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Self-Perceived Oral Health and Use of Dental Services by Pregnant Women in Surrey, British Columbia

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Abstract

Objective: The aim of this study was to determine the self-reported oral health status and needs and the patterns of use of dental services by a sample of pregnant women from diverse ethnic backgrounds in the city of Surrey, British Columbia, Canada.

Method: A 34-item cross-sectional survey was administered to women enrolling in a prenatal program for 4 months in 2012/13. For data analysis, we used a 2-sample *t* test and tested categorical variables using a χ^2 test. We used multivariable logistic regression analysis to estimate the odds ratio for the variables, self-reported oral health status and use of dental services.

Results: Of the 740 pregnant women who participated in this survey (87% of registrants), 30% were considered vulnerable because of inability to live within their household income, smoking status, self-reported depression, lack of dental insurance and time since last dental visit. Most respondents (84%) rated their oral health good or excellent. Almost half of the women had not visited a dental professional during the past year, while 23% saw a dental professional only for emergency purposes. Women with dental insurance were 6.6 times more likely to have visited a dental professional than those without insurance.

Conclusion: Although most pregnant women considered dental care during pregnancy to be important, almost half had not visited a dental professional during the pregnancy.

Maintaining good oral health and preventing oral disease before, during and after pregnancy is an important aspect of general health for both mother and newborn.[1] Receiving oral health care — including a compressive dental examination and periodontal assessment, radiographs, pain medication, most dental treatments and professional scaling — is considered safe during pregnancy. In fact, it is recommended that pregnant women visit a dental professional if they have not done so in the last 6 months.[2]

Poor maternal oral health can not only affect the mother's nutrition and oral health-related quality of life, but it is also believed to be associated with early childhood caries and long-term systemic disorders for the newborn.[3] The harmful effects of poor oral health during pregnancy can be even more prominent among women who are vulnerable because of their race, ethnicity, economic disparities and other psychosocial and environmental factors.[4]

In 2014, there were 386 000 pregnancies in Canada, 43 700 of them in British Columbia.[5] Yet, there are no baseline data describing the oral health status of Canadian pregnant women in general or of British Columbians in particular. Determining the oral health status and needs and the use of dental services by pregnant women, especially those who are vulnerable during pregnancy, may help inform future interventions for this patient group.[3] Therefore, the aim of this study was to explore those issues in a sample of pregnant women living in British Columbia.

Methods

Study Participants and Data Collection

Fraser Health is one of 6 health authorities in British Columbia serving more than 1.6 million people, including a large population of Indo-Canadians, Korean-Canadians and Filipino-Canadians. Current oral health promotion initiatives include fluoride varnish application for children up to the age of 4 years, oral health education in elementary schools, preschool dental resource kits for children at age 3, and oral health care programs tailored for adults with developmental disabilities. We collaborated with the prenatal program called Best Beginnings, which is similar to programs offered by other provincial health authorities in British Columbia to support pregnant women and their newborns.

Study participants were pregnant women from the family planning and birth unit at Surrey Memorial Hospital (SMH), the largest hospital in the Fraser Health Authority area. SMH is enrolled in the Best Beginnings program, which is designed to provide public health services to pregnant women, new mothers, babies, children to age 2 years and their families.

SMH sees more than 5000 pregnancies a year, and the diversity and size of the target population offered us the opportunity to carry out data collection. Seven dental questions from the Canadian Health Measures Survey (CHMS) were adapted for this study. After pilot testing the adapted questions data were collected using the Best Beginnings form (**Appendix 1**) and an attached list of 7 dental-focused questions (**Appendix 2**). These forms were distributed to all women attending prenatal registration at SMH from October 2012 to February 2013.

Those who agreed to participate in the study were advised to detach a cover page as the consent form for their records while filling out the Best Beginnings form and the dental survey. The Best Beginnings forms were kept in the reception area where a public health nurse collected them twice a week. An identification code was assigned to match the dental survey questions with the Best Beginnings form while de-identifying the forms by blacking out all personal information, such as name, address, postal code, care card number, date of birth, telephone number and other contact information. All forms were photocopied before the public health nurse picked them up. All data were numerically coded and entered into a password-protected spreadsheet for statistical analysis.

The 740 respondents provided enough statistical power to tease out the potential relationships and correlations between the different variables presented below.

