Get 'Er Done: Experiences of Canadian Farmers Living with Chronic Low Back Disorders

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ABSTRACT

Purpose: This study explored the experiences of adult farmers living with chronic low back disorders (LBDs) in Saskatchewan. **Method:** A qualitative phenomenological approach with inductive thematic analysis was used to analyze semi-structured interviews that had been audio recorded and transcribed verbatim. Interview items focused on the perceived cause of LBDs, their impact on social and work life, coping strategies, and health care access and use. **Results:** A total of 12 face-to-face interviews were conducted with 11 men and 1 woman aged 40–84 years. Two overarching themes emerged: seasonality and isolation. Related sub-themes included pushing through, doing less, barriers to health care, and self-management. **Conclusions:** Farmers are faced with seasonal demands and geographical constraints, which lead them to push through the pain or do less when experiencing an episode of low back pain. In addition, farmers identified many barriers to accessing health care services that caused them to develop self-management techniques to cope or to go without care. This study provides the groundwork for future research addressing the unique occupational demands of farmers. Knowledge of farmers' experiences with chronic LBDs and their challenges regarding health care access can help inform health care providers and decision makers and contribute to tailored services and management approaches for similar rural and remote regions in other parts of the world.

Key Words: agriculture; farmers; health services accessibility; low back pain; qualitative research.

RÉSUMÉ

Objectif : explorer les expériences des agriculteurs adultes de la Saskatchewan qui souffrent de douleurs lombaires chroniques. **Méthodologie :** les chercheurs ont utilisé une approche phénoménologique qualitative associée à une analyse thématique inductive pour dépouiller des entrevues semi-structurées enregistrées puis transcrites textuellement. Les volets de l'entrevue portaient sur les causes perçues des douleurs lombaires, les effets de ces douleurs sur la vie sociale et professionnelle, les stratégies d'adaptation, l'accès aux soins de santé et l'utilisation de ces soins. **Résultats :** au total, les chercheurs ont effectué 12 entrevues individuelles auprès de 11 hommes et une femme de 40 à 84 ans. Deux thèmes globaux ont émergé : le caractère saisonnier et l'isolement. Les sous-thèmes connexes incluaient le fait de persévérer, le fait d'en faire moins, les obstacles aux soins et l'autogestion des soins. **Conclusion :** les agriculteurs doivent se soumettre à des exigences saisonnières et des contraintes géographiques, ce qui les incite soit à persévérer soit à en faire moins lorsqu'ils souffrent de douleurs lombaires. Ils ont également énuméré de nombreux obstacles aux services de santé, qui les portent à adopter des techniques d'autogestion pour endurer ou poursuivre sans se faire soigner. L'étude jette les bases de futures recherches sur les exigences professionnelles caractéristiques des agriculteurs. Ce regard sur les expériences des agriculteurs à l'égard des douleurs lombaires chroniques et de leurs difficultés à obtenir des soins peut éclairer les dispensateurs de soins et les décideurs et contribuer à la création de services adaptés et d'approches de prise en charge dans des régions rurales et éloignées semblables d'autres parties du monde.

Low back disorders (LBDs) are common and highly prevalent in the general population. Four out of five adults will experience back pain at some point in their

lives,^{1–3} with approximately one in five adults experiencing persistent back pain associated with lasting disability.^{4,5} Chronic low back pain is one of the most prevalent

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health issues in Western nations, and managing it represents one of the highest costs of health care.⁶

LBDs are of particular concern in farming communities. A recent systematic review highlighted the fact that musculoskeletal disorders are consistently more prevalent in farming than in non-farming populations, with LBDs being the most common complaint.⁷ Farmers are at a higher risk of developing musculoskeletal pain and dysfunction, including LBDs; suspected causes are a high level of manual labour, lifting and carrying heavy loads, working in trunk flexion for extended periods, sitting for long hours while operating machinery, working with the unpredictable actions of livestock, and being exposed to vibrations from machinery.⁷

