Community Dental Health (2019) **36,** 95–100
Received 16 August 2018; Accepted 26 September 2018

doi:10.1922/CDH_4455Keboa06

A qualitative study on the oral health of humanitarian migrants in Canada

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Objectives: There is limited evidence to guide oral health policy and services for the 25,000 refugees and asylum seekers who arrive in Canada yearly. The purpose of this study was to explore and understand the pre-migration use of dental services, oral health knowledge, and the effects of oral disease among newly arrived humanitarian migrants in order to inform policy and practice for the population. ***Methods:*** Using focused ethnography and the public health model of the dental care process, we conducted face-to-face interviews (50-60 minutes) with a purposive sample of humanitarian migrants who had indicated the need for dental care. We observed mobile dental clinics that provided care to underserved communities in Montreal. Data were analyzed using a thematic and contextual approach that combined inductive and deductive frameworks. ***Results:*** Participants included 25 humanitarian migrants from four global geographical regions. Five major thematic categories were explored: problem-based dental consultation, self-assessed oral health status, causes of oral diseases, personal oral hygiene, and good oral health for wellbeing. In their countries of origin, participants consulted a dentist when oral symptoms persisted. They cited excessive sugar consumption and inadequate oral hygiene as causes of oral diseases, and reported significant oral diseases impacts that limited their daily functions and wellbeing once in Canada. ***Conclusions:*** Humanitarian migrants were knowledgeable about causes of oral disease and the importance of good oral health, yet poor oral health continued to affect their lives in Canada in important ways.

Keywords: *Oral health knowledge, oral disease effects, humanitarian migrants, Canada*

Introduction

Over 25, 000 refugees and asylum seekers (humanitarian migrants) arrive in Canada every year. The population often arrive with poor health, limited finances, linguistic challenges, and greatly reduced family and community support. They are severely disadvantaged when entering a new sociocultural and political system and present with communicable and non-communicable diseases (Redditt *et al*., 2015).

There is limited research on the oral health of this population. Oral health knowledge, perceptions, and dental care policy for migrants vary within and across host countries (Keboa et al., 2016). For example, parents of refugee children in Canada (Prowse *et al.,* 2014) and Australia (Nicol *et al*., 2014) correctly identified the main risk factors of early childhood caries yet were uncertain about what constituted appropriate care for this condition. In separate studies, adult refugees in Canada (Ghiabi *et al.,* 2014), and the US (Okunseri *et al.,* 2008) perceived they had good oral health although clinical examination revealed significant oral disease among the participants. The notion of being in good oral health could hinder appropriate personal oral hygiene and seeking preventive or curative dental services.

In Canada, humanitarian migrant children (Azrak *et al*., 2017; Hoover *et al*., 2017; Reza *et al*., 2016), and adults (Ghiabi *et al*., 2014) have a high burden of oral disease that is partly attributed to limited access to dental care (Canadian Academy of Health Sciences, 2014). Furthermore, the oral health status of this population is likely to decline during their initial years of settlement (Calvasina *et al*., 2015). Poor oral health negatively affects quality of life and oral diseases can increase the risk of systemic diseases.

Canada is a member of international treaties that morally oblige host countries to attend to the wellbeing of humanitarian migrants through health and social services policy. The Interim Federal Health Program (IFHP) was established to ensure access to health care services for this population (Government of Canada, 2017). However, the IFHP policy is subject to amendments that result in irregular health care benefits, including dental care (Government of Canada, 2017). Currently, under the program, individuals are eligible for only emergency dental care and only during their first 12 months in Canada. This coverage is limited to basic treatment aimed at alleviating acute pain from oral disease or trauma to the jaw. This emergency curative approach provides short-term relief to the patient and is expensive to the government (Quinonez *et al*., 2011). In contrast, services that focus on prevention and oral health promotion can contribute to improving the general health and wellbeing of humanitarian migrants.

Since 2011, Canada has received close to 400,000 humanitarian migrants (Government of Canada, 2017).

