



HOUSEHOLD SURVEY RESULTS, COALDALE AB, 2010

Technical Report

THE HOUSEHOLD SURVEY

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Background

There are mounting concerns about individual and community preparedness for disasters in part because disasters are increasing in numbers. Circumstances such as pine beetle infestations, climate change and an increased number of homes in forested areas contribute to the increased number of disasters and their impacts. In order to understand community response to wildfires, a mixed method study was conducted (2008-2010) in two communities in western Canada (Barriere, British Columbia and La Ronge, Saskatchewan) (ruralwildfire.ca). These two communities were selected since they had endured wildfires that resulted in community evacuation with significant loss of property (McClure fire in BC, 2003; and, Mallard fire in SK, in 1999). Coaldale, Alberta was chosen as a comparison community that had not experienced a recent natural disaster and was of similar size to Barriere and La Ronge.

Specifically, the study was developed to determine the types of local social dynamics and institutional structures which contribute to resiliency in rural settlements that have experienced disasters and to determine how resiliency is manifested under these circumstance at: a) an individual or household level and, b) a collective level. Local advisory boards were created and local individuals were hired to work as research assistants. Qualitative interviews were initially conducted with the simultaneous development of community profiles of the participating communities. Household surveys were also conducted in each community and another community which did not experience a wildfire (Coaldale, Alberta). This technical report presents the findings from the household survey that was conducted in Coaldale, AB.

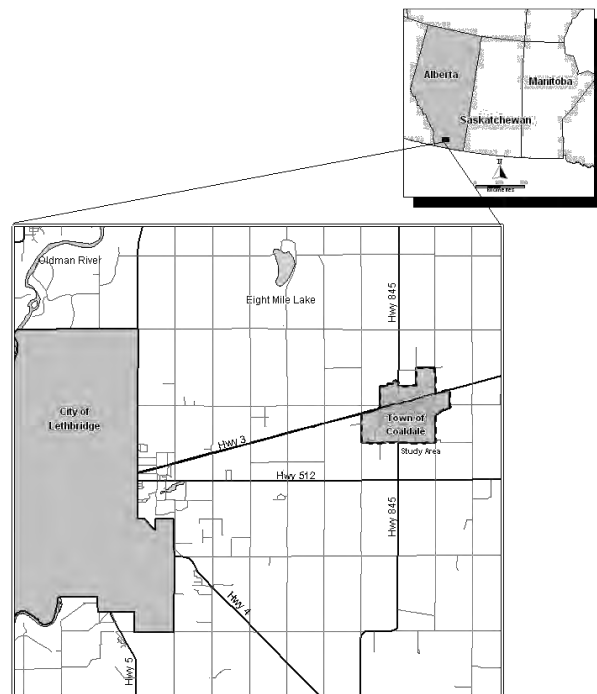


Figure 1

Coaldale Study Area



ETHICAL CONSIDERATIONS

Institutional ethical approval was granted by the University of Lethbridge for the project.

SURVEY DEVELOPMENT

In the original research proposal, we proposed to conduct a mailed household survey in the participating communities. Four of the research team members worked by distance throughout 2008 to devise a questionnaire that would capture the wildfire experience of residents and their perceptions of social support, social cohesion, community resiliency, health and well-being, as well as residents' reported behaviours of community participation. The literature, findings from the qualitative interviews, and the researchers' past experience with previously developed tools guided the development of the questionnaire.

The *General Inventory Questionnaire for Disasters*¹ was modified to specifically inquire about wildfires. For those participants in Barriere and La Ronge, respondents were asked about the amount of warning they had to prepare for the wildfire, the danger and damage experienced by the wildfire, and experience of evacuation. A series of questions on social support were replicated from the *New Rural Economy (NRE)* project², as well as from the *General Social Survey*³. The previously designed questions were modified to capture participant actions before, during and after the wildfire. Social cohesion questions asked about the feelings of respondents living in their respective communities; the questions were taken from the NRE survey and originally were based on the *Neighborhood Cohesion Instrument*⁴. Questions related to community resiliency were based on a previous mailed survey used in Alberta⁵. The questionnaire also contained questions on self-reported health and selected questions on chronic health problems, taken from the *Canadian Community Health Survey (CCHS)* and a question on stress from the NRE survey. Queries about active involvement at the local community level and rural well-being were based on work by Hungerford and Townshend⁶. Demographic variables were constructed to mirror the information gathered in national surveys, such as the CCHS.