Variable Construction

Andersen and Newman's[6] framework of health service utilization was used to inform the selection of outcome and independent variables. Self-reported oral health and use of dental services during pregnancy were the outcome variables; predisposing, enabling and need factors were independent variables. However, the focus of this paper is on predisposing and enabling factors only. The framework helped to determine the sociodemographic variables that would likely make these women vulnerable to inadequate oral health care during pregnancy.

Predisposing Factors

The predisposing factors in Andersen and Newman's model comprise variables that represent the tendency to use available health services. In the context of this study, the included variables were age, education (high school education: yes/no), immigration status (born in Canada or elsewhere and number of years living in Canada), refugee status, Aboriginal heritage and smoking status (smoker or non-smoker).[6]

The model emphasizes that both financial and personal enabling factors must be present for most people to use available health services. Therefore, the enabling variables included were having difficulty living within total household income (yes or no), having dental insurance (yes or no), type of insurance, having children (yes or no), needing assistance with transportation (yes or no), feeling depressed during the last month (yes or no) and time of last dental visit.[6]

Vulnerability was assessed from the self-reported answers on the Best Beginnings form, grouped according to the Andersen and Newman model to identify the personal and societal factors that could affect the overall health of the pregnant women and their newborns, including difficulties with living and transportation, immigration status, smoking

Table 1 Characteristics of study participants (n = 740).

Characteristic	No. participants (%*)
First pregnancy	
Yes	293 (41.3)
No	415 (58.5)
Refugee status	
Yes	40 (5.5)
No	681 (94.5)
Aboriginal heritage	
Yes	37 (5.5)
No	632 (94.5)
Time lived in Canada	
Born in Canada	252 (34.6)
< 5 years	197 (27.0)
5–10 years	149 (20.4)
> 10 years	131 (18.0)
Completed high school	
Yes	617 (85.2)
No	107 (14.8)
Have someone to talk with	
Yes	667 (91.9)
No	59 (8.1)
Have assistance with transportation†	
Yes	650 (89.8)
No	74 (10.2)
Difficulty living on income‡	
Yes	101 (14.2)
No	611 (85.8)
Depressed during the past month	
Yes	67 (9.3)
No	653 (90.7)
Little interest or pleasure in doing things during the past month	
Yes	91 (12.7)
No	627 (87.2)
Tobacco use	
Never smoked	567 (81.0)
Quit smoking > 1 year ago	56 (8.0)
Quit smoking < 1 year ago	37 (5.3)
Currently smoking	39 (5.6)
People smoke around you (secondhand)	
Never	530 (77.3)
< monthly	53 (7.7)
Monthly	13 (1.9)
Weekly	31 (4.5)
Daily	59 (8.6)

*Totals may not equal 100% because of rounding error.

†Women reported needing assistance with childcare, housing and transportation.

‡Women reported having difficulty living within their household income.

status, inadequate income and depression. Having 1 or more of these factors was an indicator of vulnerability.

Statistical Analysis

Continuous variables were compared by using two sample t tests, while categorical variables were tested using Fisher's exact test and the χ^2 test of association. Multivariable logistic regression was used to estimate the odds ratio and 95% confidence interval (CI) for self-reported oral health and use of dental services. A receiver operating characteristic analysis was conducted to determine which of either the predisposing or enabling factors was most associated with dental service use. Results were considered significant for $p < 0.05$. Data analysis was carried out using SPSS software, v. 22 (SPSS, Inc., Chicago, Ill.).

Ethical Approval

This study was approved by the Research Ethics Boards of both the Fraser Health Authority and the University of British Columbia.

Results

The study reached 835 registrants over the 4-month period. Of these, 740 (87%) responded fully to the survey. Given that the prenatal registration program is also voluntary, the actual number of pregnant women seen at SMH during this period was probably larger.

Participants included a high proportion of high school graduates (85.2%) who were able to live within their income (85.8%) (**Table 1**). Few reported recent depression (9.3%) or lack of a social network, i.e., "someone to talk with" (8.1%). Although some of the pregnant women (5.6%) identified themselves as smokers, almost one-quarter (22.7%) were exposed to secondhand smoke.

Surrey has a large immigrant population, with almost 75% born in Asia.[7] Of the women who participated in the survey, almost two-thirds were immigrants (**Table 1**), with the largest

Table 2 Self-reported oral health status of pregnant women in the city of Surrey, British Columbia, by various predisposing characteristics.

