Title: Gender inequalities in access to health care among adults living in British Columbia, Canada

Authors: M. Eugenia Socías, MD^a; Mieke Koehoorn, PhD^b and Jean Shoveller, PhD^b

Authors' affiliation:

- a. Interdisciplinary Studies Graduate Program, University of British Columbia, 270, 2357 Main Mall, H. R. MacMillan Building, Vancouver, BC, Canada, V6T 1Z4
- b. School of Population and Public Health, University of British Columbia, 2206 East Mall, Vancouver, BC, Canada, V6T 1Z3

Corresponding author: M. Eugenia Socías, MD. Interdisciplinary Studies Graduate Program, University of British Columbia, 270, 2357 Main Mall, H. R. MacMillan Building, Vancouver, BC, Canada, V6T 1Z4. Email: esocias@cfenet.ubc.ca

Competing interests

The authors declare that they have no competing interests.

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ABSTRACT

Introduction: Existing literature is inconclusive as to whether disparities in access to health care between men and women are mainly driven by socio-economic or gender inequalities. The aim of this study was to assess whether gender was independently associated with perceived unmet health care needs among a representative sample of British Columbia adults.

Methods: Using data from the 2011/12 Canadian Community Health Survey, logistic regression analyses were conducted to investigate the independent effect of gender on perceived unmet health care needs adjusting for potential individual and contextual confounders.

Results: Among 12,252 British Columbia adults (female 51.9%), the prevalence of perceived unmet health care needs was 12.0%, with statistically significant higher percentage among women compared to men (13.7% versus 10.1%, $p<0.001$). After adjusting for multiple confounders, women had independently increased odds of perceived unmet health care needs (AOR=1.37, 95% CI: 1.11-1.68).

Discussion: The current study found that, among a representative sample of British Columbia adults, adjusted for various individual and contextual factors, female gender was independently associated with increased odds of perceived unmet health care needs. These findings suggest that within Canada's universal health system, gender further explains differences in health care access, over and above socio-economic inequalities. Interventions within and outside the health sector will be required in order to achieve equitable access to health care for all residents in British Columbia.

Keywords: gender, unmet health care needs, healthcare access, inequalities, social determinants of health

Introduction

Appropriate and equitable access to health care is recognized as a key determinant of individual and population health (Solar & Irwin, 2010). Under the Canada Health Act ("Canada Health Act, R.S.C., 1985, c. C-6,"), universal and comprehensive health care should be granted to all Canadians, independently of their ability to pay, socio-economic status, and place of residence. However, research has shown that many Canadians face barriers when trying to access health services (*Access to Health Care Services in Canada*, 2005, 2006; Sanmartin & Ross, 2006). This is concerning, since individuals who experience barriers to care may postpone or avoid seeking preventive or curative services, placing them at increased risk of morbidity and mortality, as well as further increasing the burden on the health system (Chen, Rizzo, & Rodriguez, 2011; Girardi, Sabin, & Monforte, 2007; Weissman, Stern, Fielding, & Epstein, 1991).

Given the universal nature of the Canadian health system, research on inequalities in access to care in Canada has historically focused on indicators of health services utilization by different social groups (Allan & Cloutier-Fisher, 2006; Glazier, Agha, Moineddin, & Sibley, 2009; Newbold, 2009). However, focusing on utilization as a proxy to access fails to account for the complex interactions between social-structural, environmental and individual factors that shape individuals' health care seeking behavior, as well as the difficulties that individuals may experience when trying to obtain the care they need (Levesque, Harris, & Russell, 2013).