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The population need to be in good health to facilitate their integration and economic productivity; there is sparse quality data to help service providers and decision makers understand both individual and system level facilitators and barriers to optimal oral health for this population (Keboa *et al*., 2016). The purpose of this study was to understand the dental care experiences of humanitarian migrants and dental professionals in order to inform the design of appropriate services and policy. In this manuscript we present the pre-migration dental service utilization, oral health knowledge, practices, and effects of diseases among newly arrived humanitarian migrants in Canada.

Methods

We used focused ethnography, a qualitative method that enables the researcher to explore and understand the experiences of a health phenomenon in real time (Higginbottom *et al*., 2013). Our conceptual framework draws upon the public health model of the dental care process proposed by Grembowski and colleagues (1989), and the McGill Illness Narrative Interview (MINI) (Groleau *et al*., 2006).

Study area and participants

Participants were recruited in the city of Montreal. The city receives the second largest number of humanitarian migrants in Canada. Two non-profit community organizations providing services to humanitarian migrants introduced the study to their clientele using informational flyers, word of mouth, and phone calls. The inclusion criteria included humanitarian migrants who were 18 years and above and had received or expressed the need for dental care in Canada. The primary researcher (MK), a foreign-trained dentist with over 10 years experience, used the list from the community organizations to recruit further participants using the snow-ball technique. The final sampling pool purposefully included humanitarian migrants who varied in age, gender, country of origin, and duration in Canada.

Data collection

We conducted face-to-face interviews using an interview guide adapted from the MINI (Groleau et al., 2006). The MINI is a theory-based set of semi-structured questions developed to explore awareness, practices, and impacts of disease. The tool was adapted for oral disease, thereby reducing by half the number of questions. Interviews were conducted in English, French, or Spanish, the languages spoken by the majority of humanitarian migrants in Montreal. The primary researcher (MK), who is bilingual in English and French, mainly conducted and transcribed the interviews. Two interviews were conducted in Spanish and transcribed in English with the help of a translator.

Interviews took place in the McGill Faculty of Dentistry or alternative venues proposed by the participants, lasted 50-60 minutes, and were audio-recorded with the informed consent of the participants. Recruitment was completed when preliminary analysis suggested informational redundancy. Participant observation occurred at mobile dental clinics that provided basic care to underserved communities in the city. During these field visits, the primary researcher (MK) listened to illness narratives, observed the oral health status of humanitarian migrants, and informal discussions between humanitarian migrants and dentists. These data were recorded in field note journals.

Data analysis

Data analysis and data collection occurred simultaneously. The first step of the analysis involved the completion of an Interview Report Form that was designed to facilitate reflexivity. Transcripts of the recorded interviews and completed forms for each participant were shared among three authors (MK, RH, MEM). We analysed the data using deductive and inductive coding; the theoretical frameworks inspired deductive codes whereas inductive codes were constructed from the data. The primary researcher discussed provisional codes with the larger research team (including dental scientists, an anthropologist, an educational researcher, and a nursing researcher) and the revised codes were applied to the entire data set. Similar codes were aggregated to form categories (Burnard *et al*., 2008). A synthesis of the field notes informed contextual interpretation of the data. Three members of the research team (MK, RH, MEM) analyzed the data and provisional results were confirmed with a sample of the participants.

Ethical approval

The McGill University Institutional Review Board approved the study.

Results

Our sample included 25 humanitarian migrants (16 women and 9 men) between 18 and 65 years old, from four global geographical regions. More than half of the participants had been living in Canada for less than one year. Table 1 shows relevant socio-demographic characteristics of participants. Our findings are grouped into five thematic categories, each interpreted with the theoretical framework. We support our findings with salient quotes rendered in English. To maintain participants' confidentiality, we decided to not indicate which in-text quotes were originally in English, and which were translated. The primary researcher or the Spanish translator translated the quotes.