Characteristic	All participants, no. (%)	Oral health status		Odds ratio* (95% CI)	*p*
		Excellent or good, no. (%)	Fair or poor, no. (%)		
Total	717 (100)	596 (83.1)	120 (16.7)		
Age (n = 686)					0.42
≤ 30 years	366 (51.0)	300 (81.9)	66 (18.0)	1	
> 30 years	320 (44.6)	270 (84.3)	50 (15.6)	1.2 (0.8–1.8)	
Refugee status (n = 700)					0.38
No	663 (94.7)	549 (82.8)	114 (17.1)	1	
Yes	37 (5.2)	33 (89.1)	4 (10.8)	1.7 (0.6–4.9)	
Aboriginal status (n = 653)					0.49
No	617 (94.4)	521 (84.4)	96 (15.5)	1	
Yes	36 (5.5)	29 (80.5)	7 (19.4)	0.8 (0.3–1.8)	
Time living in Canada (n = 350)					0.33
Born in Canada	248 (34.5)	209 (84.2)	39 (15.7)	1	
> 10 years	127 (17.7)	99 (77.9)	28 (22.0)	0.8 (0.3–2.2)	
5–10 years	146 (20.3)	4 (27.3)	3 (20.5)	0.2 (0.1–1.2)	
< 5 years	186 (25.9)	12 (64.5)	5 (26.8)	0.9 (0.5–1.6)	
Completed high school (n = 705)					0.32
No	104 (14.7)	83 (79.8)	21 (20.1)	1	
Yes	601 (85.2)	503 (83.6)	98 (16.3)	1.3 (0.8–2.2)	
Tobacco use (n = 682)					0.40
Never smoked	552 (80.9)	463 (83.8)	89 (16.1)	1	
Quit > 1 year ago	55 (8.0)	46 (83.6)	9 (16.3)	1.1 (0.5–2.3)	
Quit < 1 year ago	37 (5.4)	28 (75.6)	9 (24.3)	0.6 (0.3–1.3)	
Currently smoking	38 (5.5)	29 (76.3)	9 (23.6)	0.8 (0.3–2.2)	
Secondhand smoke (n = 669)					< 0.01
Never	513 (76.6)	440 (85.7)	73 (14.2)	1	
< monthly	53 (7.9)	46 (86.7)	7 (13.2)	1.1 (0.5–2.5)	
Monthly	13 (1.9)	11 (84.6)	2 (15.3)	0.9 (0.2–4.2)	
Weekly	31 (4.6)	20 (64.5)	11 (35.4)	0.3 (0.1–0.7)	
Daily	59 (8.8)	41 (69.4)	18 (30.5)	0.4 (0.2–0.7)	

* Odds of reporting excellent or good oral health versus reference category.
CI = confidence interval.

proportion born in India (50%). In all, 18 birth countries were identified. Few women identified as a refugee (5.5%) or of aboriginal heritage (5.5%). When asked to describe their oral health, most respondents reported it as excellent or good, while 16.7% rated it as fair (14%) or poor (3%) (**Table 2**).

Almost 50% had seen a dental professional in the last year and 23% reported they visited a dental professional for emergency purposes only. Nine percent of the respondents had never visited a dental professional; of these, almost two-thirds came from India (data not shown). Women who visited a dental professional within the last 2 years were more likely to rate their oral health as excellent or good (89%) than women who hadn't consulted a dental professional in more than 2 years (72%) ($p < 0.001$) (data not shown).

Tables 2–4 show the relation of predisposing and enabling factors to self-reported oral health and dental service use, respectively. Of all the predisposing factors, only decreasing exposure to secondhand smoke was associated with better self-reported oral health (**Table 2**). Women exposed to secondhand smoke on a daily or weekly basis were at least 60% less likely to report their oral health as excellent or good. For enabling factors, financial issues were the dominant limiting factor; lack of dental insurance, type of dental insurance and difficulty living within their income were all associated with fair or poor self-reported oral health (**Table 3**). Women with dental insurance were 3 times more likely to report their oral health as excellent or good. However, women on government programs or First Nations/Inuit insurance programs were up to 90% less likely to report good oral health. Women who used dental care more recently rated their oral health higher than women who had not seen a dental professional in more than 2 years (**Table 3**).

Lack of financial means also appeared to limit dental visits (**Table 4**). Women who reported difficulty living on their income and/or who had no dental insurance reported a greater elapsed time since their last dental visit. Almost 46% of the women had visited a dental professional within the last year for regular care (data not shown).

