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Accessing dental care: a survey of barriers among at-risk youth

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Abstract

Background: In the face of homelessness, maintaining one's health, including oral health, is a challenge especially given that dental care is omitted from Canada's universal healthcare model (1,2). Canadian youth make up about one-third of Canada's homeless population, but another unique population of youth exists, those that are "at-risk" (4). At-risk youths are considered young individuals that, given an array of potential circumstances, are less likely to successfully transition to adulthood. **Objective:** The purpose of this research was to determine specific barriers that at-risk youth face when accessing professional dental services. Methods: The research was carried out at Choices for Youth, a community-based youth outreach program, where individuals aged 16-29 years old were surveyed to determine what they view their barriers to accessing dental care to be, as well as if they perceive dental care to be of importance to their overall health and wellbeing. The survey included a total of 9 questions in multiple choice and Likert formats, both quantitative and qualitative. **Results:** A total of 34 youths participated in the study with a mean age of 23.5 years old. A lack of financial support for dental care proved to be the most common obstacle (n=30) for at-risk youth accessing dental care. Conclusion: Despite this study's small sample size, our findings suggest that at-risk youth value their oral health but are unable to access adequate dental care due to expense.

Preface

This research is an original and independent work. Ethics approval was received from the provincial Health Research Ethics Board (HREB) of Newfoundland. The authors received no funding for this work. No conflicts of interest to declare.

Accessing dental care: a survey of barriers among at-risk youth Introduction

In the face of homelessness, maintaining one's health, including oral health, is a challenge (1,2). Without stable housing and perhaps a lack of adequate personal hygiene tools and practices, it becomes increasingly difficult to maintain proper oral health. Although Canada's healthcare system functions within a universal model, dental care is omitted from the range of services covered and is generally accessible only through out-of-pocket payments or private health insurance. In homeless individuals, often neither of these payment options are feasible and oral health can suffer as a result (2).

In Canada, homelessness is a significant issue with an estimated 300,000 individuals considered "homeless" and these rates are rising (3,4). Canadian youth make up about one-third of Canada's homeless population (4). However, aside from youth that are defined as homeless, another unique population of youth exists, those that are "at-risk". These at-risk youths are considered young individuals that, given an array of potential circumstances, are less likely to successfully transition to adulthood. Measures of success that are generally used to predict a youth's smooth transition into adulthood include academic success, securing employment, gaining financial independence, and avoiding the criminal justice system. An at-risk youth can indeed be homeless but could be disadvantaged in other ways that are not necessarily related to shelter (6,7). Some other factors that contribute to a youth being considered at-risk include low familial income, persistent drug and/or alcohol use, teen pregnancy, being of a minority group, not completing high school, criminal involvement, amongst others (6,7).

The purpose of this research was to determine what barriers at-risk youth face when attempting to access professional dental services. The research was carried out with the help of Choices for Youth, a

community-based, not-for-profit organization in St. John's that provides at-risk youth with supportive outreach programs and opportunities for stable housing, health, education, and employment training.

Methods

We surveyed youth that are accessing programs at Choices for Youth to determine what they view their barriers to accessing dental care to be, as well as if they perceive dental care to be of importance to their overall health and wellbeing. This cross-sectional study used a paper survey composed of both quantitative and qualitative questions. The survey was a composite of categorization (e.g., excellent-poor), Likert-type scale questions, with room for some personal comments. The questionnaire was adapted from a University of Toronto Doctoral dissertation that looked at oral care and dental services in homeless adults in Toronto (8). The questionnaire included Figueiredo's questions 1, 2, 8, 16, 38 (out of the original 42 question survey), in addition to age and gender, with two new questions added (8).

The inclusion criteria of this study included participants that use Choices for Youth outreach services and hence enter the doors of the organization, are 16-29 years old (age range of youth that can avail of Choices for Youth services) and consented to participate. Initially, we (SG) personally administered questionnaires to the youth. However, after the first session of data collection, outreach staff at Choices for Youth offered to make the questionnaires available for the youth to complete.

