Perceived oral health and access to care among men with a history of incarceration

Leeann R Donnelly*, PhD, RDH; **Ruth Elwood Martin**§, MD, MPH, FCFP; **Mario A Brondani**†, DDS, PhD

WHY THIS ARTICLE IS IMPORTANT TO DENTAL HYGIENISTS

- Men with a history of incarceration tend to have poorer oral health than the general population.
- This study explores perceptions of, barriers to, and facilitators of oral health for this group as a first step in identifying strategies to reduce this disparity.
- Dental hygienists, in collaboration with correctional institutions and community organizations, can improve access to care for men with a history of incarceration by creating a safe space for them to receive professional oral care.

ABSTRACT

Objectives: To explore the perceptions of oral health and access to care experiences of men with a history of incarceration and to identify factors contributing to current oral health inequities within their community. **Methods:** A qualitative approach was used via focus group discussions among 18 men with a history of incarceration and 10 staff members of a non-profit organization working with individuals who are involved in or at risk of involvement with the criminal justice system. All discussions were audiorecorded and transcribed verbatim. A thematic analysis was undertaken using *N-Vivo 10*™, a qualitative data management program. **Results:** The participants ranged in age from 29 years to 69 years, came from a variety of ethnic backgrounds, and had different prison setting experiences. Five major themes emerged: not on the radar, stigma of incarceration, being shot down, caught in the system, and institutional conditioning. **Conclusions:** The personal backgrounds, experiences with health and dental care during prison time, and the unique challenges faced by men with a history of incarceration influenced their perceptions and their ability to access dental services. Dental professionals can help to change these perceptions and experiences by creating a safe space for these individuals to access and receive care comfortably.

RÉSUMÉ

Objectifs : Explorer la perception sur la santé buccodentaire et l'accès aux soins des hommes ayant des antécédents d'incarcération et cibler les facteurs qui contribuent aux inégalités actuelles en matière de santé buccodentaire au sein de leur communauté. **Méthodologie :** Une approche qualitative a été utilisée au moyen de groupes de discussion comprenant 18 hommes ayant des antécédents d'incarcération et 10 membres du personnel d'un organisme sans but lucratif qui travaillent avec des personnes impliquées ou à risque d'être impliquées dans le système de justice pénale. Toutes les discussions ont fait l'objet d'un enregistrement sonore et ont été transcrites mot pour mot. Une analyse thématique a été effectuée au moyen du programme de données qualitatives *N-Vivo 10*MD**. Résultats :** Les participants étaient âgés de 29 ans à 69 ans, étaient issus d'origines ethniques variées et avaient vécu différentes expériences en milieu carcéral. Cinq thèmes principaux sont ressortis, y compris ce qui ne figure pas sur l'écran radar, les préjugés associés à l'incarcération, être rejetés, être coincés dans le système, et le conditionnement institutionnel. **Conclusions :** Les antécédents personnels, les expériences en matière de santé et de soins buccodentaires au cours de la peine d'emprisonnement, et les enjeux uniques auxquels sont confrontés les hommes ayant des antécédents d'incarcération ont influencé leur perception des services buccodentaires et leur capacité d'y accéder. Les professionnels dentaires peuvent aider à changer la perception et les expériences de ces personnes en créant un endroit sécuritaire pour eux, qui leur permet d'accéder aux services et de les recevoir confortablement.

Keywords: access, incarceration, justice system, oral health, prison system, qualitative research
CDHA Research Agenda category: access to care and unmet needs

INTRODUCTION

In Canada, correctional services are administered either by a provincial or territorial government for sentences of less than 2 years or by the federal government through the Correctional Service of Canada (CSC) for sentences greater than 2 years.[1] In the year 2016–2017, there were on average 117,645 adults under provincial and territorial supervision; an average of 23,006 adults were under the supervision of CSC.[1] Provincial, territorial or federal supervision can be done in custody (prison or remand) or in a community-based program (probation, parole, statutory release). In 2016–2017, within the overall Canadian correctional system, 39,873 individuals were