Multiple logistic regression analysis was used to evaluate the effect of the psychosocial variables mentioned by Anderson and Newman[6] on self-reported level of oral health and use of dental services (**Table 5**). All variables that were significant in univariate analysis were included in the multivariate model. The presence of dental insurance significantly predicted both better self-reported oral health ($p < 0.001$) and receiving dental care within the previous 2 years ($p < 0.001$). To determine which predisposing or enabling factors were most associated with dental service use, a receiver operating characteristic curve was plotted (**Fig. 1**). The area under the curve is greater for enabling factors (72.5%) versus predisposing factors (63.6%) and perceived need of care (69.9%).

Discussion

This study examined self-reported oral health and dental service use among a diverse population of pregnant women from the city of Surrey, in British Columbia. The results suggest that pregnant women do not differ, with some exceptions, from the general Canadian population as reported in the oral health component of the CHMS.[8] The self-reported oral health of the women in our study was similar to that reported in the CHMS study (excellent/good 83% v. 84%, respectively). Fewer pregnant women had dental insurance than those in the CHMS population (53% v. 62%) and only slightly more

Table 3 Self-reported oral health status of pregnant women in the city of Surrey, British Columbia, by various enabling characteristics.

Characteristic	All participants, no. (%)*	Oral health status		Odds ratio† (95% CI)	*p*
		Excellent or good, no. (%)	Fair or poor, no. (%)		
Difficulty living on incomeπ (n = 695)					0.02
No	594 (85.4)	505 (85.0)	89 (14.9)	1	
Yes	101 (14.5)	76 (75.2)	25 (24.7)	0.5 (0.3–0.9)	
Dental insurance (n = 666)					< 0.01
No	315 (47.2)	239 (75.8)	76 (24.1)	1	
Yes	351 (52.7)	317 (90.3)	34 (9.6)	3.0 (1.9–4.6)	
Type of insurance (n = 350)					< 0.01
Employer sponsored	326 (93.1)	298 (91.4)	28 (8.5)	1	
Government program for social services	17 (4.8)	12 (70.5)	5 (29.4)	0.2 (0.1–0.7)	
First Nations/Inuit	7 (2.0)	4 (57.1)	3 (42.8)	0.1 (0.0–0.6)	
Have children (n = 708)					0.27
No	308 (43.5)	250 (81.1)	58 (18.8)	1	
Yes	400 (56.4)	338 (84.5)	62 (15.5)	1.3 (0.9–1.9)	
Have assistance with transportation‡ (n = 704)					0.87
No	70 (9.9)	58 (82.8)	12 (17.1)	1	
Yes	634 (90.0)	529 (83.4)	105 (16.5)	1.0 (0.5–2.0)	
Depressed during the past month (n = 702)					0.16
No	638 (90.8)	536 (84.0)	102 (15.9)	1	
Yes	64 (9.1)	49 (76.5)	15 (23.4)	0.6 (0.3–1.2)	
Last use of dental services (n = 703)					< 0.01
< 2 years ago	468 (66.5)	414 (88.4)	54 (11.5)	1	
2–5 years ago	142 (20.1)	102 (71.8)	40 (28.1)	0.3 (0.2–0.5)	
> 5 years ago	93 (13.2)	68 (73.1)	25 (26.8)	0.4 (0.2–0.6)	

*Totals may not equal 100% because of rounding error.
†Odds of reporting excellent or good oral health versus reference category. CI = confidence interval.
π Women reported having difficulty living within their household income.
‡ Women reported needing assistance with childcare, housing and transportation

Table 4 Use of dental services by pregnant women in the city of Surrey, British Columbia, by various predisposing characteristics.

