

## Understanding the Cultural Meanings of Farm Women's Stress Experiences in Canada

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### ABSTRACT

*Stress is a pervasive issue that can potentially affect health and productivity. There is evidence to suggest that farm women are particularly susceptible to the effects of stress. The purpose of the study was to arrive at an increased understanding of the underlying cultural knowledge (how women feel, think, and how feelings and beliefs affect behavior) of Canadian prairie farm women's stress experiences in Central Canada. The study's conceptual framework was guided by Socialist Feminist Theory (SFT). Qualitative ethnographic face-to-face interviews were conducted with a purposive sample of eight farm women whose farming livelihood was seriously impacted by the Bovine Spongiform Encephalitis (BSE) outbreak of 2003. The women (ages 39-62) were married with children. The ethnographic central theme describes the aggregate as women who struggle to balance the sense of self in a patriarchal context, while struggling to survive the micro and macro changing times in agriculture following the BSE outbreak. The study has shown that the root causes of the aggregate's culturally defined stress experience is situated in the socio-economic-political changing times in the agricultural industry at the familial, local, national, and global levels. As such government policy, and decision making should be guided by 'upstream thinking' through the inclusion of women's voice. Future research includes exploring the stress experiences of both farm men and women in various farming operations both provincially and nationally from a population health perspective, health impacts of BSE, and exploring the importance of housing quality to farm women's well-being.*

### INTRODUCTION

Stress is a subtle problem that can potentially affect both health (psychological and physical), and productivity of individuals (Lyon, 2000). Farm women are a group of individuals (aggregate) identified as being particularly susceptible to the development of higher stress symptoms (Booth & Lloyd, 2000, Brown, 1998; Dreary, Willcock, & McGregor, 1997; Kubik & Moore, 2001; Thurston, Blundell-Gosselin, & Rose, 2003; Walker & Walker, 1988). While stress literature abounds, little is known about the continuum of farm women's stress experience (how stress is viewed, defined, understood, experienced, and dealt with on a day-to-day basis) at the aggregate level. The over-reliance of various quantitative scales to measure stress manifestations and etiology may have failed to capture women's voices, and take into consideration the interplay of health determinants that may be associated with the day-to-day reality of farm women's way-of-life. The purpose of this study was to arrive at an increased understanding of the underlying cultural knowledge and meanings of the stress experience of Canadian prairie farm women. The ethnographic paradigm will be presented using thick descriptions, and

will be further discussed within the context of the post-Bovine Spongiform Encephalitis (BSE) outbreak of 2003.

### *Farm Women and the Health / Stress Continuum*

Canadian farm women are likely to be between the ages of 35-54 (Statistics Canada, 2004), married with children, have off-farm employment, have a higher level of education in comparison to their spouse, and to infrequently participate in rural women's networking organizations (Martz & Brueckner, 2003; Statistics Canada, 2005b). Women in rural areas are more likely to be isolated, poor, unemployed, and have a higher prevalence than urban women to either die accidentally (motor vehicle accident, poisoning, and suicide), or from disease (cancer and diabetes) (Prairie Women's Health Centre of Excellence [PWHCE], 2003). Nonetheless, rural populations (male and female) continue to rate their health as very good to excellent (Kubik & Moore, 2001; Roberts & Falk, 2002; Thurston & Meadows, 2003).

Rural and farm women view health as an important life priority, and define health as a combination of physical, mental, spiritual, gender (role overload), and social (farm family and community) well-being (PWHCE, 2003; Roberts & Falk, 2002; Thomlinson, McDonagh, & Crooks, 2004; Thurston & Meadows, 2003). Rural and farm women's views of health may explain the value women place on culturally, gender sensitive programming (PWHCE, 2003; Roberts & Falk, 2002).

The literature, although sparse and dated in nature, addresses the issue of farm stress mainly from a biomedical perspective. Farm women have reported a variety of physical stress symptoms (sleep disturbances, lack of energy, headaches, gastrointestinal problems, respiratory problems and elevated blood pressure), cognitive problems (inability to concentrate, forgetfulness, procrastination and difficulty making decisions), and behavioral problems (relationship and familial conflict, gambling, substance abuse) (Kubik & Moore, 2001; Walker & Walker, 1988). Factors contributing to the development of stress symptoms ranged from gender, economics, workload, political issues, government regulations, geographical and personal isolation (Thurston, et al., 2003; Walker & Walker, 1988).

The aforementioned factors are determinants of health that collectively may be influencing overall wellness in the farm women aggregate. Determinants of health are factors outside the health care system that contribute to the health of populations (Hamilton & Bhatti, 1996). As such, the context (diverse elements that affect values, beliefs, and behavior of individuals) of the stress experience (the continuum of factors, coping, response, behavior changes, and illness development) (Gerrard, 2000) may need to be understood at an aggregate level in order to plan effective 'upstream' mental health intervention strategies.

## *Stress Theories*

Stress is not an illness in itself. However, stress had been identified as a major contributing factor to the eventual development and aggravation of disease (American Psychiatric Association, 2004). The three most influential stress theories include the General Adaptation Syndrome (Seyle, 1993, Seyle, 1976, Seyle, 1956), the Transactional Stress Theory (Aneshensel, 1992), and the Social Stress Theory (Lazarus & Folkman, 1984). Definitions and descriptions of each theory are provided (*Table 1*).

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***Table 1***

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Stress Theories

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1. General Adaptation Syndrome (GAS). Seyle (1956)

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\*The nervous and endocrine systems are the masterminds of the body's stress response. Failure and/or exhaustion of the systems may result in disease.

- Operational definition: "The state of stress by the measurable manifestation of the stress syndrome" (Seyle, 1976, p. 64)
  - Stress definition: "The non-specific (that is common) result of any demand upon the body, be the effect mental or somatic" (Seyle, 1993, p. 7)
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2. Transaction Stress Theory (TST).

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\*The response is a subjective phenomenon influenced by cognitive appraisal (threat, harm, and challenges), emotions, and coping responses

- Stress definition: "a rubric consisting of many variable and processes" (Lazarus & Folkman, 1984, p.12)
  - Stressors may include: daily hassles, major changes affecting one or few persons
  - Psychological stress occurs when coping fails
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3. Social Stress Theory.