Recruitment posters were placed around the outreach centre and any interested youth participated by indicating their interest to outreach staff. This change in method was made (with an approved ethics amendment) to maintain the youths' sense of safe space by not introducing a stranger into the outreach centre. Overall, this change in method worked well and increased our expected recruitment. Throughout the research, when each participant completed a questionnaire, he or she placed it into an individual unidentified envelope and sealed it so as to maintain participant privacy. The participant then placed their sealed envelope into a larger container for collecting completed surveys. The outreach staff at CFY

offered a private office space within the outreach center to be used for youth who chose to avail of it while completing the survey. The individual envelopes contained a letter of consent which included the primary investigator's (SG) contact information if the youth would like to contact us with any questions. SG also reviewed the questionnaire and letter of consent with the outreach staff who had volunteered to carry out its distribution and provided them with SG's direct contact information (phone and e-mail) if any issues arose throughout the process. No questions or concerns were brought to our attention throughout the research process.

Results

Questionnaire results were counted and percentages of respective responses were calculated using Microsoft Excel (version 15.41). No comments were left on any completed questionnaires to allow for thematic analysis.

Questionnaire results

All participants (n=34) chose to answer the question that asked them to self-rate their oral health (Table 1). When participants self-rated the current health of their mouth/teeth, 29.4% (n=10) considered their oral health to be "poor"; 26.5% (n=9) of participants rated their oral health as "fair"; 26.5% (n=9) rated their oral health as "good"; 8.8% (n=3) rated their health as "very good"; 5.9% (n=2) of participants rated their oral health as "excellent"; and 2.9% (n=1) answered "do not know/prefer not to say".

All participants (n=34) chose to answer the question that asked when they last saw a dentist/dental professional (Table 2). Zero (0) participants answered "never" having seen a dentist/dental professional; 20.6% (n=7) of participants answered to having seen a dentist/dental professional "5 or more years ago"; 20.6% (n=7) of participants answered to having seen a dentist/dental professional "3-4 years ago"; 20.6% (n=7) of participants answered to having seen a dentist/dental professional "1-2 years"

ago"; and 38.2% (n=13) of participants answered to having seen a dentist/dental professional "less than 1 year ago".

All participants (n=34) chose to answer the question that asked how often they have access to dental supplies (e.g. toothbrush, toothpaste, floss, etc.) (Table 3). A majority of participants, 73.5% (n=25), answered to having "daily" access to supplies; 11.8% (n=4) answered to having "weekly" supplies; 11.8% (n=4) answered to having "monthly" supplies; and 2.9% (n=1) answered "do not know/prefer not to say".

All participants (n=34) chose to answer the question that asked how important the appearance of their teeth/mouth is to them (Table 4). Of the participants, 91.2% (n=31) answered that the appearance of their teeth/mouth was "very important", and the remaining 8.8% (n=3) of participants answered that the appearance of their teeth/mouth was "important". No participants answered that the health of their teeth/mouth was "not so important" or "not important at all", respectively.

All participants (n=34) chose to answer the question that asked them to indicate barriers that they feel make it difficult to access dental services (Table 5). The format of this question allowed participants to check any/all answers that they felt were applicable to them. The most chosen response was "can't afford the expense", with 88.2% (n=30) of participants selecting this option. Followed by inability to pay for dental care, "transportation being too difficult or expensive" was a barrier noted by 23.5% (n=8) of participants. A "fear of the dentist" was selected by 14.7% (n=5) of participants. Similarly, "feeling embarrassed about your mouth or teeth" was selected by 14.7% (n=5) of participants. Next, 11.8% (n=4) of participants noted that they "don't know what dental services are available", 11.8% (n=4) of participants selected that they felt "there aren't any barriers making it difficult for me to access dental services", and 8.8% (n=3) selected that they "don't have reliable phone access to make an

appointment". No participants chose that they "don't feel a need for professional dental services" or that they "don't know/prefer not to answer", respectively.