Characteristic	All participants, no. (%)*	Time since last use of dental service			p
		< 2 years, no. (%)	2–5 years, no. (%)	> 5 years, no. (%)	
Total	714 (100)	475 (66.5)	144 (20.1)	95 (13.3)	
Difficult to live on income* (n = 690)					0.05
No	589 (85.3)	404 (68.5)	116 (19.6)	269 (12.2)	
Yes	101 (14.6)	59 (58.4)	22 (21.7)	20 (19.8)	
Dental insurance (n = 668)					< 0.01
No	319 (47.7)	151 (47.3)	98 (30.7)	70 (21.9)	
Yes	349 (52.2)	302 (86.5)	35 (10.0)	12 (3.4)	
Type of insurance (n = 349)					0.18
Employer sponsored	325 (93.1)	278 (85.5)	37 (11.3)	10 (3.0)	
Government program for social services	17 (4.8)	13 (76.4)	4 (23.5)	0 (0)	
First Nations/Inuit	7 (2.0)	6 (85.7)	0 (0)	1 (14.2)	
Have children (n = 706)					0.71
No	308 (43.6)	199 (64.6)	66 (21.4)	43 (13.9)	
Yes	398 (56.3)	269 (67.5)	78 (19.5)	51 (12.8)	
Have assistance with transportation (n = 701)					0.13
No	71 (10.1)	43 (60.5)	13 (18.3)	15 (21.1)	
Yes	630 (89.8)	421 (66.8)	130 (20.6)	79 (1)	
Depressed during the past month (n = 698)					0.31
No	632 (90.5)	426 (67.4)	122 (19.3)	84 (13.2)	
Yes	66 (10.4)	40 (60.6)	18 (27.2)	8 (12.1)	
Self-reported oral health (n = 703)					< 0.01
Excellent or good	584 (83.0)	414 (70.8)	102 (17.4)	68 (11.6)	
Fair or poor	119 (16.9)	54 (45.3)	40 (33.6)	25 (21.0)	

* Totals may not equal 100% because of rounding error.

pregnant women in our study reported avoiding dental treatment because of cost (19% v. 16%).[8] The disparity between those avoiding dental treatment may be a result of this population having more financial barriers than other Canadians as a result of a lower socioeconomic status in the area reached by Fraser Health.

As recommended in the guidelines of both the American Dental Association and the American Association of Periodontology, all pregnant women should receive a comprehensive dental and periodontal checkup during pregnancy at least once, and most types of dental treatment as needed.[9] However, according to the findings of this study, financial barriers may be a major risk factor for women not receiving regular basic dental care.[4] This barrier has been identified as a factor that can substantially impact overall oral health status and use of dental services.[6]

Use of dental services by our study population is similar to that in other studies of pregnant women as almost half

of those in our study reported having consulted a dental professional within the last year. Gaffield et al.[10] and Lyndon-Rochelle et al.[1] suggest similar patterns of dental service use during pregnancy in Arkansas, Illinois, Louisiana and North Dakota. Roger et al.[11] concluded that 30–50% of women seek dental care during pregnancy and consult a dental professional more frequently during pregnancy than at other times. Hence, pregnancy would appear to be a good time to introduce oral-health-related behavioural modifications that could be beneficial for both mother and infant.[12]

This study also identified financial affordability as the most important enabling factor in the use of dental services by pregnant women: having dental insurance and the financial means to pay for dental care is a common finding across similar and different populations in other studies.[13] Not surprisingly, more than a third of those reporting income difficulties had never consulted a dental professional or had done so only for emergency purposes, as Dinas et al. found in Greece.[13] It would appear that, like other marginalized groups, pregnant women of lower socioeconomic status face further difficulties in accessing the care they need and remain vulnerable to adverse pregnancy outcomes.[14] This research informs the need for publicly funded programs covering at least basic dental treatment for pregnant women.[14]

Self-reported oral health seems to be influenced by the same predisposing and enabling factors as dental care use. Of interest, almost two-thirds of the pregnant women who rated their oral health fair or worse did not have dental insurance; those with financial difficulties were almost twice as likely to rate their oral health fair or poor. The inability to access dental care because of financial constraints could adversely affect the self-esteem and quality of life of these women. These results are similar to those of other studies where dental insurance and/or being able to afford dental care were strongly associated with both oral health status and use of dental care.[10] A possible solution to the issue of affordability could include training midwives and other allied health care professionals to do basic dental examinations and make referrals for proper care even though that would not necessarily improve access to dental treatment.[15]

Limitations

Because the information in the dental survey was self-reported, we do not know how respondents interpreted the questions. Because of the limited number of questions, we were not able to find out why some women had not visited a dental professional within the last year. We do not know if they avoided the dental visit because of anxiety or cultural or ethnic beliefs, which may have influenced their use of dental services. Although most women reported having completed high school, we were unsure whether spouses, family members or accompanying persons had translated the questions for respondents. The focus on 1 specific jurisdiction in British Columbia that has a particular ethnocultural composition may prevent full generalization of our findings.

Despite these limitations, this study provides comprehensive self-reported data on the overall oral health of pregnant women at the sub-population level of a diverse ethnic

Table 5 Multiple logistic regression analysis of psychosocial variables* on self-reported level of oral health and use of dental services by pregnant women in the city of Surrey, British Columbia.