Members of the local advisory teams in Barriere and La Ronge provided input and feedback about the content, format and length of the questionnaire and plans for mail delivery. It was during an onsite visit to La Ronge in October 2008 that the researchers realized that distributing the questionnaire via the mail would not result in the desired response rate. After much discussion, a decision was made to re-fashion the questionnaire into a structured interview tool and to hire local research assistants to gather the information by interviews with residents from randomly selected households. This revised strategy was applied to the two communities that had experienced wildfires, as well as the control community. The final versions of the structured interview guide and the participant selection guide, tailored for each community, were finalized in January 2009. Standardized training sessions for the research assistants were conducted in February 2009 in Barriere, and in La Ronge at the end of April 2009.

SELECTING THE HOUSEHOLD SAMPLE & REPRESENTATIVENESS

Face-to-face interviews were carried out by two research assistants from University of Lethbridge who were trained on the use of the sampling lists, issues of confidentiality, and use of the structured interview guide. Each was assigned a share of the primary, secondary, and tertiary sample lists. Households on the primary list were approached and to ensure random selection of male and female respondents, an adult with the most recent birthday was invited to participate in the survey. If there was no response or contact after 3 visits, an address from the secondary sample list (or tertiary list if required) was used as a substitute. Household contacts continued in this manner from May to August 2009. Guidance to interviewers was provided through a weekly scheduled teleconference call during the duration of data collection.



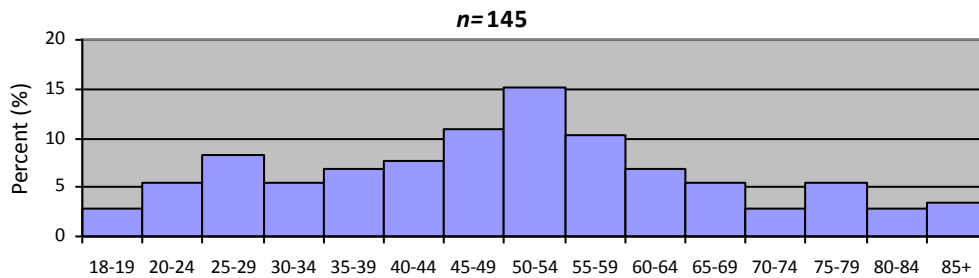
The household survey in Coaldale yielded 145 useable responses. Although not an optimal sample size, time constraints and surveying difficulties made it impossible to obtain the desired 250 responses. Nevertheless, assuming a population of 2795 households in Coaldale, the sample data provides a margin of error of +/- 7.9% at the 95% confidence level and +/- 6.7% at the 90% confidence level.



WHO WERE THE PARTICIPANTS?

In the Coaldale household survey, the largest proportion of respondents were female (n=86, 59%). Females are over-represented among the Coaldale respondents by approximately 10% compared to the proportion of Coaldale females reported in the 2006 Census (49.9% female). The households ranged in size from 1-9 persons with 38% composed of 2 people. Forty-five percent (n= 52) of responding households had no minors living with them. Forty-three percent of the respondents were between the ages of 45 and 64 (n=63) (See figure 2), which represents a higher proportion than the actual population of Coaldale based on the 2006 census (n=1515, 25%). More married people participated in the survey compared to the 2006 Coaldale census data (71% vs. 59%). The majority of the respondents (54%) had some form of post-secondary education; only 1% reported being unemployed, 25% were retired and the majority of the respondents (57%) reported being employed or self-employed. Annual household income for nearly 25% of respondents was reported to be between \$40,000-\$59,999, which is comparable to the median reported earnings of \$39,357 for full time workers, age 15 years and older in Coaldale based on the 2006 census. It should be noted that Coaldale had the highest proportion of survey participants in the study who declined to respond to the household income question (28%).

