They had no other place to turn for help than to fellow church members. Therefore the church fellowship was always more than a worshipping community" (p. 17). Their church fellowship and religious values are combined with their culture in a process of religious socialization. Parents teach their young how to be faithful community members, an essential component in the preservation of the social system operating within the community. In their beliefs, separation from the world and avoidance of the temptations of the "world" are emphasized, since they are essential aspects of their holy way of living, their simplicity, and their obligation to *Gelassenheit* — or their willingness to yield to God's will in all matters (Horst, 2000). This religious doctrine requires acceptance of gender roles, including the submission of women to men in a patriarchal social order that demands women's *silence, obedience,* and *self-denial* and acceptance of a clearly defined community hierarchy (Epp, 2008). All OOM members are committed to community. Their theology reinforces moral codes and places the needs of the community above the needs of the individual. The historical, religious, social, and contextual circumstances of people united in a *gemeinschaft* community frame their sense of place (Eyles,

1985). This background provides the context within which our study of women in the OOM community is undertaken.

Study Site

Farming communities located downstream from the town of Elmira, along the Canagagigue Creek in Ontario's Woolwich Township, have been exposed to chemical contamination for more than half a century (Conestoga-Rovers & Associates, 2003). The source of the contamination is a plant that manufactures highly toxic pesticides, herbicides, and other chemicals, including 2,4-D and 2,4,5 T, commonly known as Agent Orange, which was used by the US Army as a defoliant during the Vietnam War. Following years of complaints by concerned Elmira residents, in 2003 the potential health effects of the contamination were analyzed in a Human Health Risk Assessment. The study found extensive health risks associated with the plant and noted that users of the Canagagigue Creek floodplain, downstream from Elmira, face a cancer risk estimated at 1.9 cases per million *above* the national rate (Conestoga-Rovers & Associates, 2003). Since all those living along the Creek, including farmers, face a cancer risk estimated to be above the national rate, the Ministry of the Environment (2004) recommended the adoption of measures to protect the OOMs from exposure. In 2005, residents along the Creek were advised to fence off the floodplain and Creek so as to reduce exposure to toxins accumulated in the banks.

Old Order Mennonites were selected for the present study because members of this group include farm families living in very close proximity to the highly polluted Canagagigue Creek.

Method

Using ethnographic methodologies (Hall & Kulig, 2004; Williams, 1996), semi-structured interviews were conducted with a sample of 15 OOM women to explore their perceptions of health in their place. Since the OOMs are a special minority group, three levels of ethics approval were required and received from the Research Ethics Board of Wilfrid Laurier University. During the 2-year preparatory stage of the project, the researchers conducted interviews with a group of medical and health professionals, including nurses, midwives, and family physicians, as well as with some community leaders. Our purpose was to gain a full understanding of the health problems that could arise as a result of the contamination over a prolonged period to which members of the Elmira community and OOMs in the region had been exposed (Waterloo Region Community Health Department, 2001). During a period of participant observation, the principal researcher attended multiple meetings with

representatives of the Waterloo Region Community Health Department, the local environmental organization Assuring Protection for Tomorrow's Environment, the Regional Municipality of Waterloo, and the (Uniroyal) Crompton Chemical Company through the Crompton Public Advisory Committee, as well as with community members in Elmira.

Introductory letters, consent forms, and interview guides were prepared with help from an OOM woman who had been raised in the OOM community but was no longer a member. Previously, this woman had participated in a research project and was able to guide the principal researcher with regard to potential cultural biases in the questions and interpretation of meanings. The culturally sensitive nature of the research necessitated a particular focus with respect to the preparation of the documentation. As the nature of the inquiry was intrusive for members of this religious community, the researcher followed the interview guide closely and limited the number of probing questions. In a short questionnaire, participants provided demographic information as well as information on their health status.