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\*A state of arousal resulting either from the presence of socio-environmental demands that tax the individual's ordinary adaptive capacity

- Stress definition: "Discrepancies between those condition and characteristics of the individual, his needs, values, perception, resource and skills" (Aneshensel, 1992, p.16)
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Comparisons of the aforementioned stress theories illustrate an individual-centered focus. The theories present stress as an individual response to various stress stimuli. Patterns of ineffective coping such as the development of illness (physiological and psychological), and behavior problems may, as a result, be viewed as an individual problem. Even though factors (economics, government policies, and isolation) contributing to farm stress were found to be outside the individual's control (Thurston, et al., 2003; Walker & Walker, 1988), the focus of stress related interventions still reflect "downstream thinking" and remain at the individual level.

## *The Canadian Farm Context*

The Canadian farming context is one that has seen the gradual decline of farm numbers, while in some geographical locations, rural and small town populations have flourished (Racher, 2001, Statistics Canada, 2005). Nonetheless, rural communities continue to face demographic, ecological, economic, and social problems due to geographic isolation, depletion of natural resources, chronic high employment, depopulation, an aging population, and environmental decay (Pitblado, Pong, Irvine, et al., 1999).

In spite of moribund farm numbers, agriculture remains a primary industry providing income and employment for many rural and urban dwellers (Government of Manitoba, 2004). Farming lifestyles are characterized by seasonal workload and recreational activities, lower population density, greater spatial distances between people and services, and an economic orientation to land and nature (Bushy, 1994).

### *Farming — A Workplace*

Farming is considered one of the most hazardous and stressful occupations in the industrialized world (Guilfoyle, 1992; Thurston, Blundell-Gosselin, & Vollman, 2003b). From an environmental perspective, the farm context exposes men, women, and children to an overwhelming number of controllable and uncontrollable factors that contribute to an unsafe workplace and residence (Guilfoyle, 1992). Some contributing factors include heavy farm workloads, off-farm work, increasing size of farm, farm as a residence, availability of hired help, use of chemical agents, and heavy equipment (Guilfoyle, 1992; Thurston, Blundell-Gosselin, & Rose, 2003).

### *Economic Reality of Farming*

Historically, farming has consistently endured cyclic economic ‘downturns and upturns’ (van de Vorst, 2002). The economic feasibility of farming remains uneasy (Lind, 1995). Canadian government farm statistics reveals farm debt to asset ratio, and revenues have not significantly improved since the 1980’s (Canadian Federation of Agriculture, 2004). The pervasive effects of economic instability have been found to be a major contributing factor to the development of stress in farm men, farm and rural women (Gerrard, 2000b, Gordon & Pain, 1995; Walker & Walker, 1987). In fact, Meyer and Lobao (2003) discovered when studying 800 farm men and women who had experienced the 1980’s American Midwestern farm crisis that agricultural macro level changes were impossible to deal with at the micro (individual coping) level. Macro level changes resulting from inappropriate and irrelevant government bureaucratic policies and subsidies have been shown to have a severe impact on self-esteem, coping and resiliency development (Gerrard, 2000b; Kubik & Moore, 2001; Meyer & Lobao, 2003; Walker & Walker, 1987).

In order to ‘make ends meet’ farm women economized, worked harder, and acted as a buffer against the initial shock of an economic crisis (van de Vorst, 2002). However, these coping skills may no longer be sufficient of off-set economic instability. Gordon

and Pain (1995) suggest Canadian prairie farm women are feeling increasing powerless, and misunderstood by government and agri-business, and unsupported by their communities and service providers.

A comprehensive review of key bodies of literature provided an overview of women's contextual experiences on the farm. The reviewed stress theories reveal a narrow biomedical focus that may result in victim-blaming when physiological, psychological, or behavioral manifestations arise. When the stress experience is situated within the farming cultural context, the lived realities of women may possibly be culturally motivated by the interplay of various health determinants. This study sought to examine farm women's stress continuum as perceived, defined and lived, on a day-to-day realities.

### *Conceptual Framework*

Socialist Feminist Theory (SFT) is the lens that guided and provided the means to understand and conceptualize the realities of farm women's stress experiences. SFT is based on several assumptions including: Women are expert knowers of their day-to-day lived reality; women are an oppressed group within dominant cultures; women's oppression is due to cultural institutions, class structures, and capitalist enterprise (Ardevini-Brooker, 2002; Campbell & Wasco, 2000). SFT was seen as providing the essential grounding needed to bring women's ways of knowing to the forefront by raising consciousness of everyday ordinary and extraordinary events through critical reflection.

## **METHODOLOGY**

A mini-focused qualitative critical ethnographic approach was selected to explore farm women's stress experiences. Specifically, to give voice to farm women's ordinary and extraordinary, day-to-day events within the lived realities of the stress experience, and provide the basis for change in delivering services to farm women. Ethnography may be broadly defined as "writing about groups of people" (LeCompte & Shesnsul, 1999, p. 21). Rooted in anthropology, ethnography provides elucidation of how people think, what they believe, and how their thoughts and beliefs affect their behavior (Kleinman, 1992). Values, beliefs, and behavior are a result of how reality is interpreted through social, political, cultural, economic, ethnic, and gender values (Campbell & Wasco, 2000).

### *Sampling Approach*

A non-probabilistic sampling (purposive sampling, snowballing, and posters) approach was used for participant recruitment. The approach to sampling allowed the identification of specific groups of people who possessed characteristics and live in circumstances relevant to the social phenomenon being studied (Mays & Pope, 1996). Recruitment was facilitated by the staff at a community farm stress program. Participants were either close friends, or neighbors of the program staff, and members of a rural women's group. Sampling continued until thematic saturation was attained.

The eight participants ranged in age (39 to 64) and education (high school diploma to university degree), were married with children, lived on and helped to operate a mixed or beef farm operation affected by the 2003 Canadian Bovine Spongiform Encephalitis (BSE) crisis. The majority of women practiced religion, worked off the farm, and felt the farm income was insufficient. Health (general practitioner) and agricultural services were used to help deal with stress.

### *Data Collection*

The voices of women and their subjective 'lived through stress experiences' surfaced by the combination of two face-to-face, women-centered interviews and photovoice. Photovoice is a participatory method that uses visual imagery as a means of enabling the identification of central issues in people's lives (Wang & Burris, 1997). The pre-photovoice was guided by interview questions (*Table 2*) focused on the breath of the stress continuum. Whereas, the post-photovoice interview was participant-led, using participant photographs of their stress experience.