Figure 2: Age Structure



HEALTH & WELL-BEING

As noted in Figure 3, the respondents most often reported their health as 'very good' or 'excellent' (58%). This response is slightly lower than 61% of Albertans who reported their perceived health as 'very good' or 'excellent' in June 2010. In total, 87 (60%) of the respondents indicated that their life was somewhat stressful whereas 32 (22%) indicated it was not stressful, 15 (10%) said it was not at all stressful, and nearly 8% (n=11) reported their life as very stressful.

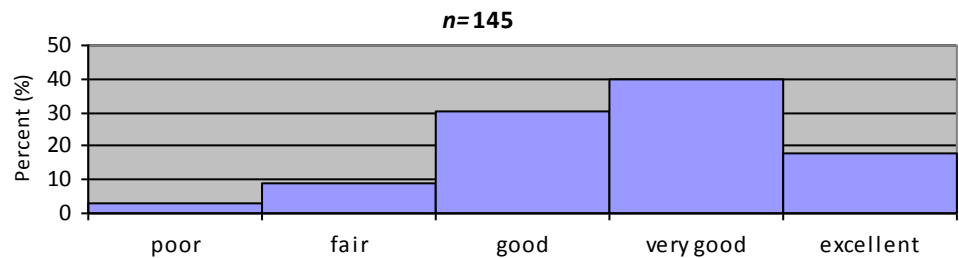
A 21-item scale measuring anxiety was used in the survey. Scores could range from 0 to 63, with a higher score indicating a higher level of anxiety. The average anxiety levels in all three communities were low and highly skewed, with an overall mean of 4.6 (SD=6.5). In Coaldale, the scores ranged from 0 to 41, with a mean score of 3.9 (SD=6.6), slightly lower than the combined mean.

Survey participants were presented with 14 medical diagnoses and asked to comment if anyone in their household had been diagnosed with the condition(s). The most common household chronic conditions among the sample were: arthritis (37%), high blood pressure (37%) and chronic back pain (29%). These top three medical diagnoses in Coaldale were also the top three in the two communities that experienced wildfires. Of note, however, are two diagnoses that were reported by Coaldale respondents more frequently than Barriere and La Ronge: a) asthma (23%); and, b) mood disorder (depression (17%)).





Figure 3: Self-Reported Health



SOCIAL RELATIONS

The participants were all asked to respond to questions about living in Coaldale. The responses reinforce their satisfaction living in this rural area. For example, 95% (*n* = 137) strongly agreed and agreed that they were attracted to living in Coaldale and 86% (*n* = 123) felt like they belonged in the community (See Figure 4). Furthermore, the respondents strongly agreed and agreed that Coaldale gave them a sense of community (*n* = 125; 87%); fellowship existed between themselves and their neighbors (*n* = 91, 63%) and they had a sense of rootedness (*n* = 101, 70%) in the area.

Eighty eight (61%) strongly agreed or agreed that they would move out of Coaldale if given the opportunity. However, 122 (84%) strongly agreed and agreed that they would remain a resident in Coaldale for a number of years in the future (See Figure 5).

Having positive connections with their neighbors was clearly evident in their strongly agree and agree responses shown below:

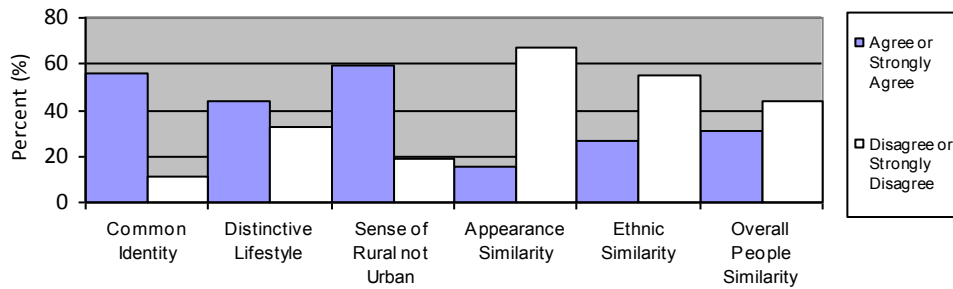
- 69 (48%) indicated that they visit with their neighbors,
- 126 (88%) noted that the friendships and associations they have in their community mean a lot to them,
- 140 (97%) said that neighbors help in emergencies,
- 103 (71%) would go to someone in their community if they needed advice,
- 119 (82%) felt loyal to the people in their community,
- 116 (81%) regularly stop and talk with the people in their community,
- 103 (71%) noted that they borrow and exchange favours with their neighbors,
- 68 (47%) strongly disagreed and disagreed that they rarely have neighbors over,
- 48 (33%) agreed that they rarely had neighbors over.