Problem-based dental consultations

Of the 25 participants, only 11 had ever consulted a dentist before they arrived in Canada. For the majority of these individuals, pain from a decayed tooth was the main trigger for these consultations, which ended with extraction of the offending tooth for 10 of the 11 participants. According to the participants, this was a common pattern of dental consultation in their countries of origin. An adult participant from West Africa describes this perception: *"I think people always consider that they are in good health when there is no pain. Thus, it is a waste of time to go consult a dentist when you are okay. They tell themselves, I am okay if there is no pain. So, why should I go to see the dentist? I used to think like this."*

Table 1. Socio-demographic characteristics of participants

Variable	*N(25)*
Age (in years)	
18-35	13
≥36	12
Gender	
men	9
women	16
Region & countries of origin	
Latin America	5
North Africa & Middle East	5
Russia & South East Asia	3
Sub-Saharan Africa	12
Duration in Canada	
≤1 year	14
2-4 years	6
>4 years	5
Immigration status	
Government Assisted Refugee (GARs)	2
Privately Sponsored Refugees (PSRs)	3
Inland (In-Canada) refugees	8
Asylum seekers (refugee claimants)	12
Employment status	
Employed (part-time)	3
Unemployed	22
Monthly income/allowance ($)	
<700	23
700-1000	2

The participants sought help from a dental professional only when self-administered treatments were no longer helpful. The auto-treatment measures included application of local herbs on the offending tooth, and the use of analgesics and antibiotics that were bought from a pharmacy or local medicine vendor. According to the participants, the delay in seeking dental care was due to a number of reasons that included negligence of oral health, failure of dentists to sensitize the population on the importance of good oral hygiene, high cost of dental care, scarcity of dentists, and fear developed from previous dental treatments. An exception to this pattern of pre-migration dental consultation came from a Cuban who summarized the availability and accessibility of dental services in his country: "*In Cuba ... you have dental care so close that you lose all sense of responsibility for your oral health. You feel protected to the extent that no matter what happens with your oral health, you will always have care immediately*."

Self-assessed oral health

All participants were recruited on the basis that they self-expressed the need for dental care during their stay in Canada. At the time of the recruitment, only one of the 25 participants perceived their oral health was good. Participants described their current oral health in terms of the presence or absence of a problem. Problems affecting the teeth were often characterized by chronic toothache and included "dental caries," "broken teeth", "fragile teeth," "broken or missing fillings," "sensitive teeth," "grinding of teeth," and "missing teeth due to extractions." As mentioned above, 10 of the 11 participants who had consulted a dentist in their home country had a tooth extracted. Three of the four participants who had their teeth restored, in their home country, complained that the filling material had "fallen-off" or was "broken." An asylum seeker from North Africa explained this frustration: *"After two or three months the filling falls off, it does not stay. Like this tooth, it was treated just 1 month before I arrived here. It cost me 80,000 dinar (~$100), and it is not up to five months and it has fallen off."*

Six participants felt they had gum disease. They based their assessment on the presence of blood in their saliva, or gums that bled during brushing. Field notes from participant observation corroborated the self-reported oral health of participants.

Causes of oral disease

When asked about the cause of their oral health condition, the responses were diverse. Participants attributed their oral health problems to a number of factors: (i) consumption of sugars (candies, "bonbons", chocolates); (ii) inadequate oral hygiene (failure to brush the teeth at night and after eating candies); (iii) extreme climatic conditions; (iv) hereditary causes; (v) bacteria contamination; and (iv) trauma. The consumption of "sugary products" and inadequate personal oral hygiene were cited as the most common causes of tooth decay. Individuals who considered that sugar consumption was harmful to the teeth were convinced that limiting or avoiding excessive sugar consumption was one method to prevent dental caries. This knowledge did not appear to discourage the consumption of sugar as suggested by an asylum seeker from West Africa: *"When we were growing up, we were told that if you consume too much sugary products it affects the teeth…. I ate a lot, I always had chewing gum. Every day I did not miss eating bonbons."* Two participants had a strong conviction that their tooth decay resulted from the transmission of bacteria from a second party: *"I would say that I was infected. We drink from the same cup with people. To me, sincerely it is a contagious disease. Yes, I can confirm this as a fact."* Yet another participant added: *"I am certain that my teeth are fragile because of the extreme cold and heat in Canada. During summer, we eat cold items and in the winter, hot food. Can you imagine what that does to your teeth?"* Some participants claimed that they inherited "weak teeth" from one of their parents.