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*Table 2*

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#### Interview questions

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1. Tell me about your life on the farm.
  2. Stress means different things to different people. What does it mean to you?
  3. Certain things and events may cause stress for people. What kinds of things produce the feeling of being stressed for you?
  4. Some women deal with stress in a variety of creative ways. What do you do to deal with stress?
  5. How do you think the farm 'way of life' affects your stress experience?
  6. What kind of support would you like to see available to help farm women, such as yourself, to address stress on the farm?
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Interviews were conducted either at home, at a mutually agreed upon site, or by telephone. The interview was kept flexible with questions emerging as a result of answers to previous questions (Britten, 1995). With each subsequent interview, the wording of the questions changed to reflect farm women's own words (Pope, et al., 1995). As the participant answered the initial questions, the women were asked to clarify, explain, and expand on their responses (Devault, 1990). If women did not have the words to express themselves concisely, facial expressions, and body language were observed and recorded in field notes.

### *Data Analysis*

Data collection and analysis was a cyclical process informed by Spradley's (1980) steps for conducting ethnographic research (Speziale, 2003). Triangulation of the findings was ensured by various sources of data collection. Data sources included reflective

notes, interview transcriptions, participant photographs, field notes, windshield survey, and participant demographic information.

Spradley’s steps for conducting ethnographic analysis included: Domain identification (discover and search for patterns that make up the cultural scene); taxonomy identification (discovery of relationships, and larger categories to which the domains belong, and generation of questions about emerging concepts), componential analysis (search for cultural attributes/characteristics); identification of cultural themes; and writing the ethnography (Speziale & Carpenter, 2003).

### *Central Theme*

The overall cultural knowledge that guided Canadian farm women in conceptualizing their stress experiences was reflected by a central theme: ‘The self as mediator of cultural duality in changing times’. The ‘self’ refers to the aggregate of prairie farm women. The central theme is supported by four taxonomies. The taxonomies include: ‘Self as invisible agent of changing times’; ‘Self as cognizant agent of changing time’; ‘Self as subservient nurturing agent of the family’; and ‘Self of minder of women’s inner voice’. The ethnographic paradigm and supportive taxonomies are summarized in *Table 3*.

**Table 3**  
Ethnographic paradigm

Taxonomy	
I.	Self as invisible agent of the way of life
	a. Description: “The good farm woman” who forsakes and subjugates her own needs to ensure the survival of the farm.
	b. Cultural attributes:
	i. Personification of the farm as entity
	ii. Women’s needs inferior to the farm, and the male farmer
	iii. “You have to make sacrifices”
	iv. “Doing what needs to be done”
	v. Relinquishing control to male authority
II.	Self as cognizant agent of changing times
	a. Description: Women as knowledgeable but powerless to deal with changing times.
	b. Cultural attributes:
	i. Economic forces, social, and political forces subsequently impacted on the family, farm, rural community forces
III.	Self as subservient nurturing agent of the family
	a. Description: Represent the struggle to raise and educate children and be the family’s caregiver
	b. Cultural attributes: Farm needs supersedes:
	i. Children’s needs
	ii. Spouse’s need
IV.	Self as minder of women’s inner voice
	a. Description: Represents women’s endeavour to sustain equipoise of the self during changing times.
	b. Cultural attributes:
	i. Women as emotional symptom bearer of the family who farms
	ii. Women’s capacity to manage

### ***Self as Invisible Agent of the Way-of-Life.***

The 'self as invisible agent of the way-of-life' represented the good farm women who forsook and subjugated their own needs to ensure the survival of the farm. Farm women's testimony of the following cultural attributes illustrates the perception of oppression on the farm. A componential analysis revealed five cultural attributes characterizing the taxonomy includes: Personification of the farm as entity; women's needs inferior to the farm/farmer; "you have to make sacrifices"; "doing what needs to be done"; and relinquishing control to male authority.

***Personification of the Farm as an Entity.*** Personification of the farm as an entity defined how women think about the farm as a living entity. They spoke of the farm as having priority needs that required their husband's attachment. One woman referred to the farm as "the other woman". The farm was an intrusion, as it usurped all the man's time and money, while leaving nothing for the woman. The following represents women's thinking about the farm: "The farm is my husband, and my husband is the farm... You cannot separate them [spouse and farm], it is not just an attachment, it is who they are."

***Women's Needs Inferior to the Farm and the Male Farmer.*** Farm women interviewed had an acute awareness that the farm's sustenance was the priority. The farm as a capitalist enterprise usurped the majority of the farm's earnings, and required the farm family's time and energy. Adequate and safe housing, an identified priority for women was not considered essential. One woman saw the neglect of the farm and her home as "symbolic of the state of the farm, and to a certain extent our relationship". Every woman interviewed took photographs of their homes in various states of disrepair. The home photographs were representative of a factor greatly impacting women's stress experience. When talking about their homes and esthetic appearance of the farm yard expression of sadness and hopelessness surfaced. The home, considered the woman's domain, was considered superfluous. Women felt a new home, or renovation of the existing home was disallowed because they had to be on constant alert while anticipating the farming economic lows.

"We could built a house...I just cannot talk him into it. In fact, I don't even try to talk him into it anymore. For some reason, there has to be so much money in the bank, in case of BSE and a drought comes. It is just really frustrating to me because as a woman's point of view, a house is really important. We went through a lot of years when I really tried to push, push, push it and it caused a lot of friction ...I get embarrassed when people drive into the yard...they're [people] are going to judge us be the outside of that house and that causes me a lot of stress."

Their spouse's overwhelming burden of farm work precluded men from being able to renovate/repair the homes, and maintain the esthetics of the farm yard. The burden of work was such that men have started to do what one woman called "revenue generating work". The burden of work was due to the increased size of the herd, required farm infrastructure changes, while being "cash strapped" resulted from BSE. "Revenue

generating work” encompassed all those activities that can “turn a profit”. One woman’s description of the farm was reflective of this phenomenon: “...there is junk around everywhere, which drives me completely around the bend. [The piles of junk] just keep growing and growing, and growing and growing. This poor old tree [on a photograph] fell down two years ago and there it lies and it look like hell and what it needs is for somebody to have a chainsaw to chop it apart,...he doesn’t have the time and we don’t have the money to hire.”

**“You have to make sacrifices.”** Farm women felt they had to sacrifice their own needs to maintain the every day life of the farm and cultural expectations. Forsaking and subjugating own needs was an element of the ‘way-of-life’. In times of economic adversity farm women reported alteration in their spending habits. One woman’s words were indicative of this phenomenon: “And you think, well there’s not enough money, and then you just, I just kinda put it out of my head, and I just think okay, we just gotta work with what we have”.