All participants (n=34) chose to answer the question that asked them if they would see a dentist/dental hygienist if one were available (Table 6). Each participant, 100% (n=34), answered "yes", they would see a dentist/dental professional if one were available to them.

The next question asked participants which social problems the face in their life, to which they could respond with all/any options. One participant did not answer this question, but the remaining 97.1% (n=33) of participants did answer this question (Table 7). The social problem of "homelessness or unreliable housing" was selected by 90.9% of participants (n=30); "unemployed" was selected by 45.4% (n=15) of participants; 24.2% (n=8) of participants noted "legal difficulties such as criminal charges"; 21.2% (n=7) of participants selected "dropped out of school or did not complete high school"; 21.2% (n=7) of participants cited "alcohol use"; 18.1% (n=6) of participants selected "street drug use"; and 11.1% (n=2) of female participants identified "unintentional pregnancy" as a social problem.

Results in tables and figures

Table 1: Participant Demographics

Gender	% (n)
Males	44.1 (15)
Females	55.8 (19)
Transgender	0 (0)
Other	0 (0)
Total	100 (34)
Age	% (n)
Age <18y.o	% (n) 0 (0)
<18y.o	0 (0)
<18y.o 18-21	0 (0) 20.6 (7)

Table 2: Survey Responses

Question (Total Responses)	Response	% (n)

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"In general, would you say the	Excellent	5.9 (2)
health of your mouth/teeth is:"	Very good	8.8 (3)
(N=34)	Good	26.5 (9)
	Fair	26.5 (9)
	Poor	29.4 (10)
		2.9 (1)
(43371	Don't know/prefer not to say	
"When was the last time you	Less than 1 year ago	38.2 (13)
saw a dentist/dental	1-2 years ago	20.6 (7)
professional?" (N=34)	3-4 years ago	20.6 (7)
	5 or more years ago	20.6 (7)
"How often do you have access	Daily	73.5 (25)
to oral hygiene supplies (e.g.	Weekly	11.8 (4)
toothbrushes, toothpaste, dental	Monthly	11.8 (4)
floss, etc.)?" (N=34)	Do not know/prefer not to say	2.9 (1)
"How important is the	Very important	91.2 (31)
appearance/health of your	Important	8.8 (3)
mouth/teeth to you?" (N=34)	Not so important	0 (0)
	Not important at all	0 (0)
"Which of the following	Cannot afford the expense	88.2 (30)
barriers make it difficult for you	Transportation is too difficult or	23.5 (8)
to access dental services, like a	expensive	(0)
dentist? Please check all that	Fear of the dentist	14.7 (5)
apply." (N=34)	Feeling embarrassed about mouth/teeth	14.7 (5)
Tribin (c. c.)	Do not know what dental services are	11.8 (4)
	available	11.0 (4)
	Do not feel there are any barriers	11.8 (4)
	Do not have reliable phone access to	8.8 (3)
	make an appointment	8.8 (3)
	Do not feel the need for professional	0 (0)
	dental services	0 (0)
		0 (0)
(XX) 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Do not know/prefer not to answer	0 (0)
"Would you see a dentist/dental	Yes	100.0 (34)
hygienist if one were available	No Control of the Con	0 (0)
to you?" (N=34)	Do not know/prefer not to answer	0 (0)
"Which of the following social	Lack of money or financial support	88.2 (30)
problems do you face in your	Unemployed (if not in school)	44.1 (15)
life? Please check all that	Legal difficulties such as criminal	23.5 (8)
apply." (N=33)	charges	
	Dropped out of high school or did not	20.6 (7)
	complete high school	()
	Alcohol use	20.6 (7)
	Street drug use	17.6 (6)
	Homelessness or unreliable housing	14.7 (5)
	Unintentional pregnancy (females only)	11.1 (2)*
	ommonutorial programmy (termates only)	11.1 (2)

Do not know/prefer not to answer	0 (0)
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^{*} A total of nineteen (19) females participated in the study, but only eighteen (18) answered this question