A complementary and increasingly used measure of access to care is "perceived unmet health care needs", defined as the difference between the care felt to be necessary to deal with a particular problem and the services actually received (Sanmartin, Houle, Tremblay, & Berthelot, 2002). According to Statistics Canada,

rates of perceived unmet health care needs have been rapidly increasing, with 12.5% of the Canadian population reporting unmet health care needs in 2000/01, three times higher than in 1994/95 (Sanmartin et al., 2002). Further, particular vulnerable groups such as recent immigrants, young adults, individuals with lower income, and those with poorer health status seem to be at an increased risk of unmet health care needs (Chen & Hou, 2002; Kasman & Badley, 2004; Marshall, 2011; Wu, Penning, & Schimmele, 2005).

There is conflicting evidence in the literature regarding the role of gender as a determinant of unmet health care needs. While most studies showed women at increased risk of unmet health care needs (Bryant, Leaver, & Dunn, 2009; Kasman & Badley, 2004; Levesque et al., 2012), others have failed to find such an association (Chen & Hou, 2002; Law et al., 2005). Some of the inconsistency in the evidence for female gender as a determinant of unmet health care needs may relate to the role that socio-economic status plays as driver of health inequalities between men and women, even in a context like Canada (Cooper, 2002; Denton, Prus, & Walters, 2004). For example, full-time employed women in Canada earn on average 19% less than men (OECD, 2014). Lower socio-economic status, in turn, is a well-known predictor of poorer health status (Adler & Newman, 2002; Marmot et al., 1991), with its associated implications for higher health care needs. Women are also more likely to work part-time (OECD, 2014) and consequently less likely to be eligible for full employment benefits including health services benefits such as prescription drug insurance. Therefore, it is not surprising that rates of unmet health care needs are higher among women. What is less clear is the extent as to which socio-economic inequalities account for disparities between men and women in unmet health care needs, and whether gender differences persist after adjustment for socio-economic factors and other potential confounders.

Therefore, the objectives of this study were to provide an updated population-based estimate of the prevalence of perceived unmet health care needs among adults living in British Columbia, Canada; and to explore whether female gender was independently associated with an increased risk of perceived unmet health care needs among this population.

Methods

Study design

Data for this study was obtained from the 2011/12 Canadian Community Health Survey (CCHS). Briefly, the CCHS is an ongoing, annual, cross-sectional survey that collects information regarding health status, health care utilization and health determinants of the Canadian population. The sampling frame is generated using a multistage stratified cluster design, and includes individuals aged 12 years and over living in private dwellings in the 115 health regions from all provinces and territories of Canada; while excludes individuals living on Indian Reserves and on Crown Lands, institutional residents, full-time members of the Canadian Forces, and residents of certain remote regions. Thus, the CCHS is representative of approximately 98% of the Canadian population at the level of age and sex groups within provincial health regions. All questionnaires are administered using either in-person or telephone computer-assisted interviewing. A detailed description of the survey and methodology is available elsewhere ("Canadian Community Health Survey (CCHS). Annual component. User guide. 2012 and 2011-2012 Microdata files," 2013). Ethical approval for this study was covered by the publicly available data

clause (Item 7.10.3) governing the use of public release data set under the University of British Columbia's Policy #89: Research Involving Human Participants (Board of Governors, 2012).

Study sample

The study sample was restricted to respondents (18 years and over) living in the province of British Columbia for which optional survey content modules on both perceived unmet health care needs and access to health care services (e.g., having a regular family doctor) were available. For the 2011/12 CCHS, the overall response rate for British Columbia was 86.7%, resulting in the inclusion of 15,413 participants from this province. Individuals with invalid responses (i.e., refusal, don't know, not stated) to the study outcome (i.e., unmet needs), the explanatory variable (i.e., gender), or potential confounders were excluded. Figure 1 shows the sample selection process for this study. Of the 14,250 eligible respondents, 27 were excluded for invalid responses to unmet needs, and a further 1,971 for invalid responses to potential confounders. Thus, the final analytic sample comprised 12,252 British Columbia adults.

Measures

For the current analysis, the main outcome of interest was perceived unmet health care needs, defined as answering "yes" to the question: "During the past 12 months, was there ever a time when you felt you needed health care, but you didn't receive it?" The primary explanatory variable of interest was the self-reported gender of the participant (female versus male).