Saskatchewan has approximately 36,952 farms and 49,475 farm operators.⁸ The farming community makes up approximately 10.3% of Saskatchewan's total population, the highest proportion of any province in Canada.⁸ A recent study found that, of a sample of 2,595 Saskatchewan farmers, 85.4% reported having musculoskeletal problems, with low back pain being the most common complaint (57.7%).⁹

The Saskatchewan farming environment is unique. First, the province has a low population density, with large geographical dispersion, compared with the rest of Canada. The average Canadian farm size of 778 acres is less than half the average farm size in Saskatchewan, at 1,668 acres, and Saskatchewan has many farms larger than 10,000 acres.¹⁰ Second, Saskatchewan farms, like those in the northern United States, have a relatively short growing season—approximately 130–140 growing days per year—and this demands intense periods of farm activity.⁸ Therefore, results from previous studies investigating the risk factors and experiences of farmers with LBDs in other countries^{10–12} may not accurately represent the remote and environmental context of the farming population with LBDs in Saskatchewan. Thus, the objective of this study was to explore the experiences of adult Saskatchewan farmers living with LBDs—specifically, how it affects their personal and work lives, access to health care, and management strategies—to better understand the complexities and impact of LBDs in the Saskatchewan farming community.

METHODS

Study design and sample

This cross-sectional, mixed-methods study used a primarily phenomenological, qualitative framework to gain more information on Saskatchewan farmers' experiences of living with LBDs. Participants were recruited from the Farmers Back Study, a field study investigating farming exposures to LBD risk factors in Saskatchewan.¹³ Participants were invited into the study by mail and followed up by phone. Eligible participants were adults, either pri-

mary farm operators or farm workers who performed farm work for at least 12 weeks of the year, and had chronic LBDs. A chronic LBD was defined as pain and discomfort localized below the costal margin and above the gluteal folds, with or without leg pain, which: 1) limits usual activities or daily routine and 2) has been present for >3 months.¹⁴

Data collection

We obtained qualitative data from audio-recorded interviews conducted from February to May 2015 at the interviewees' farming location. The 20- to 30-minute, face-to-face, semi-structured interviews were based on an interview guide developed by the research team (see the [Appendix](#)) and were conducted by one of two trained non-clinician interviewers. Modifications to the interview guide were made after a series of meetings and pilot testing with farmers. Questions were open-ended and included a series of core questions and prompts related to the lived experience of chronic low back pain on the farm; the impact of chronic LBDs on quality of life; changes to overall work behaviour as a result of LBDs; perceived access to and use of health care services; and coping mechanisms, strategies, and management.

Before the interviews, participants completed a series of standardized questionnaires related to the physical and psychosocial risk factors of chronic LBDs. These included the Oswestry Disability Index (ODI),¹⁵ Fear Avoidance Belief Questionnaire (FABQ),¹⁶ Modified Zung Depression Index,¹⁷ and Modified Somatic Perceptions Questionnaire,¹⁸ as well as socio-demographic questions, farm and work task characteristics, stress and psychosocial hazards, general health questions, and health care use and access questions.

Data analysis

Audio recordings of the interviews were transcribed verbatim by a third-party source, and we analyzed written transcriptions using NVivo, version 10 (QSR International, Burlington, MA). A student research team, made up of five physical therapy students (BJ, LD, JC, JN, NR), performed a continuous and iterative analysis of the transcripts. Transcripts were read in teams of two, and quotes were highlighted and inductively coded according to our research question. After four transcripts had been coded, the full research team, consisting of two experienced physical therapists (BB, LC) and two non-clinician researchers (MIK, CT), met and developed a coding framework by which further transcripts were coded. We refined the codes by consensus during regular team meetings and developed themes that captured meanings within the codes.

This process was repeated, breaking the main themes down into sub-themes. Sub-themes were then referenced against the original transcripts to ensure that they represented the content of the interviews with high fidelity.

Standardized questionnaires were scored, and quantitative data were entered into Microsoft Excel, version 2015 (Microsoft Corporation, Redmond, WA) for further descriptive analysis.