In times of economic struggle women expected to work harder. Farm work was difficult and challenging. Women’s work ethic was well developed. Work was what motivated all the participants to get up in the morning. When stressed or worried, women indicated they worked harder as a means of coping because “it’s what you do.” Women believe the farm ‘way-of-life’ represents “a lot of work for little return”, while another stated: “I mean you’re doing what you do and you just do it because it needs to be done, but no, I mean it’s just expected of you I guess. And at the end of the day there is no reward”

Another sacrifice that farm women made was the lack of leisure time to spend with their spouses and families. This sentiment was expressed in the following words: “That’s life on the farm, or that’s what it is like to be married to a farmer...you can never leave, there’s always something to fix, and you are never free”.

**“Doing what needs to be done.”** Farm women reported the traditional values and beliefs were still prevalent among farming people especially the gendered division of labor (raising children and housework). The gendered division of labor was reinforced not only by men, but by women as well. One woman described her husband’s expectations as follows: “And if I even mention [to my husband] having to do a dish in her presence, she [mother-in-law] says well you can always send him back...my husband is very chauvinistic of women’s work so I find housework that’s my chores”

A considerable portion of farm women’s work was invisible and often went unrecognized by the men. These sentiments were reflected by one woman’s words. “When I first moved out to the farm and the guys wouldn’t talk, they wouldn’t involve me, in the conversation. So I was serving coffee and ... cookies, in the background and picking up on the conversation, and then I would hear my husband say things that, I’d never heard him say to me about farming. And it used to really frustrate me that I wasn’t more part of those conversations because why would you think that I wouldn’t understand or if I couldn’t understand or why wouldn’t you [husband] take the time to explain.”

***Relinquishing Control to Male Authority.*** Seven out of the eight farm women who participated in the study were daughters-in-law, who had married into the family farm. Women felt they had to relinquish control to male authority because the farm did not belong to them as a couple. The following participant's words clearly articulate this sentiment: "...The thought that he might have to, relinquish, some of the control, and oh God forbid we should [even] entertain the idea."

In relinquishing control, women who married into the farm gave away the right to contribute to decision making. Men tended to consult women on menial decision. However, women felt belittled, because the consultation was considered tokenism. Tokenism is illustrated by this woman's words: "When you stand back and look at the big picture there are some decisions that he's made, that I certainly didn't agree with, but I also felt that I didn't have any, um, influence over them. He's always smart enough to come and ask me, but, then, I truly believe that he just makes his own decision and, I don't think he generally bases it on what I have to say about it...Why don't you ask me something important? You're [the husband] gonna do whatever you want anyway so, just go do it!"

As well, in order to sustain the farm, women felt they needed obdurate faith in their husband's ability to act in the family's best interest: "[A good farm woman] has to be extremely supportive of her, husband, never, say a bad word about him, like, you know he's just a wonderful guy and we're gonna do what he wants to do and, and a very sixties kind of [thinking]...And so, I kinda think [that] in order to be, a good farm wife you have to sort of have to have faith [in your husband]."

During the course of the interviews, farm women described conflicting feelings about the farm way-of-life. The inconsistent feelings were expressed during the first and second interview, and through the photographs. Although at first glance women appeared to be happy with the farm way-of-life, their testimony was reflective of ambivalence of whether the life was all that it was meant to be. Women appeared to tell stories of pride/freedom/independence, while at the same time reporting oppressive group characteristics. Hence, farm women appeared to be living a cultural duality where they had learned and incorporated the male value system of the farm way-of-life.

### ***Self as Cognizant Agent of Changing Times***

'Self as cognizant agent of changing times' represents women's knowledge, and powerlessness to deal with the impacts of changing times. Women felt that the fabric of farming was in a state of flux. Although, women described many perceived changes, a common response pattern emerged. Women felt "vulnerable", and as such "unsure" of the future of farming, and wishing for simpler times as voiced below by one woman. "[There is] a desperation to get back to when it was good [in farming]: "When it [life] felt good. This is about the life you used to have and wishing it was all okay."

The factors associated with the stress experiences are varied, and reflective of the individuality of the stress experience. However there were three common factors

described by all farm women. The factors included economic forces, social changes, and political forces. All the factors were perceived as uncontrollable, and as a direct result of the Bovine Spongiform Encephalopathy (BSE) outbreak.

***Economic Forces.*** Farm women felt that BSE had created undue financial crisis for the farm family, the farm, and the community. The economic crisis was seen as foundational to all the other issues. The most important factor in women's stress experience was "all financial stress" and it makes one woman feel "stripped to the bone". The concerns were centered on its perceived impacts on the family, "I can tell you which farm families are struggling and which ones aren't by the behavior of the kids in the hallways...they're acting out in the hallways," on the farm, "I almost feel now at this point of agriculture [low market values for products] that we are like the slaves working the land, and everyone is suffering." and at the community level, "I would say that [there is a] big change in our whole community because of [BSE] and so you feel somewhat more vulnerable."

While community members were supportive of each other in times of individual loss, the community was unable to provide for each other when everyone was facing the same bleak prospects. One woman felt that 'we are our own worst enemies because "we have relinquished control over everything."

***Social Changes.*** Women felt the public perceptions of farmers were indicative of societal change. The 'city people's' perception of the farm's economic sustainability was contributory to the "sense that nobody cares and understands". Women emphasized that farming is not a business but a 'way-of-life' as reflective in the following narrative: "[In farming], you maybe bought some equipment the year prior, relying on the money from your calves to pay your bills. When you get no money for your calves because the border's closed, you can't pay your bills and bill collectors start phoning and they have absolutely no compassion. They don't care. These are city people, maybe they are not all city people, but they don't care..."

***Political Forces.*** Women felt that the government had "lost sight of the importance farming." Whilst past governments were supportive of agriculture, women felt that this was no longer the case. The government was accused of "being asleep at the wheel," "being pretty wussy," "being pushed around by the Americans," and as a result one woman had "less faith in the politics of farming." When the BSE crisis occurred, women felt that the government missed "a fantastic opportunity to create slaughter houses, and now the window of opportunity closed". Another woman expressed her sentiments about subsidies: "They [governments] are turning farmers into like welfare people, because they can't make enough money at what they are doing to pay their bills and you know, just be like everybody else".

### *Self as Subservient Nurturing Agent of the Family*

The self as subservient nurturing agent of the family represented the struggle to raise and educate children and be the caregiver of the family while placing the needs of the farm as the priority. Therefore women placed themselves at the end of the priority needs list.