Based on prior literature examining access to health care (Allin, Grignon, & Le Grand, 2010; Andersen, 1995; Cavalieri, 2013; Chen & Hou, 2002; Law et al., 2005;

Levesque et al., 2012; Marshall, 2011; Sanmartin et al., 2002; Shi & Stevens, 2005; Wu et al., 2005), other individual and contextual factors that were hypothesized to confound the relationship between gender and perceived unmet health care needs were also considered. The selection of these variables was informed by Andersen's Behavioral Model of health service use (Andersen, 1995), and adapted to the study setting. This model posits that access to and utilization of health services is a function of individual and contextual predisposing, enabling and need factors. Predisposing covariates analyzed included: age, grouped into 4 categories (young adults: 18-29 years; early midlife: 30-49 years, late midlife: 50-64 years, and older adults: ≥ 65 years); race/ethnicity (visible minority status, yes versus no); highest educational attainment (less than secondary, secondary, or postsecondary); immigrant status (yes versus no); and sense of belonging to the local community (somewhat weak or very weak versus somewhat strong or very strong). Enabling factors included household income (in ascending quintiles); place of residence, grouped into 3 regions that were defined using Statistics Canada's health regions' "peer groups" algorithm ("Health regions and peer groups ", 2011), (urban, southern non-urban, northern non-urban); having a regular family doctor (yes versus no); and social support measured by the Social Provision Scale (Caron, 1996; Cutrona & Russell, 1987) ranging from 10 to 40, and where a higher score reflects a higher level of perceived social support. Since participants' scores followed a left skewed distribution, cut-off points were identified from this distribution (i.e., first and third quartile), and used to group participants into 3 levels of social support (low, moderate, or high). Perceived health (poor/fair, good, very good/excellent) was included as a measure of need of health care.

Statistical analyses

As a first step, descriptive statistics were conducted to examine baseline characteristics of the sample, and chi-square tests were used to compare the distribution of covariates between men and women. Associations were considered statistically significant at the two-tailed p -value <0.05 .

Next, bivariable logistic regression analyses were performed to investigate the crude effect of gender, as well as of all other confounders on perceived unmet health care needs. To estimate the independent effect of gender on unmet needs, a multivariable logistic regression model was then constructed. After checking that there was no collinearity among confounders (Belsley, Kuh, & Welsch, 1980), a step-wise logistic regression was conducted where covariates were entered into the unadjusted model one at a time to assess for potential confounding (i.e., shift in the point estimate of the primary explanatory variable by more than 10%) (Maldonado & Greenland, 1993; Rothman, Lash, & Greenland, 2012). No strong evidence of confounding was found for the relationship between gender and perceived unmet needs among the study variables. However, based on *a priori* conceptual evidence of potential confounding effects (Allin et al., 2010; Andersen, 1995; Cavalieri, 2013; Chen & Hou, 2002; Law et al., 2005; Levesque et al., 2012; Marshall, 2011; Sanmartin et al., 2002; Shi & Stevens, 2005; Wu et al., 2005), all variables were forced into the final model. Odds ratios (OR) are reported at 95% confidence intervals (CI).

To appropriately account for the CCHS sampling procedures and for appropriate estimates of variance, sampling weights provided by Statistics Canada were applied to all the analyses ("Canadian Community Health Survey (CCHS). Annual component. User guide. 2012 and 2011-2012 Microdata files," 2013). All analyses were conducted using SAS software, University Edition (SAS Institute Inc., Cary, NC, USA).