100 88.2 Percent of participants citing barrier 90 80 70 60 23.5 30 14.7 14.7 20 11.8 11.8 8.8 10 0 0 Do not feel a Cannot afford Transportation Do not have Fear of the Feeling Do not feel Do not know Do not too difficult or reliable phone what services the expense dentist embarassed need for there are any know/prefer are available expensive access to make about professional barriers not to answer mouth/teeth dental services appointment

Figure 1. Self-perceived barriers to accessing dental care in at-risk youth participating in this study

Barriers to accessing dental care

Discussion

This research demonstrated that the most pervasive barrier to accessing dental care among at-risk youth surveyed in this study is an inability to afford dental care. Lack of financial support was also noted by the majority (88.2%) of youth when thinking about social issues that they face in general, not specifically in keeping with dental care. In contrast to this finding, all participants considered their oral health and appearance to be "important" or "very important" to them. Furthermore, all participants noted that they would see a dental professional for dental care if this were an option for them. Overall, the results of this study show that the at-risk youth surveyed in this study are largely unable to access dental care due to inability to afford the cost, yet 100% of the youth consider this part of their health and appearance to be of importance to them.

To further support the need for accessible dental care in this population, the majority of participants rated their own oral health as "poor". Aside from the medical importance of maintaining proper oral health, unhealthy teeth and gums can lead to emotional and psychological distress. Homeless

youth that are unable to care for their teeth have documented embarrassment and anxiety at the thoughts of interacting socially due to unclean, unaesthetic, and/or missing teeth (5). This facet of poor oral health can arguably contribute to isolation, low self-confidence, and decreased motivation to become employed (8).

Our study found a higher than expected proportion of youth that note having seen a dental professional less than one year ago, when contrasted to research out of Toronto, which noted that greater than sixty percent of homeless adults had not seen a dental professional in greater than one year which includes emergency visits (8). Further study could investigate those youth that answered to having seen a dental professional less than one year ago. These recent dental services may have been delivered in an emergent form, rather than preventative in-office services. By chance, this research did not capture any youth under the age of 18, and therefore no participant would have qualified under the Newfoundland and Labrador provincial government's *Low Income (Access) Program* which includes youth and covers dental exams every two years. The participants of this research being 18 years and older would instead fall under the *Adult Dental Program* which does not cover preventative services but does cover dental fillings ± x-ray imaging every three years and extractions when necessary (9).

Despite a majority of participants having daily access to dental supplies (73.5%), the research results demonstrate that having the supplies is not adequate to fully maintain excellent oral health since a majority of participants still self-rated their oral health as being "poor" or "fair". From this data, it seems appropriate to infer that a major component to excellent oral health lies not only in having access to dental supplies (e.g. toothbrushes, toothpaste, floss, etc.), but also in preventative care and maintenance via professional dental services. This component of the study highlights the need for accessible profession dental services in the at-risk youth of St. John's.

Our study suggests that cost is the primary barrier for at-risk youth accessing dental services in St. John's, where the services are funded privately in-office. Further study could consider alternative models of care and funding, such as Australia's community-based model of dental service (10).

Limitations

Since this study only gathered information from youth that access Choices for Youth programs and walk through the doors of the organization, the research is only collecting data from a subset of at-risk youth in St. John's. Ultimately, the age range captured in this study were individuals aged 18-29 years which does not capture younger aged youth. There may exist an overlap among barriers to accessing dental services and barriers to accessing outreach services in St. John's, therefore such youth may not be well-represented. This study used a self-reported rating of one's own oral health, which is subjective and allows room for bias. Further study could investigate the validity of self-perceived oral health when compared to a dentist's professional assessment. As well, a greater number of survey participants from multiple sites would have provided an even more inclusive data set. Furthermore, our survey was written at a grade 6-8 English reading level, which study excludes individuals who are illiterate in English. Our findings therefore may not be representative of at-risk youth with lower levels of education, certain learning disorders, or immigrant/refugee populations.