The respondents also noted that they strongly agreed and agreed that they agreed with their fellow residents about what was most important in their life (*n* = 101, 70%) and that they saw themselves as most similar to others in Coaldale (*n* = 151, 75%).

Any planning in the community is seen as a process that involves “we” rather than “they” (Strongly agree and agree: *n* = 70, 49%), however 32% (*n* = 46) had a neutral response to this question. In addition, 124 (86%) strongly agreed and agreed that they would be willing to work on things together with their fellow residents.



Figure 4: Community Sense of Identity



COMMUNITY RESILIENCY

All the participants were asked to respond to the 15 item Community Resiliency Scale. Over a third did not feel isolated from the rest of the province, (strongly disagree and disagree: 63%; $n = 91$) although 31% ($n = 45$) felt neutral in this regard. Eighty two percent ($n = 119$) either strongly agreed or agreed that people in the community helped one another. Most participants agreed that the people in the community shared similar values (strongly agree and agree: 68%, $n = 99$). Only 6% ($n = 9$) strongly agreed that people in their community were open to new ideas; 38% ($n = 55$) were neutral in regards to this statement (See Figure 6). The participants also indicated that:

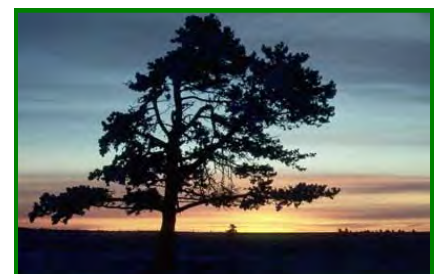
- The changes in their community were positive (strongly agree and agree: 69%, $n = 100$),
- They believed that residents of the community participated in community events (strongly agree and agree: 90%, $n = 130$),
- There is strong community leadership (strongly agree and agree: 48%, $n = 69$) and that leaders listen to the residents (45%, $n = 65$),
- There is a sense of community pride (90%, $n = 131$),
- Community members are able to deal with problems (strongly agree and agree: 63%, $n = 91$),
- There is satisfaction with the quality of current health care services in their community (strongly agree and agree: 57%, $n = 82$).

As individuals, they did not believe that the physical environment negatively affected their lives (strongly disagree and disagree: 90%; $n = 130$). They also expected things to stay healthy (strongly agree and agree: 90%; $n = 130$), that they have support from others to stay healthy (strongly agree and agree: 90%; $n = 131$) and they can deal with problems in their life (strongly agree and agree: 63%; $n = 91$).

COMMUNITY & POLITICAL PARTICIPATION

The majority of the respondents noted that they always voted in municipal/local ($n = 86$, 59.3%), provincial ($n = 102$, 70%) and federal ($n = 100$, 69%) elections.

The respondents were also asked to identify how often they used community facilities. For the following facilities, the largest response was “never:” church ($n = 60$, 41%), sports facility ($n = 58$, 40%), and library ($n = 43$, 30%). They accessed the medical clinic, pharmacy and restaurants less than once a month ($n = 77$, 53%; $n = 53$, 37%, $n = 45$, 31% respectively), a convenience store, and a gas station five or more times a month ($n = 60$; 41%, $n = 40$; 28%).





COMMUNITY IDENTITY

Several statements were included that focused on community identity. When asked about how similar people are in their community: 31% ($n = 45$) agreed or strongly agreed that their 10 nearest neighbors were similar to them but 44% ($n = 63$) either disagreed or strongly disagreed with this statement. They did not believe that people in their community were easily recognizable by their ethnic background (55%, $n = 80$) or by their clothing (67%, $n = 97$).