*Department of Oral Biological and Medical Sciences, Faculty of Dentistry, The University of British Columbia, Vancouver, BC, Canada
§School of Population and Public Health, Faculty of Medicine, The University of British Columbia, Vancouver, BC, Canada
†Department of Oral Health Sciences, Faculty of Dentistry, The University of British Columbia, Vancouver, BC, Canada

Correspondence: Leeann R Donnelly; ldonnelly@dentistry.ubc.ca
Manuscript submitted 8 March 2019; revised 27 June; accepted 5 July 2019

©2019 Canadian Dental Hygienists Association

in custody and the remaining 100,868 were awaiting sentencing or serving their sentence in a community-based program, which translates to roughly 72% living within society.[1] There is an overrepresentation of males within the Canadian correctional system as they up make more than 90% of those under CSC supervision, and there is also an overrepresentation of Indigenous populations as they account for almost one-third of those in the correctional system while making up roughly 4% of the Canadian population.[1]

Overall, people in prison are relatively younger, have poorer physical and mental health, and have higher rates of tobacco and alcohol or illicit drug use than the general population.[2] Other factors such as low socioeconomic status, ethnicity, female gender, intravenous (IV) drug use, and addiction are also known to play a role.[3] Furthermore, the poor physical and mental health of incarcerated individuals can be related to inequities in access to health care services.

The health services provided to those in provincial or federal custody differ. Federally, it is the responsibility of CSC to provide essential health care and reasonable access to non-essential mental health services. Provincially, correctional institutions offer a variety of private or government-funded health and educational programs, including mental health services, drug and alcohol counselling, liaison services, Narcotics/Alcoholics Anonymous meetings, and dental care.[4]

Even though the prevalence of chronic medical conditions among the prison population is higher than that of the general population,[5] incarcerated individuals often report difficult access, or delayed access, to the health services that are available inside correctional institutions. One of the most common complaints made by the prison inmate population in Canada is inequitable access and unavailability of health care, including dental care.[6] After release from prison, access to medical and dental care seems to worsen despite having similar health insurance status to their peers without an incarceration history.[7] Furthermore, those who are unemployed, homeless or who have experienced abuse find access to dental care extremely difficult due to past trauma, negative dental experiences, lack of insurance, low oral health care knowledge and awareness, and the perceived stigmatizing attitudes of oral health professionals towards this client group.[8] Stigma is indeed a major barrier to care experienced by many who are marginalised and vulnerable.

As in other parts of the world,[9] incarcerated populations in Canada have poorer health and higher mortality rates than the general population.[10] In particular, communicable diseases, sexually transmitted blood-borne infections, mental health disorders, and substance use are highly prevalent among this population.[11-13] Chronic conditions such as cardiovascular disease, diabetes, asthma, and cancer are also prevalent in Canadian prisons and often attributed to low socioeconomic status and related health behaviours prior to incarceration.[14,15]

In Canada little is known about the oral health status of those in prison. In the United States nearly half (49%) of the those entering prison report having a dental problem once admitted,[16] yet few report receiving care other than extractions.[17] Oral health conditions left untreated in prison place individuals at a disadvantage when they try to reintegrate into the outside world, especially in Western society where cultural ideals of oral health are focused on a full dentition of straight, white teeth.[18] Limited literature is available to describe the conditions under which oral health is addressed in prison and the impact it has on those incarcerated,[19,20] and little is known about how those who leave prison view oral health and experience oral health care services, and how access to care is affected by a history of incarceration. In the literature, this population appears to be a forgotten segment of society with regard to their oral health needs and is often not a focus for research and funding.[3,21]

Although there may be little focus on this population from the research community, organizations that work with these populations appear well aware of the oral health disparities among their clients. The John Howard Society (JHS), a non-profit organization with offices across Canada, has a long history of working with individuals who are involved in or at risk of involvement with the criminal justice system due to poverty, homelessness, substance use, and mental illness. Their goal is to "contribute to public safety by offering services that lead people to be contributing citizens within their communities."[22] Services include assisting individuals with finding housing, obtaining identification, support for mental health and substance use, and developing strategies for reintegration into the community.[22] One strategy identified as important for successful reintegration in society is addressing unmet oral health needs.[23,24] However, a clear understanding of perceptions of, barriers to, and facilitators of oral health is lacking, specifically in the Canadian context.