	Odds ratio	95% CI
Psychosocial variables with self-reported oral health†		
Birthplace (Indian v. others)	0.339	0.120–0.954
Birthplace (Canada v. others)	0.727	0.215–2.457
Depressed (no v. yes)	0.750	0.284–1.981
Living difficulty (no v. yes)	1.900	0.763–4.733
Smoking (no v. yes)	1.171	0.425–3.226
High School (no v. yes)	0.915	0.219–1.229
Insurance (no v. yes)	0.519	0.219–1.229
Psychosocial variables with dental service use†		
Birthplace (Indian v. others)	2.861	1.881–4.351
Birthplace (Canada v. others)	1.456	0.944–2.247
Depressed (no v. yes)	0.592	0.386–0.906
Living difficulty (no v. yes)	1.086	0.697–1.694
Smoking (no v. yes)	0.928	0.610–1.413
Insurance (no v. yes)	6.614	4.620–9.468

*Predisposing and enabling variables according to Andersen and Newman.[6]

Note: CI = confidence interval.

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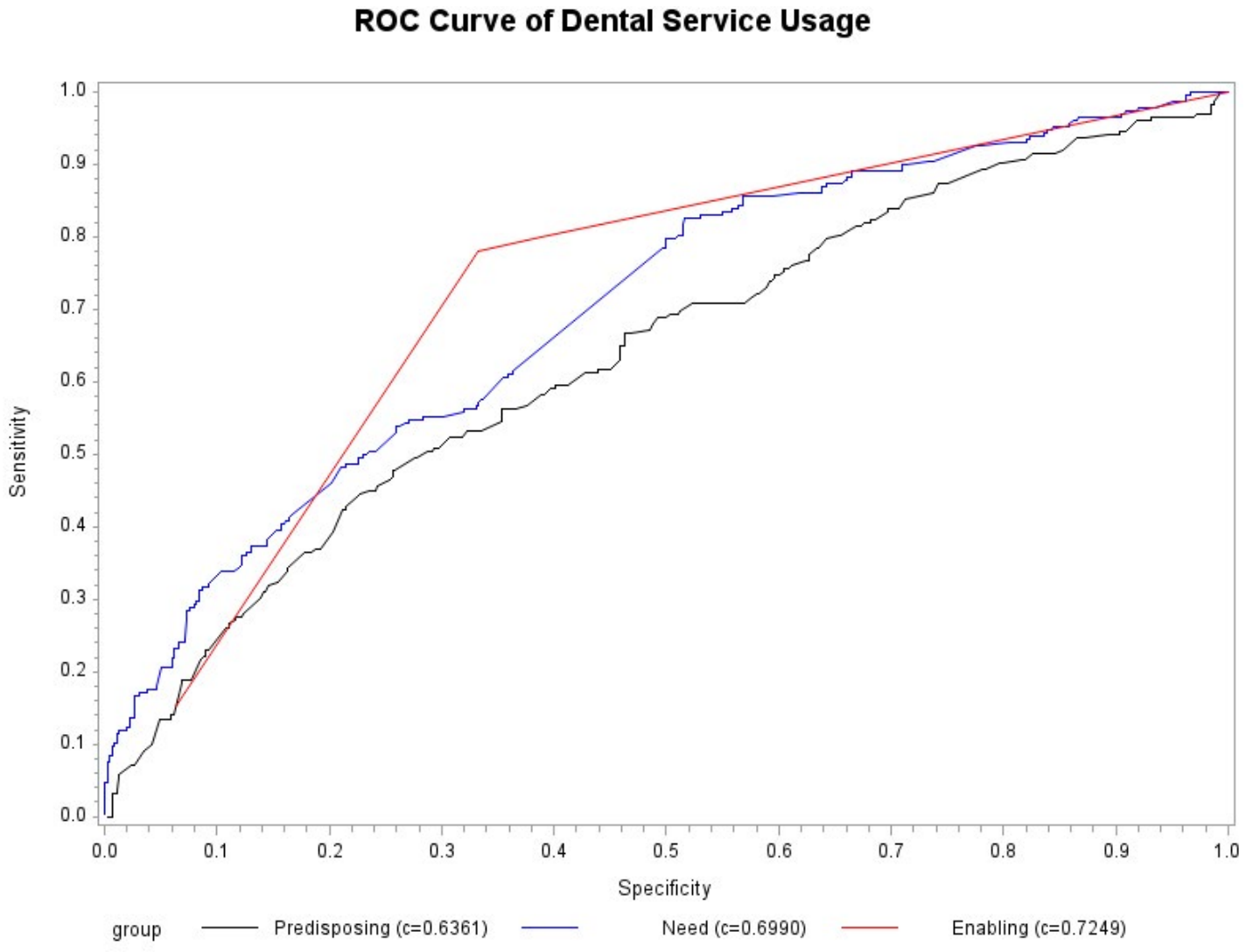
Figure 1