There was strong agreement that their community was more rural than urban (strongly agree and agree: 59%, $n = 86$) and that a rural lifestyle is more distinctive than an urban lifestyle (44%, $n = 64$). Finally, 56% ($n = 81$) felt that there was a common sense of identity among the residents.

Most of the participants indicated that their community was trusting, welcoming, supportive and friendly (see Figure 6) and noted that they would feel sad if they had to move away. Forty one percent ($n = 59$) noted that they were much more satisfied living in Coaldale than elsewhere and 34% ($n = 49$) felt it was the most desirable place to live.

They also believed that outsiders would see their community as struggling (3%, $n = 4$) or average (55% $n = 74$). Finally, when asked about the percentage of visiting with their neighbors involves their own family, almost 50% indicated zero and almost 10% indicated half of their visiting with neighbors involved their own family members.

Figure 5: Feel Like I Belong in Coaldale

$n=144$

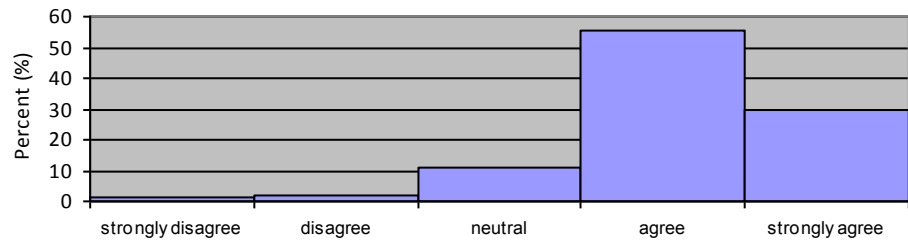
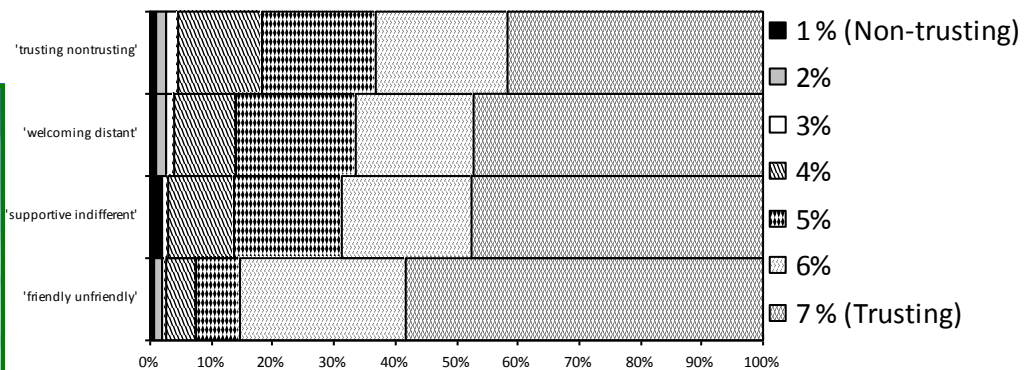


Figure 6: Community Identity



Acknowledgment and Funding: The Rural Wildfire Study Group thanks the community members of the participating communities (Barriere, i.e., The Valley, British Columbia; La Ronge, Saskatchewan and Coaldale, Alberta for their participation in this study. The agencies, leaders, local community advisory board members and research assistants all contributed to the final product. Funding for the research was provided by the Social Sciences and Humanities Research Council of Canada. Both Ambra Gullacher and Phillip Layton were Canadian Institutes of Health Research (CIHR) Health Professional Student Research Award recipients; Ambra also received a Summer Studentship from the Alberta Heritage Foundation for Medical Research while Phillip received a Chinook Research Summer Award.

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SUGGESTED CITATION FORMAT:

Kulig, J., Reimer, W., Townshend, I., Edge, D., Lightfoot, N., Kimmel, A., Hosgood, E. (2010). Report of the Household Survey: Coaldale, AB. Lethbridge, Alberta. University of Lethbridge.

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