**Children Needs.** Farm women as nurturers and caregivers placed much emphasis on the importance of their family's well-being. Overwhelmingly, women indicated that the central benefit to living on the farm was that it was "good for the kids." The health of the family was paramount to woman's sense of identity as expressed by one woman: "I'm so close to my kids, and they are my entire life...because I am a hundred percent mom. That's all I ever wanted, something [children] to love."

In times of economic insufficiency, such as experienced during the BSE crisis, women's concerns for their children's well-being were exacerbated. One woman's concerns were reflected by the following words: "It's not whether the farm survives this [BSE], or the rain, it is the worry of looking after my children and still being a good parent and giving [to them]...what I hate about farming, is kids ...we had to pull [the children] out of hockey because it cost us so much money..."

Women expressed concern for their children's current and future needs. There was overwhelming evidence to suggest that women do not want their children to continue the family farm because "you're not making any money." Whilst farm woman understood the importance of the farm as the economic base, they were unwilling to sacrifice the well-being of the family to ensure the farm's survival. Women did not have qualms of selling the farm to ensure the family's survival: "But if it [financial situation] came down to the point where, we couldn't function anymore, we would have to have coming in from somewhere. We can't continue the way we are and keep losing forty thousand dollars a year, we just cannot."

In order to help sustain the farm and their families, farm women went out to work. For some women, off-farm work was a necessity as a result of the ongoing economic crisis. "Dabbling", was defined, as working for the benefits of "just getting out, and kinda getting a break from the farm." "Dabbling" was considered acceptable, however, working to sustain the farm was perceived as a threat to the perception of impending farm bankruptcy because "nobody wants to be the generation that loses it [the farm]." Women obtained off-work employment to "help pay the bills, and as well, to spoil them [children]."

**Spouse's Needs.** Farm women expressed concerns about their husband's well-being on the farm, their inability to adequately provide for the family as result of BSE, and the harmful effects of the farm/farmer relationship. One woman's words reflect the aforementioned concerns:

"[The farm] is sucking my husband dry." "...He is a source of stress for me in terms of what the impact of farming is on him, because he has always been such a strong and

capable man and I've seen him falter, I've seen him afraid, and I never saw that before...and it makes me angry about what [BSE] has been able to do this man."

### ***Self as Minder of Women's Inner Voice***

The 'self as minder of women's inner voice' was described as women's endeavor to sustain equipoise of the self during changing times. The taxonomy was defined by two cultural attributes. They include: Women as emotional symptom bearer of the family who farms; and women's capacity to manage.

***Women as Emotional Symptom Bearer of the Family Who Farms.*** Whilst women described different physical, behavioral, and cognitive manifestations of stress, a state of sadness, frustration, anger, hopelessness and guilt were experienced by all women who had married into the family farm. One woman described her feelings with the following words: "The kid part of me, the part of me that enjoyed life has left. A part of me has left and I don't think it is ever coming back."

Women felt that their apparent lack of control and support on the farm made them feel hopeless. The sense of hopelessness was more pronounced for women whose participation in farming decisions was minimal. Women felt that they would "rather not know", "to go away from the farm", "let it ride", "just forget about it", "not think about it", "just want to be left alone", and "let go of silly dreams" in order to cope.

***Women's Capacity to Manage.*** Women felt that they had the ability to manage and "find their own way out" by taking control, coming together, and finding solutions. One woman in counseling felt strongly that the first step to take control was to be responsible for her emotions as reflected by her words: "It is my choice to let things bother me, and my emotions belong to me, they are mine. I am making a conscious choice to deal with things differently"

While some women learned through experience as one woman explained: "Like I've learned over the years how to cope. So just as time goes on, I just find different ways. That worked for me for [it] might not work for everybody else. Coping is just evolving." Another woman felt that adversity "made me stronger", while another woman set boundaries for "what I would do and not do" made her feel in control. Taking control was indicative in one woman's need for education about stress: "The main thing is recognizing stress, and be comfortable and secure enough to share your feelings. That it is okay to talk about it."

Women characterized 'coming together' as the supports that farm women have to facilitate coping. On the one hand some women have supportive spouses that 'will try and support me in every way he can.' On the other hand, for six out the eight women interviewed spousal support was non-existent. One woman described her husband's lack of support in the following words: "I guess a part of that has been snubbed out because of lack of his support, and I've lost interest in the things that I love...because he does not appreciate it, so why bother."

The lack of spousal supports for some caused the development of their “own support system...my girlfriends.” Friends were perceived as “living it [farm life], they [friends] know what it’s like and they understand, and [it help get] the stuff [stress] off your chest.” However, friends were “not immediate neighbors, they are from a distance away”. Women had a preference for friends outside the immediate vicinity in order to keep their “dirty laundry at home.”

Some women felt that managing could be encouraged by “building capacity,” and “I would like to see more strength within to bring us together as a common [place] almost like a religion, that the community might build itself.” Informal supports such as women’s group where “a bunch of women gather who live in the community and then of course you talk farming together” may be helpful. However, the “trust factor” remained a problem for women to feel safe.

Woman strongly felt that services should be delivered by “women who are involved in it up to their necks because they are the only ones that can understand.” These services should also be provided face-to-face “by someone outside the community.” Women felt that solutions to dealing with the “root causes” of stress needed to be found: “I could go for a massage, and that would feel good at the time. But we need to deal with the root causes of it [stress].”

Finding solutions for one woman meant that “farmers have to start rowing forward in the same direction [to obtain their goal]”. While another woman felt that public education was required “to get those stressors on the table and make people aware of them.” Other practical solutions included those provided by Agricultural representatives of the area, and “rethinking government policies that [subsidies] are chronic, and debilitating.” During the interviews, women presented with a diversity of emotions. Women felt that although they had strengths to deal with the multiplicity of factors contributing to stress, they also felt that solutions needed to come from policy.

## **DISCUSSION**

The central theme ‘Self as mediator of cultural duality in changing times’ represents the stress experience (how stress is viewed, defined, understood, experienced, and dealt with on a day-to-day basis). Stress was viewed as a continual emotional reaction that was heightened vicariously through the experiences of the spouse, the farm, the family, and the community (local, provincial, national, and global). The aggregate defined stress as ‘worry’ which contributed to a fervent sense of alertness causing continual emotional upheaval.

The aggregate defined itself as ‘good farm women’ with a supportive role rather than an operative role on the farm. The farm was defined as “an operation that was a lot of work for little return. Culture and ‘way-of-life’ were synonymous and reflected the farm as a social construction. The aggregate defined the ‘way-of-life’ as being patriarchal, and dominated by traditional values and beliefs. As such, the aggregate assimilated both

dominant and feminine realities. The cultural struggle or ‘balancing act’ of the stress experience was as a result of the two ‘ways-of-being’.