community within the Fraser Health Authority. However, more work is needed to substantiate our self-reported findings with clinical examinations and further explore the roots of the most commonly held dental beliefs during pregnancy.

Conclusion

This study provides a baseline of self-reported oral health status and needs and use of dental services by pregnant women in the city of Surrey in British Columbia. It highlights the predisposing and enabling psychosocial factors that most influence the overall oral health of pregnant women and their use of dental services. Based on recent evidence, we emphasize the importance and safety of oral care during pregnancy. It is important to reassure both pregnant women and their health care providers that oral care — including the use of radiography, analgesics and local anesthesia — is safe during pregnancy. Pregnant women should be encouraged to seek oral care, practise good oral hygiene and follow the recommendations of their health care providers to maintain a healthy mouth during pregnancy.

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Appendix1 Dental questionnaire that was attached to the Best Beginnings prenatal registration form 2012, Fraser Health Authority.

Best for a healthy future
BEGINNINGS
• A Public Health Program •

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PRENATAL REGISTRATION FORM
(Please Print)

Thank you for registering for the Fraser Health – Best Beginnings Program.
A public health nurse will review the information you provide. This information becomes part of your confidential medical record.
Some women will receive a call from the public health nurse to connect them with helpful resources and supports.
All women will receive a pregnancy information package.

YOUR NAME AND CONTACT INFORMATION (PLEASE PRINT CLEARLY – THANK YOU)							
Today's Date year/month/day				Care Card Number			
Last Name		First Name					
Street Address		City		Postal Code			
Phone Numbers	Home:	Work:		Cell:			
Which phone is best to reach you at? ☐ Home ☐ Work ☐ Cell		Is it okay to leave a message on your phone?		☐ Yes	☐ No		
If you do not have a phone how can we reach you?							
When is the best time to call? ☐ Anytime ☐ Morning ☐ Afternoon ☐ Not available by phone during the day							
YOUR HEALTH CARE TEAM							
Name of Doctor or Midwife		City		Phone # (optional)			
Name of hospital where you plan to deliver your baby							
How many months pregnant were you at your first prenatal doctor or midwife visit?		☐ 1-3 months		☐ 4-6 months		☐ 7-9 months	
Are you attending, or do you plan to attend prenatal education classes?				☐ Yes		☐ No	
Are you attending any of the pregnancy outreach or support programs listed below?		☐ Yes	☐ No	If yes, please check appropriate box below			
☐ POPS Program	☐ Best For Babies	☐ Kla-how-eya Aboriginal Centre		☐ Maxxine Wright Community Health Centre			
☐ Better Beginnings	☐ Healthy Babies	☐ Healthiest Babies Possible		☐ Other (Name or Program)			
INFORMATION ABOUT YOU							
Your Birth Date year/month/day				Your Age			
What is your due date? year/month/day				How many weeks pregnant are you today? _____weeks			
With this baby, will you be a first time parent?		☐ Yes	☐ No				
How long have you lived in Canada?		☐ Born in Canada	☐ Less than 5 years	☐ 5-10 years	☐ More than 10 years		
Did you come to Canada as a refugee?		☐ Yes	☐ No				
Would you need an interpreter to speak with the nurse?		☐ Yes	☐ No				
If you need an interpreter, what language do you speak?		☐ Punjabi ☐ Mandarin ☐ Cantonese ☐ Chinese ☐ Korean ☐ Tagalog ☐ French ☐ Vietnamese ☐ Farsi ☐ Other (name of language)					
Do you identify as having Aboriginal heritage?		☐ Yes	☐ No				
Have you completed high school?		☐ Yes	☐ No				
Do you have someone you can talk to when you are upset or worried or just need to talk?						☐ Yes	☐ No
Do you have someone who can help you out with transportation, housing, childcare or other personal needs?						☐ Yes	☐ No
Are you finding it very difficult to live on your total household income?						☐ Yes	☐ No
Do you receive income assistance (e.g., disability, income assistance, employment insurance) or BC Medical Premium assistance?						☐ Yes	☐ No
During the past month have you often been bothered by feeling down, depressed or hopeless?						☐ Yes	☐ No
During the past month have you often been bothered by little interest or pleasure in doing things?						☐ Yes	☐ No
Please tick **ONE** of the check boxes about tobacco		☐ I have never smoked cigarettes		☐ I currently smoke cigarettes			
		☐ I quit smoking less than 1 year ago		☐ I quit smoking more than 1 year ago			
How often do people smoke around you?		☐ Daily	☐ Weekly	☐ Monthly	☐ Less than Monthly	☐ Never	
Are you planning to breastfeed your baby?		☐ Yes	☐ No	☐ Not decided yet			
PUBLIC HEALTH NURSE COMPLETES SECTION BELOW							
Health Unit (where client resides)							
☐ Abbotsford	☐ Chilliwack	☐ Hope	☐ Mission	☐ North Delta	☐ TriCities - Coquitlam/Port Moody		
☐ Agassiz	☐ Cloverdale	☐ Langley	☐ New West	☐ North Surrey	☐ South Delta		
☐ Burnaby	☐ Guildford	☐ Maple Ridge	☐ Newton	☐ TriCities: Port Coquitlam	☐ White Rock		
PHN Name		PHN Signature		Date: year/month/day	BB	BCHCP ☐ Yes ☐ No	