Access to the community was made possible through the help of two non-Mennonite community leaders who had worked in Elmira for more than 15 years and were acquainted with members of the OOM community. These community leaders introduced the researchers to an OOM family in which the adult male was a "cultural broker" (Good Gingrich & Lightman, 2004). This family agreed to seek out members of their community who might be interested in participating in the study. Because of this assistance, a total of 15 OOM women agreed to participate. Arrangements were made to interview each of these women. The sample was clearly purposive and limited, but, given the exploratory and unique nature of the study, we decided to proceed despite the conditions of access imposed on us.

The cultural traditions of OOM women prevent them from meeting outsiders alone, so in all cases wives followed the formal procedure of confirming the interview arrangements with their spouses and in several cases the spouse also attended the interview. Over a period of 3 months in 2005 and 2006, the principal researcher interviewed 15 women from OOM families. Due to patriarchal relations within the community, three male spouses were present for interviews. Over time, the researcher gained the confidence of community members and was received by the woman alone or was able to interview the woman on their own after being welcomed briefly by her husband.

Out of respect for Mennonite cultural values, the interviews were not audiorecorded. Immediately following each interview, the researcher checked her handwritten notes, observations, and reflections from the meeting as well as any memorized quotations. This method has been

used in research with the Kanadier Mennonites (Hall & Kulig, 2004). The data were subsequently typed into an electronic document. The interviews were analyzed and themes were identified and coded using qualitative data analysis software. The researchers paid close attention to ensure that the data were interpreted according to the cultural context of the ethnographic paradigm (Quinn-Patton, 2002) and undertook to ensure the rigour of the research by focusing on credibility, which refers to the "accuracy of the description of the phenomenon under investigation" (Jackson, 2003, p. 183). Four data-quality measures were introduced to ensure the rigour and trustworthiness of the research: (1) The interview questions were pilot tested with researchers who previously had conducted cross-cultural research. (2) Despite limited access, the researchers used diversity in sampling and selected OOM women of various ages, of different marital status, and living at different distances from the Creek. (3) All interviews were conducted by the principal researcher for the purpose of maintaining consistency. (4) The findings from the interview data were presented first to the family of the cultural broker for checking to ensure accuracy of the data, and later to medical professionals in Woolwich Township. Threats to rigour and trustworthiness were minimized through the use of strategic measures for ensuring excellence in qualitative methods (Baxter & Eyles, 1997). The participants were assured of anonymity and confidentiality throughout the study and were given pseudonyms to protect their identity.

Results

The sample consisted of 15 female members of the OOM Church living in separate households in Woolwich Township. The women were aged between 23 and 64 years, with an average age of 49.7 years. Twelve of the women were married and three were single or never married. Members of this OOM community are prohibited from attaining a high level of education, so participants had not gone beyond Grade 8. All but one of the participants lived on a family-owned farm and each of the married women had lived in her present home since her marriage. The length of residency on the farm varied from 11 to 36 years. The 12 women had given birth to 76 live children, or an average of 6.3. In the short questionnaire, the women all reported their health as good or very good.

Perceptions of Health Among OOM Women

In this section we provide the findings from the interviews. All of the OOM women expressed the universal understanding among members of the OOM community that *health is a great gift from God*. Members of the community believe that God gives them the blessing of good health.

The women spoke about their health in terms of accepting God's will: "We are not in control of our health" (Melinda). The women also referred to their commitment to take care of their own health.

In this highly patriarchal society, women consider their husbands' opinions more important than their own, even when it comes to determining their own health. Their husband's evaluation of their ability to undertake their predetermined role in society influences women's perception of their health and their sense of well-being:

> *My husband should answer the question how my health is. I had one kidney removed because of cancer 5 years ago. Now I am fine.* (Viola)

> *My wife works hard milking cows. She is in good health.* (Melinda's husband)

The description of "good health" for this ethnic community includes tending to others' needs before their own. In discussing general aspects of her health and well-being, Rhoda noted that her health was very good and linked her good health to her social role. She provided an example of her obligation to other women in her community:

> *A woman from Mount Forest was asking if I have any work and can I help sell her quilting because she needs money to pay for gas [for the stove]. Isn't it our role to help other people, when they need help? I will not sell my quilting but I will sell hers.*