On a day-to-day basis, the fulfillment of the feminine identity led to guilt, and ineffective coping. However, the aggregate’s cultural struggle also enhanced capacity and resiliency in dealing with changing times. The aggregate felt that by taking control, coming together (friends, community building, informal supports, and cultural specific services, and finding solution through policy and public education could potentially improve ‘changing times’ at micro and macro levels.

The supportive taxonomies are reflective of parts of the whole continuum, however in sum; the taxonomies are connected by the perceived economic burden, and subsequent perception of ‘being out of control.’

### ***Economic Impacts of Bovine Spongiform Encephalopathy (BSE)***

Historically, Canadian farms, farm women, and their families have endured periods of severe economic downturns (Gordon & Plain, 1995; Kubik & Moore, 2001; Lind, 1995; van de Vorst, 2002; Walker Schubert & Walker, 1987). Farm women and their families have lived with the knowledge that the farm as a capitalist institution receives funding and familial primacy (Gerrard, 2000). However, the Canadian beef industry had not experienced the degree, and propinquity of devastation provoked by the 2003 Canadian BSE crisis.

In May 2003, a six year old cow was diagnosed with BSE in Alberta. BSE, a fatal degenerative disease, is caused by recycled animal protein in ruminant feed and subsequently affects the central nervous system of cattle (Labrecque & Charlebois, 2005). The media announcement ignited an industry wide crisis (socio-economic and political) whereby Canadian beef and cattle exports abruptly ceased (Labrecque & Charlebois, 2005). Aggregate and socio-cultural impacts of BSE are discussed.

### ***Aggregate Impacts***

Approximately three years after the BSE crisis, the study participants faced and dealt with economic hardships in ways that the literature had previously explicated. Participants altered their spending habits (Gerrard, 2000; van de Vorst, 2002), worked harder (Heather, et al., 2005; Kubik & Moore 2001; Roberts & Falk, 2004, Walker & Walker, 1987), and reduced the amount of leisure time (Rosenblatt & Anderson, 1981; Walker & Walker. 1987). Similar to Saskatchewan farm and rural women, the farm women interviewed recognized the farming male dominated traditional value system, the gendered division and invisible nature of their work contributions (Gerrard, 2000b; McGee, 1983). Daughter-in-laws, like the women in this study were negatively affected by the context of the family farm (Gerrard, 2000b).

Raising consciousness of the impacts of the Bovine Spongiform Encephalitis (BSE) crisis caused a reappraisal of previously held values and beliefs. A reevaluation, of the farm's capacity to provide for the family, led women to question their mate's attachment to the farm, their authority, and their decision making. Women questioned the whole notion of the farm way-of-life, and its continuance. Women felt their needs were not being met, and were doubtful about future need fulfillment. These findings have not been previously reported within the farm stress literature.

The aggregate felt powerless to influence the dramatic economic changes brought on by BSE. Even though women placed the needs of their children, spouse, and farm above their own individual needs as traditionally customary (Heather, et al., 2005; Kubik & Moore, 2001; Roberts & Falk, 2004) they still developed a patterned emotional response to the crisis. Women worried. As emotional symptom bearer of the farm family's economic stress, women displayed a myriad of emotions (guilt, anger, worry, and hopelessness). This phenomenon has not been described in the Canadian literature; however Oklahoma farm women have been described as symptom bearers of their families (Stein, 1982). Traditional individual coping strategies previously explicated in the stress literature were ineffective for the participants. Meyer and Lobao (2003) also found that coping skills such as denial, support seeking, comparing oneself to others, having a plan, and hoping for a miracle exacerbated stress when dealing with macro-level changes.

In particular, women were concerned about the impacts of the economic strains on their spouses. In this study, farm women experienced their spouse's stress vicariously. While past literature findings suggested that farm men's stress symptom were more likely impacted by financial distress, and women by familial issues (Walker & Walker, 1988; Parry, et al., 2005), this was not entirely correct in the context of this study. As such, economic impacts and the development of stress are disquieting because it may affect both husbands and wives equally. Farm women must deal with their familial care giving roles, while vicariously enduring the economic hardship of the farm/farmer while suffering in a voiceless silence.

### ***Socio-Cultural Impacts***

The aggregate was cognizant of the far reaching economic impacts of the BSE crisis. The economic hardships had a rippling effect from the farm gate to the rural community. The impacts identified by the aggregate ranged from women's nurturing role (spouse and family), to children's behaviors in school, to the increased burden of work on the farm (reduced leisure time, increased expenses to deal with a greater number of cattle), to community losses (increased vulnerability).

The aggregate blamed ineffective government policies, the media, and society for the misconstruction and mismanagement of the crisis. Women felt that the government mishandled the border closures, found the media's portrayal and sensational representations of the problems inaccurate, felt misunderstood by urban populations, and felt that society did not value farmer's contributions to food production. The economic,

social, and political factors identified have been found to be major contributory factors to farm stress (Dreary, Wilcock, & McGregor, 1997; Kubik & Moore, 2001; Gerrard, 2000; Meyer & Lobao, 2003; McGhee, 1983; Thurston, et al., 2003; Walker & Walker, 1988).

### ***Women's Perception of Being Out-of-Control***

Common to all the taxonomies is the perception of lack of control. The perceived low level and/or lack of control was based on their supportive rather than partnering roles on the farm. Women who married into the family farm reported having token input on decision making at home, and on the farm, had minimal control in their off-low-level farm work. Therefore, for these farm women, the perception of control was minimal at home, on the farm, and at work. Although, the existing farm stress literature does not corroborate this finding, Folkman and Folkman (1984) suggest that beliefs of control and commitment are influential in the appraisal of stress and subsequent coping. Study participants felt they had the ability to manage by taking control, coming together, and finding solutions but they needed help. These findings are substantiated by Gerrard's (2000) resiliency work with farm and rural people.

The opportunity, to legitimize women's lived experiences of stress, provided consciousness rising of the cultural duality of farm women's existence. The importance of the changing face of the family, farm, and community while enduring the broad shifting uncontrollable root causes of stress (social, economic, and political) has been paramount to understanding the stress experience at the aggregate level.

### ***The Future***

The study findings illustrate the need for aggregated focused mental health interventions within a Primary Health Care Framework (empowerment and community development) (Stewart, 2000). Political will through the adoption of Population Health Promotion model (Hamilton & Bhatti, 1996) is required to address the root causes of the stress experience through the representation of women's voice at the policy table (Skogstad, 2005), enabling the maintenance and development of rural women's group (Bushy, 1994; PWCHE, 2003), and effective use of the media in the social re-contextualizing of the stress experience. Raising awareness of the root causes of the stress experience may help shift the image of victim to one of strength (Gerrard, 2000).