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Best Beginnings Prenatal Registration form - Revised November 1, 2012

Appendix 2 Best Beginnings prenatal registration form 2012, Fraser Health Authority.

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UBC DENTISTRY | THE UNIVERSITY OF BRITISH COLUMBIA

1. **Please rate the health of your mouth: (choose one)**
( )Excellent ( ) Good ( ) Fair ( ) Poor

1.2 **How important do you think is the health of your mouth during pregnancy?**
( ) Very important ( ) Important ( ) Somewhat important ( ) Not important ( ) I don't know

2. **Do you have an insurance or government program that covers all or part of your dental expenses?**
( ) Yes ( ) No ( ) Don't know
( ) I was refused coverage

2.1. **If yes, then is it:**
( ) An employer sponsored plan?
( ) A private plan?
( ) A government program for social service?
( ) A government program for First Nations and Inuit?

3. **In the past 12 months, have you avoided having some or all the dental treatment that was recommended because of the cost?**
( ) Yes ( ) No

4. **When was the last time you saw a dental professional (dentist, dental hygienist, and denturist)? (choose one)**
( ) Less than 1 year ago
( ) 1 year to less than 2 years ago
( ) 2 years to less than 3 years ago
( ) 3 years to less than 4 years ago
( ) 4 years to less than 5 years ago
( ) 5 or more years ago
( ) never

5. **How often do you see a Dental professional (dentist, dental hygienist, and denturist)? (choose one)**
( ) More than once a year for checkups or treatment
( ) About once a year for checkup or treatment
( ) Less than once a year for checkup or treatment
( ) Only for emergency care
( ) Never

6. **Since the beginning of your pregnancy to today, have you had any one or more of the following conditions:**

a) Toothache	**( ) Yes**	**( ) No**
b) Sensitivity in your teeth when consuming hot or cold foods or drinks	**( ) Yes**	**( ) No**
c) Other pain in your mouth	**( ) Yes**	**( ) No**
d) Pain around your jaw joints	**( ) Yes**	**( ) No**
e) Bleeding gums while brushing your teeth	**( ) Yes**	**( ) No**
f) Persistent dry mouth	**( ) Yes**	**( ) No**
g) Persistent bad breath	**( ) Yes**	**( ) No**

h) Others _____

7. **During your pregnancy, what do you think is most likely to happen in your mouth? (You may choose more than one answer)**
( ) I may lose a tooth or teeth
( ) My teeth may become lose
( ) My teeth and gums may become sensitive
( ) I may lose calcium from my mouth/body because of my baby
( ) I may have cavity or cavities in my teeth
( ) I may have one or more dental fillings falling out/lose a filling(s)
( ) I may avoid brushing and/or flossing
( ) My gums may bleed
( ) I may develop oral tumor/cancer
( ) I should avoid seeing a dentist/dental professional because_____
_____
( ) I don't know
( ) None of the above
( ) Other _____

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