Questionnaire results were visually inspected to provide context about the respondents' level of function, disability, and participation; these characteristics were considered for evidence of links or commonalities among the individual participants' interview transcripts and their corresponding responses on the questionnaires, particularly the ODI and FABQ. For example, if a participant had particularly high or low scores on either the ODI or the FABQ, we purposely sought to explore his or her responses in the semi-structured interview to see whether the questionnaire scores explained or gave more depth to the interview content.

We developed several strategies for ensuring trustworthiness and credibility: we coded the transcripts multiple times, held team debriefings, used participants' quotes verbatim, and checked our initial themes with four participants at the study's Stakeholder Advisory Group meeting, where the participants confirmed that the identified themes corresponded with their views. To ensure interpretive validity, cues were given and questions were asked during the interviews to clarify the participants' responses and to obtain greater depth and accuracy about their experiences.

All participants volunteered freely after providing informed consent. Ethical approval was granted by the University of Saskatchewan's Research Ethics Board.

RESULTS

Participants and farm characteristics

A total of 12 participants with chronic LBD were included in the study; they were aged 40–84 years and represented 11 separate farms. All farms were located within 400 kilometres of Saskatoon, the largest city in Saskatchewan. The majority of participants (66.7%) were the primary farm owner, with 9–70 years of farming experience. All farms produced grain, and some farms produced additional commodities, such as cattle or vegetables and fruit. Four participants had off-farm work in addition to their farm duties. Sociodemographic, general health, and farm characteristics can be found in Table 1.

Thematic analysis

The researchers identified two overarching themes: seasonality and isolation, and four sub-themes: pushing through, doing less, barriers to health care, and self-management. It is important to note that although the themes are numbered in the sections that follow, there is no hierarchical structure among them, but rather significant overlap (see Figure 1).

Table 1 Sociodemographic, Health, and Farm Characteristics of Farmers with Chronic Low Back Disorders

Characteristic	No. (%) of respondents (<i>n</i> = 12)*
Age, y	
35–49	4 (33.3)
50–64	6 (50.0)
≥ 65	2 (16.7)
Sex	
Male	11 (91.7)
Female	1 (8.3)
Highest level of completed education	
Less than secondary	0 (0.0)
Secondary	2 (16.7)
Some post-secondary	4 (33.3)
Post-secondary	6 (50.0)
Health	
Current BMI, kg/m ²	
Underweight (< 18.5)	0 (0.0)
Normal (18.5–24.9)	4 (33.3)
Overweight (25.0–29.9)	4 (33.3)
Obese (≥ 30.0)	4 (33.3)
Perceived health rating	
Excellent	2 (16.7)
Very good	3 (25.0)
Good	4 (33.3)
Fair	2 (16.7)
Poor	1 (8.3)
No. of comorbidities	
None	2 (16.7)
1–2	4 (33.3)
≥ 3	6 (50.0)
Oswestry Disability Index [†]	
Minimal disability	8 (72.7)
Moderate disability	3 (27.3)
Distress and Risk Assessment Method [†]	
Normal	8 (72.7)
At risk	2 (18.2)
Distressed somatic	1 (9.1)
Fear Avoidance Belief Questionnaire, median (range, min–max) [†]	
Physical Activity subscale	13 (2–19)
Work subscale	16 (3–22)
Farm characteristics, yes	
Primary farm owner	8 (66.7)
Off-farm work	4 (33.3)
Total work on farm, y	
0–19	1 (8.3)
20–39	3 (25.0)
40–59	7 (58.3)
≥ 60	1 (8.3)

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Table 1 (continued)

Characteristic	No. (%) of respondents (<i>n</i> = 12)*
Farmland, acres [†]	
< 2,000	3 (27.3)
2,000–3,999	2 (18.2)
4,000–5,999	4 (36.4)
≥ 6,000	2 (18.2)
Commodities produced [†]	
Grain crop only	7 (63.6)
Grain crop plus beef cattle	3 (27.3)
Grain crop plus vegetables and fruit	1 (9.1)

*Unless otherwise indicated.