This study was undertaken in collaboration with the John Howard Society of the Lower Mainland (JHSLM) in Vancouver, British Columbia, Canada. We aimed to explore perceptions of oral health and access to care experiences of men with a history of incarceration and to identify contributing factors for current oral health inequities within their community.

METHODS

A qualitative approach was selected for this study in order to gain a deeper understanding of the issues that affect the perceptions of oral health among this population and how their particular life circumstances influence their ability to obtain oral health care services. Focus group discussions offer the benefit of eliciting norms for groups through interactions between participants whereby they are able to express differing views and consider both individual

and group standpoints on issues.[25] Further, in stigmatized and marginalised communities, focus groups can foster socialization and membership, and generate transformative change.[25] For this study, a purposefully selected group of 18 men and 10 JHSLM staff members participated in 4 focus group discussions. Approval for this study was obtained from the University of British Columbia, Behavioural Research Ethics Board (BREB # H16-01096).

Focus groups

Three focus groups comprising 18 men were conducted—one at the JHSLM community services office and the other 2 at halfway houses where some of the participants lived. Participants from both provincial and federal institutions, with varying sentence lengths and time since release, were invited to take part. Discussion topics focused on perceptions of oral health, current and past dental experiences, current access to oral health care, oral health priorities, motivations for seeking care, as well as knowledge, attitudes, and beliefs related to oral health.

One focus group comprising 10 purposefully selected staff of the JHSLM was also conducted. Participants were chosen based on their role in the organization and their experience in supporting clients in obtaining oral health services. This focus group was conducted to gain insight into what the organization perceives to be the oral health needs of their clients, how they currently support clients in obtaining oral health services, and what structural barriers or facilitators their clients experience in accessing oral health services.

All focus groups were moderated by one of the authors (LD) with assistance from a graduate student or another member of the research team who documented participant involvement and who took relevant field notes of non-verbal responses and events during the discussion that could add context to the narratives. Each focus group lasted between 35 minutes and 90 minutes and was audiorecorded. A discussion guide was utilized in each focus group with questions that were developed from the literature review and from input from the JHSLM so that overall aims of the study were addressed. Prior to each focus group, a written informed consent was obtained from each participant and a sociodemographic survey was completed by the participants with incarceration history. Each participant received Can$25 as a token of appreciation for their time.

Data analysis

All audiorecordings were transcribed verbatim. Transcripts were then combined with field notes and inputted into a qualitative data management program (*N-Vivo 10*™) to facilitate coding and thematic analysis. Coding (as a word or words that synthesize a specific excerpt of the transcript or that describe the essence of what was said) of the first 2 focus group transcripts was conducted by 2 members of the research team. The individual coding was compared and consensus reached on differing interpretations of the narratives. One author (LD) then completed the coding of the remaining 2 focus group transcripts. Coding involved reading the transcripts numerous times to become familiar with the data. Codes were then grouped into categories of similar and differing views on a particular issue that emerged across the transcripts. Similar categories were combined into themes that addressed the aims of this study.

RESULTS

The participants with an incarceration history ranged in age from 29 years to 69 years and came from a variety of ethnic and educational backgrounds. Four participants had spent time in a provincial institution, two in a federal institution, and the remainder had experienced both types of correctional settings (Table 1).

Five major themes emerged: not on the radar, stigma of incarceration, being shot down, caught in the system, and institutional conditioning. They are presented and explained in the paragraphs that follow; quotes from the participant are used to contextualize the theme.

Not on the radar

Perceptions of oral health and the desire to address unmet dental needs among the participants were influenced by multiple factors, including their social situation and how childhood experiences shaped their perceptions of oral health and related care. According to one staff, oral health might not have been a priority in the past and was put aside, remaining off the radar for many of their clients:

> *For many of us at a young age we would learn that it's just part of your routine to brush your teeth. And for many of them they might have not learned that skill. To them it's not important because it hasn't been taught throughout their life that you gotta brush your teeth. So to them it's a whole new skill they have to learn.*

While this quotation offers some insight into how persons with an incarceration history view oral health and how such views might influence dental care utilization, it is not universally applicable. For some participants, such views were influenced by how the institution managed dental care. We were told how incarcerated individuals would do anything to maintain their oral health while they were in prison as it was the only way to keep their teeth:

> *Two decades in prison and I've been out nine months...For 4 months now, I've had a broken tooth, because I've had cavities and stuff. Everybody tries to take care of their teeth, or at least some people do, because in jail it's the option you have now 'cause still they won't clean them, they won't do any kind of cosmetic stuff. They'll either pull it or the worst case scenario they'll fill it. There's nothing else.*

Table 1. Participant characteristics

Participant ID	Age	Self-reported ethnicity	Highest level of education	Time in provincial prison (years)	Time in federal prison (years)	Total years in prison
1	59	White	GED	6	1	>20
2	62	Canadian	High school	10	4	>20
3	69	Indo Canadian	College	1	0	>20
4	56	Caucasian	High school	1	1	3 to 5
5	29	Metis/Canadian	≤Grade 8	1	1	11 to 15
6	59	Canadian	College	2	5	>20
7	35	Metis/French	College	1	0	11 to 15
8	59	East Indian	College	1	1	>20
9	57	Caucasian/Ukrainian	High school	4	4	11 to 15
10	48	White	College	7	0	3 to 5
11	41	Native American	≤Grade 8	4	0	3 to 5
12	64	Indian	High school	0	6	>20
13	56	White	College	1	1	11 to 15
14	58	Chinese	High school	1	1	11 to 15
15	34	Caucasian	High school	3	3	11 to 15
16	49	White	High school	0	2	>20
17	54	First Nation	High school	3	12	>20
18	57	Hungarian	High school	4	4	>20

In exploring why it was worse to have a cavity filled, this participant further described how he thought it would just create more of a problem in the future, believing that the filled tooth would eventually deteriorate and be extracted. We also probed further as to why participants indicated that they had so many cavities and problems when they were released. One participant, who had spent much of his life in prison, told us about the overall lack of dental care available:

> *I was on the inmate committee for 2 out of the last 4 years. They have stripped away all funding for dental care. You're waiting a minimum of 6 months, a 6-month minimum waiting list, that's for an emergency situation…That's the way it is now.*

Beyond emergency care it was apparent that preventive care was perceived as non-existent as one participant told us:

> *Teeth cleaning is no longer an option for anyone. You can't even go in there and say, 'Hey, I've got my own money. I will pay for this stuff.' 'No, sorry, we don't offer that. You cannot pay.'*

While dental care was important for some, not everyone was interested in seeing the dentist. In part this was due to a general fear of dental work, but also of what might happen based on vicarious experiences. As one participant explained:

> *I thought about doing the dental thing in there…but I've heard some horror stories that it's half-assed. You're not going to get the professional type of treatment that you would get on the outside. That becomes worrisome for me. I may have an opportunity, a chance, while I'm in this situation, then you are on the outside. More than likely I know that I can get all my teeth yanked out while I'm there, but it's what comes all after that is what terrifies me.*

Further discussion revealed that this fear was related to treated cavities returning or not having any teeth due to multiple extractions and the inability to get dentures. The above participant also hinted at the fact that, for reintegrating into society and trying to find housing and a job, having teeth was important.

For those who are released, making a dental appointment might not be a straightforward activity, as they now have to (re)learn how to navigate the health care system. It became clear that for some it would create yet another barrier to accessing dental services:

> *A lot of us spent our lives in prison, we really don't know the inner workings of how to book appointments, how to deal with this. All of those little details that you guys have grown up and lived your lives doing daily are just another planet to us.*

As we heard from the participants and staff, perceptions and behaviours related to oral health develop in childhood and are reinforced through the correctional system when dental concerns are not addressed. Upon release, an unfamiliar dental system may further influence the perceptions of and priority given to oral health where it remains off the radar.