Maria, who was chronically ill with multiple sclerosis, described the help that she received on weekends from other women in the community:

> *I can spend a lot of time with you today. On Sunday my friend came and she cooked meals for our family for 2 days. I am always getting help during the weekend.*

Despite refusing to take advantage of government-funded social programs, including the Ontario Provincial Health Insurance Plan, almost all OOM women in the sample delivered their children at the local city hospital, paying for the medical services out of their own pockets:

> *All my children were born in Kitchener hospital. We went there in case of complications.* (Ellen)

Members of this OOM Church community are permitted to use electricity, rubber-tired tractors, and modern agricultural equipment in their farming practices. They may also install telephones, though these are rarely used. Women understood the advantages of telephone service for the health and well-being of their family members:

> *Now we call for help when we need it.* (Barbara)

Families without access to a telephone are much more vulnerable to delays in receiving necessary health care:

> *All my sons had appendixes removed. They had complications because they were reported very late.* (Lucinda)

These delays were also the result of the high cost of medical care for families.

The women's reproductive health was discussed, but most women showed discomfort in speaking at length about their pregnancies. Few of the women had experienced complications with childbirth, but three acknowledged having multiple spontaneous abortions. A miscarriage was understood as a "better place for a child to be. Child will be in heaven with God." (Ellen) One woman spoke of the support she received from her husband after several miscarriages. Her response illustrates her religious beliefs:

> *I have a loving husband and a son. Not everybody can have everything. Maybe it is better that the other children died.* (Martha)

The strong social networks among Mennonite families were apparent, especially among farm families and in the workshops, where male children find work. Children from neighbouring farms play together and the girls help their mothers in the home and with farm and garden chores, while the boys are kept occupied helping their fathers. The women talked about their close relationships with their mothers, sisters, and other women in the community. Grandparents have a special responsibility for caring for young and sick children. Naomi explained:

> *I came from a family of 11 children. My youngest brother was a "special child." I remember that grandparents were always around his bed.*

The close connections were evident not only among family members but also among other community members:

> *There are no secrets in our community. When we have high bills, our community helps to pay for our stay in hospital.* (Anna)

These reciprocal relations, based on the religious commitment to "being your brother's keeper," help to alleviate the economic burden of health care and other costs. Networks of social relations have penetrated the lives of OOM women by constructing meaningful links among church members, neighbours, and interconnected families who live in close proximity to one another in Woolwich Township.

Understandings Among OOM Women of Environmental Links to Health

Two themes, religiosity and attachment to place, were essential to the women's understanding about their health and environment. First, the women felt they were safe on their land because they did not violate God's rules. In the past, dead fish were commonly found on the banks of the Creek. In response to a question about environmental degradation and the presence of dead fish, Hannah said:

> *I knew about the issues but I never worried. In our language, to worry means to lose sleep over it. It is all in the hands of God. I never worried about the environment.*

Martha explained:

> *Grandpa can tell you stories about his problems with dying cattle in the 60s. This doesn't mean that we are not happy here at the farm. We trust God.*

The second theme in the understanding of environmental links to health was attachment to place. The women viewed their land as a benign landscape that provided them with food and economic security and that would provide for their children and grandchildren:

> *Our children have a better life on the farm. We provide for their well-being in the future. Yes, they are better here than the children in town.* (Lucinda)

The lives of women in the community are linked to their environment through manual labour on the farm. They value their simple way of life and view their homes and farms as healthy places:

> *I think we are healthy here at the farm. Our immune system is built up.* (Minerva, supported by her husband)

> *We are healthy here. When I go to the city I am always thankful that I live on the farm. It is so nice to have wildlife coming and to be able to drink the water as well.* (Mary Ann)

Most of the OOM women seemed to be unaware of the fact that they were living in a contaminated environment and that the pollutants posed considerable dangers to their health:

> *I think it was safe here. My husband swam in the Creek when he was a little boy. My children swam in the Creek since they were little.* (Barbara)

Most of the OOM women were not interested in discussing the environ-mental contamination, as this was their "husband's department" (Marlene) and "our work is at home, with children" (Barbara). The women were

aware of bacterial water contamination, as members of the OOM community are obliged to follow provincial water-testing regulations for private wells.