[†]*n* = 11 (one incomplete questionnaire).

In the context of Saskatchewan farming, seasonality represents the periods requiring intense and time-sensitive activity. Geographical isolation reflects the low population density and long distances between farms and between a farm and the nearest town or city. As [Figure 1](#) illustrates, pushing through, doing less, barriers to health care, and self-management are influenced by both seasonality and isolation. First, farmers described how they

needed to push through their back pain to get their work done; this was a result of both the limited growing season and a lack of alternative labour arrangements resulting from living in a geographically isolated area.

The farmers described doing less in relation to the seasons in two ways: low back pain disrupted their ability to work at the capacity required over the busy summer months, and the winter months were a time of inactivity, resulting in a body that was ill prepared for the upcoming summer work. Doing less because of low back pain led to isolation, both at work and socially, because farmers had to either sacrifice leisure activities, take more breaks, or employ custom work (e.g., a professionally contracted machinery operation) during the busy season.

In addition, seasonal time constraints and geographical isolation (or distance) were barriers to health care for farmers seeking treatment of LBDs: either they were too busy to attend appointments that required substantial travel, or limited health care services were available. The final theme of self-management reflects how farmers dealt with their LBDs as a result of the other themes and sub-themes. Some farmers developed skills to successfully manage their back pain and be productive at work, and others struggled to cope on their own. Individual examples are described in more detail next.

Figure 1 Themes and sub-themes identified from qualitative interviews with Saskatchewan farmers with low back disorders.

Overarching theme 1: seasonality

Farming in Saskatchewan is dictated by seasonal constraints: there is a relatively short growing season (May–October) and a long winter (November–April). In crop farming, this involves distinct differences in the type of work that is completed for each season. One participant noted working “10, 12, 14 hours” during busy seasons. Several participants described having back pain related to the different growing seasons and the different tasks that coincide with them. One participant stated, “That’s the problem with farming: you go hard at one thing, and then something completely different, or you don’t do anything. It’s not consistent.” Another participant expressed the idea that, with farming, the tasks are so varied and unpredictable that farmers can never really prepare their body physically for the work.

We have so many different tasks that we’re doing throughout the year that I think the body never gets completely prepared . . . all of a sudden, you’re doing things that you haven’t done for several months, so it’s difficult for the body to react to that.

Overarching theme 2: isolation

Saskatchewan farmers typically work in rural and remote locations, resulting in geographical isolation. They live long distances from both their neighbours and larger centres that offer health care services. This theme of geographical isolation is represented in the following quote: “We made about 8,000 kilometres last year travelling for physio, chiropractor, and specialists.” In addition, geographical isolation informed the theme of dissatisfaction and barriers to accessing health care, as is described by one participant.

Well, I could probably go more often, but I’m 30 miles away from a chiropractor and, depending on the physio, I could be 90 miles away, and when you go, sometimes it’s a 10-to-15-minute appointment. I don’t like to do that.

Sub-theme 1: pushing through

Because of the seasonality of farming job requirements and the geographical isolation, participants identified a common theme of pushing through the pain and discomfort caused by their low back pain. The short time frames necessary to perform large amounts of work during specific seasons, and the inability to access treatment options because of the geographical isolation, led participants to push through the pain to get the work done, as one participant describes: “Well, you just try and be more careful because there’s some things that hurt worse to do, but even around here, you’ve got to do the work.”

Sub-theme 2: doing less

This sub-theme covers a wide spectrum beyond only work activities; it encompasses decreasing social activities, completing work tasks more slowly, taking more

breaks, seeking help from family or friends, and outsourcing work to a third party (e.g., custom spraying or custom combining). One participant discussed the impact that LBD had on everyday life. “I couldn’t sit; I couldn’t do anything, so for 6 months, I was in a lot of pain.” Another noted the effect on social and recreational activities: “I don’t play hockey anymore; I should have quit before, but it was old-time hockey, and it was fun, and it was a social thing.”