Results

Study sample characteristics

A total of 12,252 British Columbia adults met the eligibility criteria, and were therefore included in the study. Characteristics of the study participants, stratified by gender, are summarized in Table 1. Overall, the study sample had a balanced gender distribution (female 51.9%). Approximately one sixth of participants were older adults (16.5%), one third were immigrants (31.7%) and another third self-identified as non-white (29.0%). Socio-economic status of the sample was relatively high, as reflected by high levels of educational attainment (71.8% had post-secondary education) and slight over-representation of the two highest household income quintiles (21.1% and 21.4%, respectively). Additionally, more than half of the participants were living in urban settings (55.1%), and had a strong sense of belonging to their local community (67.4%). With regards to health-related variables, the majority had a regular source of care (85.5% reported having a regular family doctor), and good health status (61.0% self-reported very good or excellent health).

Compared to women, men had higher household income ($p<0.001$) and better health status ($p=0.008$). Conversely, more women reported having a regular family doctor ($p<0.001$), as well as strong ties with their community ($p=0.002$) and higher levels of social support ($p<0.001$).

Gender and perceived unmet health care needs

The overall weighted prevalence of perceived unmet healthcare needs in the final study sample was 12.0% (95% CI: 10.9-13.0), with statistically significant higher rates among women compared to men (13.7% versus 10.1%, $p<0.001$).

As shown in Table 2, in the unadjusted model, women had higher odds of unmet needs compared to men (OR=1.41, 95% CI: 1.16-1.71). Other covariates that were also positively associated with the outcome at the bivariable level included: younger age (young and early midlife adults compared to older adults), income (the two lowest quintiles compared to the highest quintile), worse health status, living in Northern non-urban regions (compared to living in urban settings), and weak sense of belonging to the local community. Conversely, the odds of unmet needs were lower among immigrants and participants with a regular family doctor.

As indicated in Table 2, in the fully adjusted model, female gender remained associated with increased odds of perceived unmet health care needs (AOR=1.37, 95% CI: 1.11-1.68). As anticipated, the odds of unmet needs were also higher for individuals younger than 65 years, those in the two lowest household income quintiles (compared to respondents in the highest quintile), and those with worse self-perceived health status. Also as expected, participants with a regular family doctor had significantly lower odds of unmet needs. Additionally, there were lower odds of perceived unmet health care needs among individuals with secondary education (compared to post-secondary).

Missing data

An analysis of the 14% of the sample that was excluded due to invalid responses for any of the confounders revealed similar rates of perceived unmet health care needs, with 12.8% (95% CI: 9.9-15.7) reporting having experienced an unmet need in the previous 12 months ($p=0.586$). Although, the gender distribution was similar (female 51.1%, $p=0.917$), individuals with invalid responses significantly differed in the distribution of many other covariates. Specifically, excluded respondents were older (older adults 34.2%, $p<0.001$), had lower levels of educational attainment (21.5%

had not completed secondary school, $p<0.001$), lower household income (57.3% were distributed in the 2 lowest quintiles, $p<0.001$), and poorer health status (only 43.4% self-reported very good/excellent health, $p<0.001$). However, re-analysis with excluded participants into the analytic sample did not change the relationship between gender and perceived unmet health care needs (OR=1.39, 95% CI: 1.16-1.67) (data not shown).

Discussion

In this study, nearly one out of eight British Columbia adults reported having a perceived unmet health care need in the previous 12 months. These rates are similar to national and provincial estimates for the year 2003 (Sibley & Glazier, 2009), suggesting that after peaking in 2000/01, rates of unmet needs might have stabilized. It should be noted, however, that these obstacles to health services occur in a setting with universal health coverage, where “persons must have reasonable and uniform access to insured health services, free of financial or other barriers” (“Canada Health Act, R.S.C., 1985, c. C-6,”). Even more concerning is the fact that access to health care seems not to be *uniform*, as suggested by increased risk of perceived unmet health care needs among certain social subgroups (Bryant et al., 2009; Chen & Hou, 2002; Kasman & Badley, 2004; Levesque et al., 2012; Marshall, 2011; Wu et al., 2005). In line with previous studies (Bryant et al., 2009; Kasman & Badley, 2004; Levesque et al., 2012), the current analysis found that women had higher odds of reporting unmet health care needs. Further, this association remained after adjusting for a range of individual, socioeconomic and contextual factors, suggesting that gender might be an important driver of health care access inequalities among British Columbia adults.