Conclusion

With significant help from Choices for Youth, this research project worked to gain an understanding of the barriers that at-risk youth face when seeking dental services in St. John's. Directly surveying at-risk youth regarding dental services was a unique research endeavor which had yet to be done in St. John's and the participating youth were eager to have their voices heard. Overall, the study demonstrated that this population is in obvious need of dental services, but that their access is largely limited by an inability to afford such care.

References

- 1. Hwang SW. Homelessness and health. CMAJ: Canadian Medical Association Journal. 2001 Jan 23;164(2):229-33.
- 2. Lee J, Gaetz S, Goettler F. The oral health of Toronto's street youth. Journal (Canadian Dental Association). 1994 Jun;60(6):545.
- 3. Echenberg H, Jensen H. Defining and enumerating homelessness in Canada. Montreal: Library of Parliament; 2012.
- 4. Berzin SC, Rhodes AM, Curtis MA. Housing experiences of former foster youth: How do they fare in comparison to other youth? Children and Youth Services Review. 2011 Nov 1;33(11):2119-26.
- 5. Gaetz S, Lee J. Developing dental services for street youth. Ontario dentist. 1995 Nov;72(9):34-7.
- 6. Chambliss WJ, editor. Juvenile crime and justice. Sage; 2011 May 3.
- 7. Choices for Youth. Rewriting the Future Choices for Youth Annual Report (2015/2016) [Online]. 2016 [cited 2018 Jun]. Available from: https://static1.squarespace.com/static/54873880e4b028ad7a710b0e/t/57615640555986ada6850c 21/1465996925395/CFY+Annual+Report+2015 16+-+WebVersion.pdf
- 8. Figueiredo RL. *Homelessness and Oral Health in Toronto* (Doctoral dissertation). Toronto, Ontario, Canada: University of Toronto; 2011
- 9. Government of Newfoundland and Labrador. Health and Community Services Dental Care. 2018 [cited 2018 Jun]. Available from: http://www.health.gov.nl.ca/health/dentalservices/general_info.html#3
- 10. Stormon N, Pateman K, Smith P, Callander A, Ford PJ. Evaluation of a community based dental clinic for youth experiencing homelessness in Brisbane. Health & social care in the community. 2019 Jan;27(1):241-8.

Appendix

Survey questionnaire:

Accessing dental care: a survey of barriers among at-risk youth Questionnaire

In general, would you say the health of your mouth/teeth is: Excellent Very good
Good
Fair
Poor
Don't know/Prefer not to answer
2. When was the last time you saw a dentist/dental professional?
Less than 1 year ago
1-2 years ago
3-4 years ago
5 or more years ago
Never
Don't know/Prefer not to answer
3. How often do you have access to oral hygiene supplies (e.g. toothbrushes, toothpaste, dental floss, etc.)?
Daily
Weekly
Monthly
Other
Don't know/Prefer not to say
4. How important is the appearance/health of your mouth/teeth to you?
Very important
Important
Not so important
Not important at all
Other
Don't know/Prefer not to answer
5. Which of the following barriers make it difficult for you to access dental services, like a dentist? (Please check all that apply.) Don't know what dental services are available

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	Can't afford the expense (no insurance to pay for it) The transportation is too difficult or expensive to get there Don't have reliable phone access to make an appointment Fear of the dentist Feeling embarrassed about your mouth or teeth I don't feel a need for professional dental services I don't feel there are any barriers making it difficult for me to access dental services Other (please specify):
	Don't know/Prefer not to answer
6.	Would you see a dentist/dental hygienist if one were available to you? Yes No – Why not? Don't know/Prefer not to say
7.	Which of the following social problems do you face in your life? (Please check all that apply.) Homelessness or unreliable housing Lack of money or financial support Unemployed (only if you're not in school) Dropped out of school or didn't complete high school Legal difficulties such as criminal charges Unintentional pregnancy (for women only) Street drug use Alcohol use Don't know/Prefer not to say
8.	What is your age?
9.	What is your gender? Male Female Transgender Other Don't know/Prefer not to say

Adapted from: Figueiredo, R. L. (2011). Homelessness and Oral Health in Toronto (Doctoral dissertation), Department of Dentistry, University of Toronto.