Farmers said that getting custom work done (outside contracting) was often a last resort, when other strategies were ineffective at decreasing pain to a manageable level. Custom work had an impact on their financial stability because they had to pay someone to complete the work that they were unable to do. Getting custom work done was not a way to treat back pain, but rather a business requirement to complete the required work within the seasonal time constraints, as shown by the following quote: “Yeah, I just did what I absolutely had to, and that was it. If I couldn’t do it, I paid somebody to do it.”

Sub-theme 3: barriers to health care

Participants identified barriers to health care as contributing and exacerbating factors in their LBDs: limited access in rural settings and resultant long wait times, high out-of-pocket costs related to travelling to urban centres for treatment, long distances travelled to seek health care, and decreased access to clinicians with adequate knowledge and competence in musculoskeletal disorder management. Seeking out specialist treatment was often deemed not worth the trip. “I don’t like to drive for an hour for a 15-minute appointment because to do it right, you’ve got to go three or four days a week.” One participant noted, “It was a year and a half before I got to see the physiotherapist . . . because she only has so much time.”

Another participant described the difficulty of recruiting and retaining health care professionals to work in rural and remote areas. “We went a year and a half with no physicians.” This situation can cause problems with continuity of care, as one participant described:

I’ve never worked here with a Canadian physician; it’s always been a physician from, usually, South Africa, England, other countries, which is fine, which is great, I haven’t had any complaints with them, but you don’t have that continuity, and then maybe you’ve started to see one physician, but you can’t get in to [see] them for 3 weeks, so then you go to see the other person, who doesn’t know you – [you] sort of have to begin all over again.

Sub-theme 4: self-management

Participants described how, in their context, it was essential to use self-management strategies to manage their back pain as opposed to seeking health care. The overarching themes of isolation and seasonality also

informed this sub-theme because many of the participants reported using self-management strategies as a result of the time constraints of the farming season and the long distances travelled to access musculoskeletal health care professionals. Self-management included both active and passive management of LBDs outside a health care setting. For example, participants often described trying to manage their LBDs by using stretching and strengthening exercises. “I mean, if I’m working on the tractor, the combine, and my back starts to bother me, I just stop the machine, get off, stretch, and then get back on again.” Some used medications and thermal modalities. “[I] just take pills and put heat on it and lay [sic] down.”

It is important to note that some farmers were able to effectively manage their symptoms on their own, whereas other farmers using self-management strategies were less successful:

[I use a] combination of Advil and Tylenol. . . . I’ve tried some other things, but usually that’s it and then ice, heat, rest. . . . They don’t solve the problem, but they help alleviate symptoms for a while.

Relationships between questionnaires and interview responses

To investigate whether there were any relationships between the questionnaires and the transcripts, further analysis was conducted. Two participants whom we identified from their ODI scores as having moderate disability described the impact of their LBDs on work-related tasks as either “getting custom work done” or “taking longer for things to get done.” These participants also described how LBDs had an impact on their leisure activities: one participant was limited “from doing a lot of social things”; for the other, it decreased the amount of time spent square dancing.

Four participants had higher than median scores on the FABQ Physical Activity subscale, and only one participant had a higher than median score on the Work subscale. Higher scores mean more strongly held fear avoidance beliefs. Although these participants discussed engaging in avoidance behaviour during work and leisure activities, similar themes appeared throughout several transcripts, regardless of their FABQ score. Four participants had abnormal Distress and Risk Assessment Method scores; three of them were labelled “at risk” and one as “distressed somatic.” However, there did not appear to be any relationship between the interview responses and the questionnaire scores.