Access to health care is a multidimensional process that starts with one's ability to identify a health care need, continues with the possibility of seeking and reaching health services, and culminates with the actual obtainment of appropriate care according to one's need (Andersen, 1995; Levesque et al., 2013). Thus, gender-specific barriers in any or all of these steps may contribute to differences between men and women in the rates of perceived unmet health care needs.

Consistent with previous research pointing to higher morbidity among women (Case & Paxson, 2005; Read & Gorman, 2010; Verbrugge, 1989), in the current study, women were also more likely to self-rate their health as poor/fair. Although the multivariable model was adjusted for perceived health, it may be the case that women have greater awareness about their health condition and need for care, as well as higher expectations towards the benefits of medical care (Dunlop, Coyte, & McIsaac, 2000; Nabalamba & Millar, 2007). Conversely, due to gender norms, help-seeking behavior is considered by many men as incompatible with masculinity (Spitzer, 2005), which may also explain some portion of the observed gender differences in health care seeking patterns and potentially perceived unmet needs.

Prevailing gender roles and cultural values in most societies, including Canada, place the burden of household labor, including caregiving responsibilities, primarily on women (Walters, McDonough, & Strohschein, 2002). In addition, the growing feminization of the workforce has not translated into more equal job opportunities for women. For example, although, over the last two decades the gender employment gap in Canada has declined by almost 10%, women continue to be over-represented in precarious forms of work, accounting for 70% of part-time workers and 55% of temporary workers (OECD, 2014), which is in agreement with lower income among women in this study. Precarious employment, in turn, is frequently associated with lack of extended health insurance and less work flexibility that may

make it difficult to procure certain health services (e.g., dental and vision care) as well as the scheduling of medical appointments (Andersen, 1995; Levesque et al., 2013).

Interestingly, this study found that although women were more likely to self-report having a family doctor, they also had higher odds of perceived unmet health care needs. It is important to note, though, that despite women's historical higher rates of health services utilization (Dunlop et al., 2000; Nabalamba & Millar, 2007), birth and related obstetrical procedures account for a high share of utilization. Indeed, when reproductive health services are excluded, rates of health services utilization are similar between men and women (Dunlop et al., 2000; Nabalamba & Millar, 2007). Further, many studies have highlighted gender disparities in the delivery of health care, particularly regarding specialized care. For example, research shows that women are less frequently offered invasive procedures for cardiovascular disease (Chang et al., 2007), joint replacement (Borkhoff, Hawker, & Wright, 2011), or critical care (Valentin, Jordan, Lang, Hiesmayr, & Metnitz, 2003). Collectively, these findings reinforce the idea that focusing on health services utilization as a proxy to access to care fails to capture the complexities and multidimensional aspects of the continuum of appropriate care. Understanding and addressing these gender inequalities in the delivery of health care is critical in order to ensure equitable access to high quality health services for both genders (Women and Gender Equity Knowledge Network, 2007).

This study has several limitations. First, although the CCHS is designed to be a representative sample of the Canadian population, it does not include institutional residents, people living in unstable housing situation, or in certain remote areas, all of whom might be at increased risk of experiencing unmet health care needs. Thus, the exclusion of these individuals might have resulted in an underestimation of the