Personal oral hygiene

When asked about their personal oral hygiene practices, the majority reported that they brushed their teeth twice daily using a toothbrush and toothpaste. The frequency of tooth brushing was sometimes increased to relieve oral disease symptoms as explained by this participant from North Africa: *"I had to brush almost every two hours. About one hour after cleaning, I could start feeling the bad odour again. Then I will go to the bathroom to clean again. This was very uncomfortable."*

Other products that were used for daily oral hygiene included antiseptic mouthwash, warm water and salt gargle, dental floss, and toothpicks. Three participants said they learned about dental floss and the correct tooth brushing technique after they arrived in Canada. Our field notes included a vivid account of the excitement of one humanitarian migrant on the day he was introduced to dental flossing. The effects of oral diseases motivated some participants to adopt healthier oral health habits.

For example, five participants increased their frequency and quality of tooth brushing when they experienced toothache, reduced sugar consumption, and paid closer attention to the oral health practices of their children. These participants said they maintained the practices even after oral symptoms subsided.

Good oral health for wellbeing

Participants were unanimous about the importance of healthy teeth and gums and articulated the association between good oral health, general health, and wellbeing. Two participants with missing incisors expressed unease when interacting and socializing in public and felt that their oral condition limited their chances of employment. The general view on the importance of good oral health was captured in this quotation from a 23-year old asylum seeker from Sub-Saharan Africa: *"The teeth are like the mirror to one's body. Having nice teeth is good for an individual's outward appearance and self-image. Someone with a good look has a better chance of getting employed in certain jobs such as the television (broadcasting) industry."*

Oral diseases affected the daily functions and social life of participants in various ways. Four participants complained of difficulty in chewing as a result of molars that were extracted before their arrival in Canada. This inability to chew forced them to adopt new dietary habits that sometimes led to unwanted weight loss.

Dental pain resulted in loss of sleep, increased levels of anxiety, and stress. One participant mentioned: "*I prefer a pain in the leg than a toothache, because the toothache paralyses you completely, whereas if you have a pain in the leg, you can still walk with support."* According to some participants, gum disease could lead to tooth loss and the early loss of teeth could alter one's facial appearance and create inadequate biting and chewing. Furthermore, some felt that even if one eventually got a prosthesis, the performance and durability would be inferior to the natural dentition. Participants concluded that it was therefore better to take proper care in order to maintain their natural teeth. When discussing the relationship between oral and general health, two participants explained how dental infection could aggravate the existing cardiac condition of their children. Participants explained that their inability to get immediate treatment added to their level of stress. A participant from North Africa summed up the effect of oral problems on daily function as such: "*There is an Arabic adage that says: When you have toothache, you lose your intelligence."*

Another participant from South East Asia narrated an experience that conveys how poor oral health can have extreme consequences on a person's life. Her persistent mouth odour was a source of social embarrassment and eventually got her dismissed from her job:

"This went to the extent that I was dismissed from my job. My employer said to me, what is happening to you? No one wants to receive you in his or her home and I think you cannot continue in my company (as a nursing aid) who worked in the home of clients…. I was dismissed because I did not take care of my mouth. I know the reason although it sounds strange."