DISCUSSION

This study identified six inter-related themes described by Saskatchewan farmers with LBDs. Our findings confirmed that farming in Saskatchewan is dictated by seasonal constraints because of the relatively short grow-

ing season (May–October). The volume and type of work to be done on a crop farm in summer, compared with winter, is drastically different: most farm work happens during seeding and harvest, creating more intensive periods of work, culminating in extensively higher work volumes and longer workdays. The unpredictable nature of the Saskatchewan climate and growing season dictates that the work required during seeding and harvest times cannot be put off when there is an acute exacerbation of LBDs; therefore, farmers are often left with the option of either pushing through the pain to get the work done or doing less by delegating work. Seasonal demands drive time pressures; as a result, farmers are also less likely to access health care during the busy growing season.

Seasonality also plays a role in physical fitness – such as when farmers described feeling that they were unprepared or unfit for the heavy demands of farming after a long winter. Farmers related this physical unpreparedness for the growing season to the increased likelihood of re-injury to the low back. Although this sample identified being unprepared for heavy work in the summer season as a contributor to chronic LBDs, several participants said they just pushed through the pain to get the work done.

Geographical isolation contributes to the distance farmers need to travel to access health care as well as to limitations in the continuity of care found in rural Saskatchewan. The difficulty of recruiting and retaining health care professionals to work in rural and remote regions is an ongoing challenge in Canada and around the world.¹⁹ Also, as identified through our interviews, the use of locum physicians in rural regions of the province can mean that those living there often do not have a strong or long-standing relationship with their health care practitioner.¹⁹ Rural health care practitioners, including physical therapists, are also more likely to be generalists and may not necessarily have a focused musculoskeletal practice like that of urban-based health care practitioners,¹⁹ thus compounding the barriers to accessing appropriate care. Saskatchewan is a large province with a low population density. As a result, the definition of *rural and remote* may be different in farming communities in other countries. Despite these differences, however, similar perceived barriers to accessing health care in farming populations have been found among New Zealand farmers.¹¹

Barriers to health care, seasonality, and isolation all likely contribute to the theme of self-management of LBDs. Several participants found that changing position and stretching was an effective means of actively managing their pain. Many also spoke of using passive management strategies, such as over-the-counter medication, to mitigate their pain. Given the identified challenges in accessing health care, the self-management approaches identified by the participants perhaps highlight their

resiliency in the face of adversity. This can-do attitude to self-managing LBP in a farming context was similarly identified among New Zealand¹¹ and Irish¹² farmers. Moreover, the use of active self-management strategies aligns with current evidence-based guidelines for LBP²⁰ and is thus not necessarily a negative finding. However, given the challenges of accessing care identified by the participants, those individuals who would benefit from more intensive health care interventions are less likely to be identified and optimally managed.

Although not explicitly uncovered in the interviews and analysis, another factor that may affect access to and use of health care is the current provincial occupational regulations. Saskatchewan farmers are covered under the *Occupational Health and Safety Act* (1993) and *Regulations* (1996);²¹ whereas most workers in Saskatchewan are automatically covered by the *Workers Compensation Act* (1979), farmers and farm workers are not. Coverage is optional, and an application for coverage must be made.^{22–24} Insurance plans are only highly recommended by the provincial government, and, as a result, farmers may be working uninsured and paying for treatment of injuries themselves. The lack of funding to support time lost due to work-related injuries likely feeds into the themes discovered in the present study because farmers with LBDs are more likely to push through the pain to get through the growing season. The situation is different in the neighbouring province of Alberta, for example, where farmers employing waged workers and family members of waged workers have recently been required to be registered with the Workers Compensation Board.^{25–26} As a result, farmers in Alberta and other jurisdictions with workplace insurance coverage may not have the same barriers to health care access as their Saskatchewan counterparts, potentially affecting their health status.

There appeared to be a disconnect between the qualitative and quantitative data, with no consistent patterns noted in visual inspection. For example, a participant with a higher perceived disability score, as determined by the ODI, did not necessarily reveal high levels of perceived disability in the interview. This may be because the interviews were participant-led, focusing on areas important to each individual, and did not target all potential implications of LBDs revealed by the questionnaires. Another possibility is that farmers, who are known for their stoicism and resilience,¹¹ may be less likely to indicate higher scores on objective measures; thus, methodologies using only quantitative questionnaires in a farming population may not always uncover the true effect of LBDs on quality of life.