real prevalence of perceived unmet needs among adults living in British Columbia. Second, the CCHS relies on self-reported data that may have been affected by recall, and social desirability biases, as well as open interpretation to the questions. In particular, the assessment of unmet health care needs is a subjective evaluation that reflects not only whether an individual has received appropriate care for his or her perceived need, but also personal expectations regarding health services. Although variables known to influence these expectations (e.g., socio-economic status) were controlled for in the analysis, there may be unmeasured factors that could limit the interpretation of our data. Third, given the cross-sectional nature of the survey temporality and causal association could not be determined. This could be the case, for example, for the relationship between health status and perceived unmet health care needs, which could have suffered from reverse causality. This is particularly relevant taking into account that both perceived health status and perceived unmet health care needs were associated with gender. Fourth, although the findings of this analysis are representative of residents of British Columbia, they might not be generalizable to other Canadian provinces or to other countries. In particular, in settings such as the United States, where health coverage is mainly obtained through employer-based private insurance, socio-economic status might be more of a determinant of health care access (Pylypchuk & Sarpong, 2013), potentially offsetting the role of gender as a determinant of perceived unmet health care needs as observed in the present study.

Implications for Policy and/or Practice

The current study found that, among a representative sample of British Columbia adults, female gender was independently associated with increased odds of

perceived unmet health care needs. These findings suggest that even within Canada's universal health system, gender might be a more influential determinant of health care access than socio-economic inequalities. Addressing the burden of multiple and intersecting factors that increase women's risk for experiencing unmet health care needs (Bryant et al., 2009; Spitzer, 2005; Women and Gender Equity Knowledge Network, 2007) demands interventions within and beyond the health care sector. Within the health care system there is a need for policies and programs that take into account the differential health needs of men and women—when they exist, as well as ensure appropriate and equitable delivery of care for both genders. Beyond the health care sector, providing affordable and high quality child care might be a way to reduce the burden of domestic work among women, as well as to increase women's opportunities to engage in full-time employment, and consequently improve their health outcomes (Bryant et al., 2009; Women and Gender Equity Knowledge Network, 2007). Further research is needed to better understand how different axes of inequalities (e.g., gender, socio-economic status, race/ethnicity, age) interact to influence women's health.

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Table 1. Study sample characteristics, stratified by gender, British Columbia adults, CCHS 2011/12 (N=12,252)

Characteristic	Total, n (%) (N = 12252)	Gender, n (%)		<i>p</i> - value
		Male (<i>n</i> = 5399)	Female (<i>n</i> = 6853)	
Individual factors				
Age				0.314
Young adults (18-29)	1744 (21.4)	803 (22.3)	941 (20.6)	
Early midlife (30-49)	3310 (34.8)	1477 (35.1)	1833 (34.5)	
Late midlife (50-64)	3778 (27.2)	1691 (27.0)	2087 (27.4)	
Older adults (≥65)	3420 (16.5)	1428 (15.6)	1992 (17.5)	
Visible minority	2260 (29.0)	975 (28.6)	1285 (29.3)	0.680
Immigrant	3049 (31.7)	1332 (31.3)	1717 (32.1)	0.616
Educational attainment				0.880
Less than secondary school	1438 (9.0)	670 (9.0)	768 (9.1)	
Completed secondary school	2350 (19.2)	981 (19.4)	1369 (18.9)	
Post-secondary school	8464 (71.8)	3748 (71.6)	4716 (72.0)	
Household income				<0.001
Quintile 1 (lowest)	2396 (18.5)	868 (15.6)	1528 (21.2)	
Quintile 2	2451 (18.9)	965 (17.2)	1486 (20.6)	
Quintile 3	2521 (20.1)	1098 (19.8)	1423 (20.3)	
Quintile 4	2473 (21.1)	1203 (22.5)	1270 (19.7)	
Quintile 5 (highest)	2411 (21.4)	1265 (24.8)	1146 (18.1)	
Perceived health				0.008
Poor or fair	1588 (11.2)	710 (10.0)	878 (12.4)	
Good	3639 (27.8)	1639 (26.7)	2000 (28.9)	
Very good or excellent	7025 (61.0)	3050 (63.3)	3975 (58.7)	
Contextual factors				
Place of residence (region)				0.678
Urban	5010 (55.1)	2227 (55.8)	2783 (54.6)	
Southern non-urban	5747 (39.0)	2535 (38.4)	3212 (39.5)	
Northern non-urban	1495 (5.9)	637 (5.8)	858 (5.9)	
Regular family doctor	10951 (85.5)	4653 (82.2)	6262 (87.7)	<0.001
Sense of belonging to local community				0.002
Somewhat weak or weak	3429 (32.6)	1620 (35.2)	1809 (30.2)	
Somewhat strong or strong	8823 (67.4)	3799 (64.8)	5044 (69.8)	
Social support				<0.001
Low	3300 (26.8)	1738 (31.4)	1562 (22.3)	
Moderate	5739 (46.7)	2481 (45.8)	3258 (47.6)	