Despite the preservation of conservative traditions, most OOM families have adopted modern agricultural technology in their farming practices, and they consider the use of pesticides a necessity. They do not question the scientific validity of information provided on the labels of the chemical products, and they believe that "used properly, pesticides are not dangerous" (Martha).

Two women were aware of the toxicity of these chemicals since their husbands were required to take training on the safe use of pesticides, yet they appeared to be in denial about the dangers of living alongside a polluted creek.

The OOM women spoke about their attachment to their land acquired by working on it, the strong community social and economic networks that structure their social ties, offer assistance when disaster strikes, and provide work for their children. In addition, they noted that their Sunday church rituals, visits with family, and weekly schedules (baking days, laundry days, trips to town) unite the members of the community. It was evident that these women relied on collective support from their family, friends, and community networks. Martha briefly described her understanding of her social environment:

> *We are the Mennonites. We need to honour the past and to safeguard our future. We pray together and we work together — that's the most important.*

Discussion

The findings of this study indicate that OOM women perceive their health to be good. The interviews provide clear evidence that OOM women conceptualize their health in a culturally unique way, in relation to their ability to serve their community. Unlike women in contemporary society who are part of "city culture," OOM women do not appear to have developed individualistic conceptualizations of their health. They believe that God is in control of their health and well-being, that their health is in God's hands. The OOM women spoke of their connections to their land but did not report any health concerns related to environmental risk factors.

The results confirm the importance of religious values, the significance of trusting God, and epistemic differences in the construction of knowledge and perceptions of risks (Douglas & Wildavsky, 1982). Old Order Mennonite women do not consider the linkages between physi-

cal environmental hazards and poor health — an attitude that serves as a protective barrier and separates them from modernity and the hazards of contemporary society (Beck, 1992).

To interpret the results of our research using conceptualizations of place effects on health (Macintyre et al., 2002), we offer the following explanations. First, a compositional explanation of place effects accounts for this religious community's way of constructing knowledge of health issues and problems that is based on their faith in God. Old Order Mennonite women, as members of a traditional community, construct their knowledge and manage threats to well-being based on a foundation of religious beliefs (Alaszewski & Brown, 2007). They believe that their environment is healthy for them, as God is protecting them. Their knowledge system is based on their trust in God, not on their trust in modern scientific theories. In contrast to the broader Canadian society, OOM women might not believe that their health is compromised because they do not associate environmental degradation with disease and poor health outcomes (Krewski et al., 2008).

Second, a contextual explanation reflects the social reality of their lives and their religious obligation to remain separate from mainstream society. Because of their lack of access to the media due to their separation from the general population, women in this community are not educated about current global threats. Old Order Mennonite women never listen to the radio, watch television, or read newspapers, so they are unaware that they are at risk in their environment. This might result in a positive outcome and serve as an additional protective factor (Wakefield & Elliott, 2003).

Third, a collective explanation accounts for the religious values of the community regarding obedience to God and the primacy of God's will. Old Order Mennonite women believe that human actions have little importance relative to God's will and are therefore beyond their concern. While their lack of perception about environmental risks is a part of their conception of place, their belief system might serve to protect these women from the negative health effects of a contaminated environment. The compositional, contextual, and collective explanations should be seen as complementary, each contributing to the overall effects of place (Macintyre et al., 2002).

Based on the positive effects of place on the health of OOM women observed in our study, we suggest that religious faith and trust in God are protective factors in the health of these women. The positive health effects of religion are well known; they range from physically measured lower blood pressure in religiously active adults to non-biomedical healing in a "biopsychosocialspiritual" model (see Koenig, 1999). A number of scholars have identified religion and spirituality as important

factors in the determination of health status (Kulig et al., 2009; Wengler, 2003; Wilson, 2003).