The results from this study are similar to those from qualitative studies on farmers in other areas of the world, suggesting that farming, in general, has many similarities despite the geographical and commodity-related variation in occupational demands. For example, Dean and

colleagues (2011)¹¹ reported similar findings from studies of New Zealand farmers, with a common theme of just carry on, which parallels our study's theme of pushing through. This similarity could be due to the fact that both New Zealand and Saskatchewan farmers are predominantly self-employed⁹ and driven by economic reasons as well as barriers to accessing health care, a finding common to both studies.

However, being self-employed is not a sole predictor of pushing through: Brock and colleagues (2012)²⁷ found that farmers in South Georgia shared the strategy of working through pain. South Georgian farmers stated that working through pain was an inevitable part of farm labour, despite the fact that they were not self-employed. New Zealand farmers positively identified the flexibility of being a self-employed farmer and being able to do lighter duties or other jobs on the farm if their back pain was bothering them.¹¹ Irish farmers also reported making work changes such as slowing down, avoiding certain activities, and carrying smaller loads as well as completing exercises and seeing chiropractors or physical therapists.¹² Saskatchewan crop farmers may not be able to use these strategies as easily because of the higher seasonal demands resulting from the shorter, unpredictable growing season and from their geographical isolation.

Seasonality was a dominant theme in our results, and it drove the other themes. Findings from the present study were largely based on farmers with grain-crop or mixed (grain and beef cattle) farms in Saskatchewan. Although other types of farm commodities exist in the province, they are less common. A postal survey of Saskatchewan farmers found that many farms have mixed production; almost 89% produce grain, 52.7% produce beef, and only 6.8% produce other animals.²⁸ Live-stock farmers have different seasonal demands: beef farmers have their busy time during calving season,⁹ which occurs in late winter and early spring, compared with two busy seasons (spring and fall) for grain-crop farmers. In New Zealand, farmers are mainly lamb or beef producers, and that type of farming has different seasonal and occupational demands, such as lifting sheep, identified as a significant cause of low back pain.¹¹ Although Saskatchewan farmers must also perform lifting tasks, grain farming requires less lifting than animal production. More common physical exposures, such as prolonged sitting on machinery and exposure to whole-body vibration, are more likely to be associated with low back pain in grain farmers.^{29–31}

This study had several limitations. The first was the challenges presented by conducting a study with a farming population. Because of the distance required to travel to and from the farms and the limited times that the participants were available, the face-to-face interviews were not conducted by the researchers who created the interview guide and who performed the initial qualitative data

analysis. This meant that these members of the research team were unable to follow up on responses of interest. In addition, the fact that two individuals rather than a single person completed the interviews may have influenced the resulting data.

Another potential limitation was the fact that the farmers were aware that we were researchers from a health care field, and this may have influenced their answers and the candour of their comments. Unfortunately, we were unable to report individual-level demographic, questionnaire, and corresponding interview responses because of the ethics and consent parameters of our study. Future research using a mixed-methods approach with similar populations should consider requesting consent to report non-aggregate data; this would enable researchers to provide a more fulsome report of their findings.

There is also a potential limitation of the “healthy worker effect”³¹ because the study did not include individuals who were no longer farming as a result of LBDs. This may be why there were relatively low ODI scores (i.e., low perceived disability due to LBDs) compared with what the research team expected. In addition, this sample included only one woman and farms on which grain was the primary commodity; therefore, the results may not be representative of all farmers and farm types in Saskatchewan. Finally, most of the farms were located within a 2-hour drive of Saskatoon, so these results may not be generalizable to the entire province, particularly to farmers who live in more remote areas.

CONCLUSION

This study explored the experiences of Saskatchewan farmers living with LBDs. The analysis revealed that farmers are faced with seasonal demands and geographical constraints, which lead them to push through the pain or do less when experiencing an episode of low back pain. In addition, there are many potential barriers to accessing health care services in a rural and remote region such as Saskatchewan, and many individuals either turn to self-management techniques to cope or simply go without care.