High	3213 (26.5)	1180 (22.8)	2033 (30.1)
CCHS: Canadian Community Health Survey; CI: confidence interval			

Table 2. Unadjusted and adjusted regression analyses of the relationship between gender and unmet health care needs among adults in British Columbia, CCHS 2011/12 (N=12,252)

Characteristic	Unadjusted	Adjusted*
	Odds Ratio (95% CI)	Odds Ratio (95% CI)
Individual factors		
Gender (female vs. male)	1.41 (1.16 – 1.71)	1.37 (1.11 – 1.68)
Age (ref: older adults)		
Young adults	1.57 (1.17 – 2.12)	2.05 (1.49 – 2.82)
Early midlife	1.49 (1.16 – 1.92)	1.92 (1.44 – 2.57)
Late midlife	1.20 (0.93 – 1.55)	1.45 (1.11 – 1.90)
Visible minority (yes vs. no)	0.90 (0.72 – 1.13)	0.80 (0.60 – 1.09)
Immigrant (yes vs. no)	0.78 (0.63 – 1.13)	0.79 (0.59 – 1.05)
Educational attainment (ref: post-secondary)		
Less than secondary	1.16 (0.87 – 1.53)	0.88 (0.65 – 1.19)
Secondary	0.76 (0.64 – 1.09)	0.74 (0.57 – 0.96)
Household income (ref: quintile 5)		
Quintile 1	1.91 (1.42 – 2.55)	1.46 (1.06 – 1.99)
Quintile 2	1.57 (1.18 – 2.09)	1.48 (1.09 – 2.02)
Quintile 3	0.93 (0.69 – 1.27)	0.89 (0.65 – 1.22)
Quintile 4	0.99 (0.74 – 1.33)	0.95 (0.70 – 1.29)
Perceived health (ref: very good or excellent)		
Poor or fair	3.99 (3.08 – 5.17)	4.21 (3.21 – 5.51)
Good	1.93 (1.55 – 2.41)	2.03 (1.62 – 2.53)
Contextual factors		
Place of residence (ref: urban)		
Southern non-urban	0.95 (0.79 – 1.16)	0.87 (0.71 – 1.08)
Northern non-urban	1.35 (1.02 – 1.79)	1.17 (0.87 – 1.59)
Regular family doctor (yes vs. no)	0.64 (0.49 – 0.83)	0.65 (0.48 – 0.87)
Sense of belonging to local community (weak vs. strong)	1.35 (1.10 – 1.65)	1.13 (0.92 – 1.40)
Social support (ref: high)		
Low	1.25 (0.94 – 1.66)	1.03 (0.76 – 1.40)
Moderate	1.16 (0.89 – 1.52)	1.11 (0.85 – 1.45)
* Final multivariable model adjusted for all variables in the table CCHS: Canadian Community Health Survey; CI: confidence interval		

Figure 1. Derivation of the final analytic sample for an investigation of gender and unmet health care needs among adults in British Columbia, CCHS 2011/12

Notes: CCHS: Canadian Community Health Survey. BC: British Columbia. UCN: unmet health care needs. Invalid responses: don't know, refusal, not stated.