Future research initiatives should include the exploration of farm men and women in various farming operations both provincially and nationally, the human impacts (women, families, and rural communities) resulting from BSE, and the impact of housing quality home to women's well-being.

### ***Conclusion***

Stress is a pervasive issue that has been perceived as an individual's inability to cope with various personal/contextual forces. There was evidence to suggest that farm women were particularly vulnerable to the effects of stress as measured by quantitative

biomedical focused tools of inquiry. A feminist orientated, mini-focused critical ethnographic qualitative approach was selected to understand and discover the unique cultural attributes that shape women's stress experience on the farm. The economic crisis post-BSE (social, political, and economic forces) and the subsequent perception of loss of control (the individual, family, farm, and community levels) were foundational to the aggregates stress experience. Although determination, hard work, deprivation, and resiliency have allowed women to survive, their voices must be heard to deal with the root causes of macro-level changes. Upstream thinking is required to develop stable long-term and crisis management farm policies to ensure the sustainability of farming, and wellness of the family who farms. Future research endeavours may include: an exploration of farm men and women in various farming operations, the human impacts of macro-level 'crisis' situations such as BSE, and the impact of housing quality on women's perceived well-being.

## REFERENCES

- American Psychiatric Association (2004). *Diagnostic and statistical manual of mental disorders (TR)*. London: John Wiley & Sons, Ltd.
- Aneshensel, C. S. (1992). Social stress: Theory and research. *Annual Review Sociology*, 18, 15-38.
- Ar dovini-Brooker, J. (2002). Feminist epistemology: The foundation feminist research and its distinction from traditional research. *Advancing Women in Leadership*. Retrieved June 3, 2005, from <https://www.advancingwomen.com/awl/spring2002ARDOV~CG.HTM>
- Booth, N. J., & Lloyd, K. (2000). Stress in farmers [Abstract]. *International Journal of Social Psychiatry*, 46(1), 67-73.
- Britten, N. (1995). Qualitative research: Qualitative interviews in medical research. *British Medical Journal*, 3(11), 251-253. Retrieved January 19, 2004, from <http://80-bmj-bmjournals-com.proxy1.lib.umanitoba.ca/cgi/content/full/311/6999/251>
- Brown, P. W. (1998). Effects of stress on the psychological symptoms and general health of rural primary care patients [Abstract]. *Dissertation Abstract International: Section B: The Science and Engineering*, 58(12B), 6860.
- Bushy, A. (1994). Women in rural environments: Consideration for holistic nurses. *Holistic Nursing Practice*, 8(4), 67-73.
- Campbell, R., & Wasco, S. M. (2000). Feminist approaches to social sciences: Epistemological and methodological tenets. *American Journal of Community Psychology*, 28(6), 773-791.

Canadian Federation of Agriculture (2004). *The Canadian Farm*. Retrieved February 11, 2004, from <http://www.cfa-fca.ca>

Devault, M.L. (1990). Talking and listening from a women's standpoint: Feminist strategies for interviewing and analysis. *Social Problems*, 37(1), 96-116.

Dreary, I. J., Willock, J., & McGregor, M. (1997). Stress in faming [Abstract]. *Stress Medicine*, 13(2), 131-136.

Gallagher, E. (1993). The third shift: Juggling employment, family, and the farm. *Journal of Rural Community Psychology*, 12(2), 21-35.

Gerrard, N. (2000). An application of a community psychology approach to dealing with farm stress. *Canadian Journal of Community Mental Health*, 18(2), 89-100.

Gerrard, N. (2000b). *What doesn't kill you makes you stronger: determinants of stress resiliency in rural people in Saskatchewan*. Saskatoon Health District: Author.

Gordon, E.A., & Pain, B.J. (1995). Stress in the farm family: strategies for empowerment. In H. H. McDuffie, J. A. Dosman, K.M. Semchuk, S. A. Olenchock, & A. Senthilselvan (Eds.), *Agricultural health and safety: workplace, environment, sustainability* (pp. 461-464). Boca Raton, FL: CRC Press Inc.

Government of Manitoba (2004). *Travel Manitoba*. Retrieved February 23, 2004, from [http://www.travelmanitoba.com/quickfacts/geo\\_ofmb.html](http://www.travelmanitoba.com/quickfacts/geo_ofmb.html)

Guilfoyle, J. (1992). Hazards of farming. *Canadian Family Physician*, 38, 2044-2052.

Hamilton, N., & Bhatti, T., (1996). *Population health promotion: An integrated model of population health and health promotion*. Ottawa: Health Canada, Health Promotion and Development Division

Heather, B., Skillen, L., Young, J., & Vladicka, T. (2005). Women's gendered identities and the restructuring of rural Alberta. *Sociologia Ruralis*, 45(1/2), 86-97.

Kleinman, A. (1992). Local worlds of suffering: an interpersonal focus for ethnographies of illness experience. *Qualitative Health Research*, 2(2), 127-134.

Kubik, W., & Moore, R. (2001). *Women's diverse roles in the farm economy and the consequences for their health, well-being, and quality of life*. Retrieved January 26, 2004, from <http://www.campioncollege.sk.ca/news/pdf>

Labrecque, J., & Charlebois, S. (2005). A conceptual comparative analysis between the British and The Canadian mad cow crisis. Retrieved June 19, 2006, from [http://www.lfamg.org/conferences/2005conference/Papers&Discussions/1162\\_Paper\\_Final.pdf](http://www.lfamg.org/conferences/2005conference/Papers&Discussions/1162_Paper_Final.pdf)

- Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- LeCompte, M., & Schensul, J (1999). What is ethnography? In *Designing and conducting ethnographic research* (pp. 1-28). Walnut Creek, CA: Alta Mira Press.
- Lind, C. (1995). Powerlessness, community and the environment: When the system farms the farmer. In C. Lind, *Something's wrong somewhere-Globalization, Community and the Moral Economy of Farm Stress* (pp. 69-86). Halifax, N.S.: Fernwood Publishing.
- Lobao, K., & Meyer, K. (2003). Economic hardship, religion, and mental health during the Midwestern farm crisis. *Journal of Rural Studies*, 19(2), 139-155.
- Lyon, B. L. (2000). Stress, coping and health. A conceptual overview. In V. H. Rice (Ed.), *Handbook of stress, coping, and health. Implications for nursing research, theory, and practice* (pp. 3-23). CA: Sage Publications, Inc.
- Martz, D. J., & Brueckner, I. S. (2003). *The Canadian farm family at work: exploring gender and generation*. Centre for Rural Studies and Enrichment St. Peter's College. Retrieved August 16, 2005, from [http://nfu.ca/epff/documents/The\\_Canadian\\_Farm\\_Family\\_at\\_Work.pdf](http://nfu.ca/epff/documents/The_Canadian_Farm_Family_at_Work.pdf)
- Mays, N., & Pope, C. (1996). Rigour and qualitative research. In N. Mays, & C. Pope (Eds.), *Qualitative Research in Health Care* (pp.10-19). London: BMJ Publishing.
- McGhee, M. (1983). *The changing scene: Women in rural life*. Toronto: Ontario Ministry of Agriculture and Food.
- Meyer, K., & Lobao, L. (2003). Economic hardship, religion and mental health during the Midwestern farm crisis. *Journal of Rural Studies*, 19, 139-155.
- Parry, J., Barnes, H., Lindsey, R., and Taylor, R. (2005). Farmers, farm workers and work-related stress. Retrieved February 10, 2006, from <http://www.hse.gov.uk/research/rrhtm/rr362.htm>
- Pearlin, L.I. (1989). The sociological study of stress. *Journal of Health and Social Behavior*, 30(3), 241-256.
- Pitblado, J. R., Pong, R. W., Irvine, A., Nagarajan, K. V., Sahai, V., Zelmer, J., Dunikowski, L., & Pearson, D. S. (1999). *Assessing rural health: Toward developing health indicators for rural Canada*. Centre for Rural and Northern Health Research: Health Canada.
- Pope, C., & Mays, N. (1995). *Qualitative research: Reaching the parts other methods cannot reach: An introduction to qualitative methods in health and health services*

research. Retrieved January 19, 2004, from <http://80-bmjournals-com.proxy1.lib.umanitoba.ca/cgi/content/full/311/6996/42>.

Prairie Women's Health Centre of Excellence (PWHCE) (2003). *Summary report. Rural, remote and northern women's health*. Winnipeg: Author.

Racher, F. (2001). *Determinants of rural health: Populations and communities*. Unpublished manuscript: Brandon University.

Roberts, J., & Falk, M. (2002). *Women and health: Experiences in a rural regional health authority*. Retrieved February, 11, 2004, from <http://www.pwhce.ca/pdf>

Rosenblatt, P. C., & Anderson, R. M. (1981). Interaction in farm families: Tension and stress. In R. J. Coward, & W. M. Smith Jr. (Eds.), *The family in rural society* (pp. 147-185). Boulder, CO: Westview Press.

Seyle, H. (1993). History of stress concept. In L. Goldberg, & S. Breznitz (Eds.), *Handbook of Stress* (2<sup>nd</sup> ed.), (pp. 7-17). NY: The Free Press, A Division of Macmillan, Inc.

Seyle, H. (1976). *Stress in health and disease*. Boston: Butterworths.

Seyle, H. (1956). *The stress of life*. NY: McGraw-Hill Book Co.

Skogstad, G. (2005). Policy Networks and Policy Communities: Conceptual evolution and governing realities. Retrieved May 11, 2006, from <http://www.cpsa-acsp.ca/papers-2005/Skogstad.pdf>

Speziale, H.J.S (2003). Ethnography as method. In H. Streubert Speziale, & D. Rinaldi Carpenter, *Qualitative research in nursing: advancing the humanistic imperative* (3<sup>rd</sup> ed.). (pp. 154-180). Philadelphia, PA: Lippincott Williams & Wilkins.

Statistics Canada (2005). *Farm population, by provinces (2001 Censuses of Agriculture and Population)*. Retrieved March 03, 2005, from <http://www.statcan.ca/english/Pgdb/agrc42h.htm>

Statistics Canada (2005b). *Farm women head to work off the farm—more or less*. Retrieved August 16, 2005, from <http://www.statcan.ca/english/kits/agri/women.htm>

Statistics Canada (2004). *Profile of rural and urban populations by sex and age, 2001*. Retrieved February 11, 2004, from <http://www.statcan.ca/english/freepub/95F0303XIE/tables/html/agpop1302.htm>

Stewart, M. J. (2000). Primary health care principles: Core of community health nursing. In M. J. Stewart, (Ed.), *Community nursing: Promoting Canadians' Health*, (pp.58-82). Toronto: Saunders.

Stein, H. f. (1982). The annual cycle and the cultural nexus of health care behaviour among Oklahoma wheat farming families. *Culture, Medicine and Psychiatry*, 6, 81-89.

The Canadian Agricultural Injury Surveillance Program (CAISP), (2003). *Agricultural injuries in Canada for 1990-2000*. Ontario: Author.

Thomlinson, E., McDonagh, M. K., & Crooks, K. B. (2004). Health beliefs of rural Canadians: Implications for practice. *Australian Journal of Rural Health*, 12, 258-263.

Thurston, W. E., Blundell-Gosselin, H.J., & Rose, S. (2003). Stress in male and female farmers: an ecological rather than an individual problem. *Canadian Journal of Rural Medicine*, 8(4), 247-254. Retrieved February 07, 2004, from <http://www.cma.ca?staticContent/HTML/NO/12/cjrm/vol-8/issue-4/0247.htm>

Thurston, W., & Meadows, L. (2003). Rurality and health: perspectives of mid-life women. *Rural and Remote Health*, 3. Retrieved February 10, 2004, from <http://rrh.deakin.edu.au>

Thurston, W. E., Blundell-Gosselin, H. J., & Vollman, A. R. (2003b). Health concerns of male and female farmers: Implications for health promotion planning. *CJRM*, 8(4), 238-246. Retrieved February 07, 2004, from <http://www.cam.ca>

van de Vorst, C. (2002). *Making ends meet. Farm women's work in Manitoba*. Winnipeg, MB.: University of Manitoba Press.

Walker, L. S., & Walker, J. L. (1987). Stressors and symptoms predictive of distress in farmers. *Family Relations*, 36, 374-378.

Walker, J.L., & Walker, L.S. (1988). Self-reported stress symptoms in farmers. *Journal of Clinical Psychology*, 44(1), 11-16.

Wang, C., & Burris, M.A. (1997). Photovoice: Concepts, methodology and use for participatory needs assessment. *Health Education and Behavior*, 25(3), 369-387.