The findings from this study provide the groundwork for developing effective prevention and management strategies to meet the needs of this population and to accommodate the factors of seasonality and geographical isolation. It is clear that the health care options available in Saskatchewan do not adequately serve this population, and this situation should be further explored. Future studies should examine potential strategies to enhance access to health care services in rural and remote communities, with the consideration of seasonality, to better meet the needs of farmers living with LBDs. In addition, studies of farming populations should consider the differences in responses to qualitative and quantitative meth-

ods when choosing a study design. A mixed-methods approach, such as the one used in this study, may more accurately represent the extent of the effects of LBDs.

KEY MESSAGES

What is already known on this topic

Low back disorder (LBD) is a common public health issue around the world. Farmers are known to have a higher risk of experiencing LBDs compared with many other occupational groups. However, little is known about the perceived impacts on quality of life among Canadian farmers with chronic LBDs.

What this study adds

Farmers are faced with seasonal demands and geographical constraints, which lead them to push through the pain or do less when experiencing an episode of low back pain. In addition, farmers experience many barriers to accessing health care services in a rural and remote region such as Saskatchewan; as a result, they use self-management techniques to cope or go without care. This study provides the groundwork for future research addressing the unique occupational demands of farmers, such as seasonality and geographical isolation, which ultimately affect the management of chronic LBDs in this population. Knowing farmers' lived experiences with chronic LBDs and the challenges they face in accessing health care can inform health care providers and decision makers, thereby contributing to tailored services and management approaches for rural and remote regions in Saskatchewan, other parts of Canada, and other countries.

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APPENDIX: INTERVIEW GUIDE

1. I'm interested in your experiences with low back pain as a farmer and a person. Tell me about what you think caused your low back pain.
 - a) Cue (if needed): Tell me about your earliest recollection of your experience with LBP.
2. How has low back pain affected your life in general?
3. What is your experience with LBP with respect to your leisure and social activities?
 - a) Cues (if needed): Does it prevent you from visiting friends, going for coffee or dinner, golfing, curling, travelling, attending social events, driving to town for groceries, etc.?
 - b) If they mentioned this already:
 - i. You mentioned that back pain affected _____. Can you tell me more about that?
 - c) If nothing is affected:
 - i. How do you accommodate for the pain?
 - ii. Can you recall any changes that you might make to your social routine when it is particularly bad?
4. What is your experience with LBP with respect to your work *on the farm*?
 - a) Cues (if needed): Let's start by discussing your typical workday activities, and you can tell me how or if your LBP affected your daily routine. Have you had to change anything that you do?
5. Do you work off the farm? If yes: How does LBP affect your work off the farm?
6. How do you deal with your LBP? How do you manage it?
 - a) Self-management focus
 - i. Do you do anything different when you have back pain?
 - ii. Is there anything that affects your pain (anything that makes it better or worse)?
 - iii. How did that work for you? Did you find that helpful? How so/Why not?
 - iv. What made you decide to try that? Where do you get information or advice about how to manage your back pain?
 - v. If already mentioned: you mentioned _____, can you tell me more? Anything else you do to cope? What is that like?
7. What is your experience with using health care services (physicians, chiropractors, physical therapists, massage therapists, etc.) for your back pain?
 - a) What type have you used?
8. If accessing health care:
 - a) When it comes to health care, how do you decide where to go and who to see? What is the best thing the (practitioner) has said or helped you with?
 - b) How do you feel about the advice or treatment recommendations that you receive?
 - c) Are there any challenges in seeing those (other practitioners)? What is keeping you from seeing them?
9. If not accessing health care: Are there any challenges in seeing those (practitioners)? What is keeping you from seeing them?
 - a) Cues: money (insurance), time, cultural barriers, travel, wait times, access to health care (what's available), etc.
10. Would you like to share anything else that has not been discussed regarding your experiences or elaborate on anything that was previously addressed?