The concept of place effects on health is complex, and it incorporates more factors than discussed above. These include social cohesion, social capital, the socio-economic position of the community (in this case in Woolwich Township), the rules of *Gelassenheit,* and aspects of collective community functioning (Good Gingrich & Lightman, 2004). In their rural Ontario landscape, OOM women value their social networks and the contribution of these networks to their well-being (Leipert & George, 2008). Membership in a religious community and a high level of social support might serve as protective factors in terms of health (Miller et al., 2007). Furthermore, because of their gendered roles in the community, OOM women cannot concern themselves with environmental problems; according to their value system, only their husbands and male community leaders may make decisions on important issues such as how to deal with environmental degradation (another collective explanation of place effects).

Women's roles are viewed through their religious beliefs, which are integrated into their lives. Individuals must take care of themselves and other community members, but God has control over their lives and without His help life cannot be sustained. Because of OOMs' attachment to their land, they see their farms as an ideal place in which to live, work, and raise their children despite the industrial contamination. Attachment to place, developed through their religious beliefs, is also a significant factor in their health experiences. A failure to perceive their place as safe could be interpreted as a failure to put their trust in God, since God has placed them there and their people have lived on this land for two centuries. The religious and cultural links with place construct their experience of health. Our results are consistent with those of Fretz (1989), who observes that, for this conservative group, cultural and religious links are inseparable.

We cannot know whether the OOM women are in good health. We analyzed their responses to the interview questions and considered their self-rated health assessments. In our sample of 15 women, 12 reported no health problems, one had been diagnosed with multiple sclerosis, one had had a kidney removed due to cancer, and one had been diagnosed with diabetes (of an unknown type). While OOM communities generally do not access social services, they do make use of local doctors and health-care providers and pay the full cost of the service. The women tend to rely on self-health assessments and to seek medical care only when health concerns are serious. While we are not able to provide more information about their health or determine how our status as "outsiders" affected the data, we acknowledge that in-depth discussion of reproductive health

issues that could be related to environmental conditions was not possible owing to discomfort on the part of OOM women (see Kulig et al., 2009). It is worth noting that a community ethic valuing truthfulness in communication may have served to minimize bias in this ethnographic research.

Our findings support the research argument that understandings of environmental contamination are complex. A poor-quality environment may be experienced as either unhealthy or healthy by diverse communities through multidimensional perspectives (Day, 2006; Wakefield & McMullan, 2005). In order to determine the health status of this religious OOM community using a larger sample, further work should consider mixing qualitative and quantitative methodologies in a detailed study with conservative Mennonites in Woolwich Township.

Old Order Mennonite women are able to thrive in their separate place guided by their beliefs, strong community networks, and self-reliance. Our study was concerned with whether a particular understanding of place creates a true barrier to environmental pollution. Among this community, it appears that this is the case, but we note the existence of epistemic differences between participants and researchers. Informing these unaware women about possible environmental hazards could have consequences for the psychological well-being of the population (Pidgeon, Simmons, Sarre, Henwood, & Smith, 2008).

The role of nurses and public health officials is to examine these issues using a scientific approach, to study the health of marginalized communities, and to promote healthy environments for all, including communities that choose to be separate and that present challenges to the notion of environmental health equity.

Conclusions

This study documents the health experiences of Old Order Mennonite women in a rural community and contributes to our knowledge of health challenges faced by these women. Our findings suggest that belief-informed place effects and an attachment to place, combined with strong community identification, play a critical role in shaping the health experiences of OOM women.

People's experiences of place are essential to their well-being but cannot protect them against environmental hazards. This study has identified the need to provide health education programs on environmental hazards to OOM women without compromising their religious beliefs. Effective policies and culturally sensitive nursing practices are essential to protect ethnic minorities from health risks associated with environmental contamination in rural communities.

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Acknowledgements

Ewa M. Dabrowska, PhD, is Senior Lecturer, Department of Earth and Atmospheric Sciences, University of Alberta, Edmonton, Canada. Judy Bates, PhD, is Associate Professor, Department of Geography and Environmental Studies, Wilfrid Laurier University, Waterloo, Ontario, Canada.