Discussion

This study provides insights into oral health knowledge and practices of newly arrived humanitarian migrants in Canada. Our sample comprised humanitarian migrants who self-reported the need for dental care. Participants were well-informed about common causes of oral disease and the importance of good oral health. Although the majority had never consulted a dentist or did so for only urgent relief of pain, their understandings of the relevance of good oral health fits with the cognitive component of the theoretical framework and support other studies that explored oral health knowledge and awareness among refugee populations. For example, mothers of refugee children were reported to have good knowledge about the causes of early childhood caries affecting their children (Hoover et al., 2017; Nicol *et al*., 2014; Riggs *et al*., 2015). A good level of oral health knowledge is a catalyst for programs aimed at achieving health equity (National Oral Health Alliance, 2012). Geltman and colleagues found that Somali refugees with higher oral health literacy were more likely to use preventive dental care (Geltman et al., 2014). Our results highlight preventive oral hygiene practices of participants and limited history of preventive dental care. For example, the reported frequency of tooth brushing with fluoride toothpaste can reduce plaque accumulation, and thus prevent dental caries and periodontal disease (Seneviratne *et al*., 2011).

There is potential disconnect between the cognitive oral health knowledge and practices of some participants. The frequent consumption of refined carbohydrates during early childhood and adolescence is a risk for dental caries later in life. The inability of participants to act upon their knowledge highlights the need for policy to incorporate effective behaviour change strategies (Kelly and Barker, 2016).

The narratives on self-assessed oral health focused on dental caries and periodontal disease, which are the two most prevalent oral diseases (Marcenes et al., 2013). Of course, we purposefully recruited humanitarian migrants with self-identified needs for professional dental care. Our findings contrast the results of Ghiabi et al., (2014) where refugee participants perceived they had good oral health, but support extant literature on poor oral health of humanitarian migrants globally (Keboa *et al*., 2016).

For this population, the impacts of oral disease can extend beyond effects commonly reported for adults, such as pain, loss of sleep, loss of function, decline in productivity, and low self-esteem (Batista *et al*., 2014). For example, dismissal from a job because of an untreated oral condition constitutes an extreme impact. Humanitarian migrants usually depend on financial assistance from the government or earn minimum wages when employed. Sudden termination of a job potentially leaves the affected individual with no money to pay for dental care. The health policy for this population should, among other things, guarantee access to emergency dental care.

Drawing from Grembowski and colleagues' framework, we can conclude that symptomatic humanitarian migrants had limited control over factors that determine optimal oral health. Following the 12 months of IFHP coverage, humanitarian migrants have to either pay out of their pockets or obtain private dental insurance for oral health care.

These are expensive options even for working Canadians (Thompson *et al*., 2014). We can therefore anticipate a decline in the oral health of humanitarian migrants, similar to that of other immigrant populations, as they settle in Canada (Calvasina *et al*., 2015).

The interest manifested by participants in novel oral hygiene skills and products may suggest their willingness to adopt healthier oral health behaviours and practices. However, the current IFHP policy is designed to address only urgent oral health issues. The results of our study underscore the need for a comprehensive oral health policy for humanitarian migrants that should integrate oral health prevention and promotion, while supporting access to urgent care. A prevention-based policy can help humanitarian migrants make the desired transition to the oral health culture of their host country.

Rigour and methodology

Data in this study combined individual interviews with observations in mobile dental care settings that provided care to humanitarian migrants. Every stage of the study, from conceptualization to implementation and data analysis, was discussed with the research team and preliminary results were confirmed with participants.

Contribution

Our qualitative design provided a platform for participants to express their views on aspects of their oral health, thereby enabling us to listen to the voices of a population who are often not heard. This paper thus provides important information that can guide oral health policy and services for humanitarian migrants in Canada.

Limitations

To our knowledge, this is the first study to examine oral health knowledge, practices, and effects of oral diseases of humanitarian migrants in Canada. While our results should be interpreted within the socio-cultural context of the study, they are transferable to similar contexts in Canada and abroad.

Conclusion

Humanitarian migrants in this study were knowledgeable about causes of oral disease and practised regular oral hygiene, yet poor oral health continued to affect their lives in important ways. Our results suggest the need for oral health policies that should focus on preventive care, while limiting the effects of oral disease and reinforcing oral health knowledge of humanitarian migrants.

Conflict of interest

The authors declare no conflict of interest.

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