Stigma of incarceration

We found that both experienced stigma and self-stigma of incarceration affected all aspects of the everyday life of the participants, including when seeking dental care. Each participant described how and why they believed that society had a particular view of those who had been in prison, and how that made them self-conscious:

> *I think we're all pretty used to being looked at like, 'Oh, you're a criminal or you look like one'...I think everybody can tell that I just got out of prison, even if they have no clue. It's just something that you have in the back of your head that you think you stand out.*

This self-awareness affected how participants interacted socially, and some avoided social interaction altogether. Because of the perceived stigma of incarceration, many participants tried to hide their past because they believed it led to better experiences at the dental office. As we heard, "they didn't know I was in prison and they treated me like a human being." The ability to hide their current parole or community custody condition was impossible for some because the CSC was their source of health care coverage. As one participant noted, it makes seeking care more difficult especially if one has experienced stigma and discrimination in the past:

> *It doesn't help that one of your IDs is Corrections Canada that you got to show because 'till you get health coverage, all I had to use was my Corrections Canada because I didn't have a driver licence, I didn't have a health card, or anything...It's like you got to carry this, always. That's the most embarrassing thing that you can make a convict do is carry a CSC ID.*

Being shot down

While the stigma of being incarcerated seemed to be a major factor influencing access to care, there were also negative experiences that left some participants with a feeling of not being cared for or valued. Such experiences drove them further away from seeking dental care:

> *I think that's the worst problem, is that if you go, you get rejected, and you're just like forget it I'm not going to go anymore...I have had something that needs to be repaired for the last 6 months. I encourage people to go to [the dental clinic] because I'm an activist out there, but for myself I could do without the hassle. It doesn't benefit me.*

Even though the participants described various reasons for their difficulties in accessing dental care, all agreed that at some point there was no other option:

> *My tooth was really hurting. The beer didn't even numb out the pain at the time...and that was when I really, finally made that attempt. I was pretty much shot down. I needed to pay the first $500 in cash due to my situation. I was so upset that I kicked their front sign. It wasn't like, 'I hate you guys!' It was just the fact that I took it to the point where I really needed to get help, and I finally just made that choice; 'Okay, I got to do it, I'm going to do it,' and then when I really take that first step, I'm shot down.*

Much of the reluctance to seek care until it is absolutely necessary seems to be driven or at least influenced by the experience of seeking care within the correctional institution. Access to needed care varies across institutions because of differences in current funding and health care staffing levels. One participant, who was on day parole when he attended our focus group, described his current situation:

> *For me, because I'm not actually out yet, I'll go to healthcare and they'll be like, 'Oh, you'll get the funding within 3 months,' and I'll say, 'I'm sick, can I get some Tylenol?' They'll say, 'Oh, just wait to see the doctor.' Then that's a 2-month wait. You got to go through the pain. They don't really care.*

Staff added that men who had been in prison carried unique experiences with them into the community:

> *One thing we discovered, once they get out, they're carrying that baggage; dread of dealing with medical and dental inside. They get so frustrated, they basically say, 'To hell with them, I'm not going to bother.' When they get out, nothing is worse for them than facing the same thing in the community.*

Even those who have not experienced rejection while seeking care often experience other forms of rejection or discrimination. As one participant said, "I haven't dealt with it myself personally yet, but most guys get used to being shot down. You get to the point where you stop asking." For others, there is the perception that they really don't matter that much in a dental office, as one participant told us: "there's no one as much as they'll smile to you and say 'oh yeah' and listen to your problem. As soon as they walk out of the office, they close the file and move onto the next one. There's just no follow through and there's no care."

Caught in the system

The majority of the participants in this study were on parole or under community supervision and were living in halfway houses. These individuals confronted an added layer of difficulty when trying to access needed dental care despite being covered through CSC. On multiple occasions we heard that participants "can't walk into any dentist or doctor. You have to get permission from parole, and tell them where I am going, tell the house where I am going to, what time and what day? We can't just go walk in and ask."

Participants also raised the problem of scheduling appointments and having to cancel them at the last minute due to an "unforeseen meeting with a parole officer." Participants described the strict schedules by which they had to abide as a condition of their custody or release. This restriction makes dental appointments difficult to keep, and potentially erodes their ability to develop a good relationship with a dental office. For others, the CSC coverage was believed to be inadequate:

> *The thing is CSC does $500 coverage, but some people could end up in situations where they need more than $500 coverage and they don't have it. There's a lot of people that are living in our situations that are living in halfway houses and stuff and we're just caught in a system. It's the never-ending bureaucratic BS that you have to go through, because nothing can happen until it goes through the chain of command. It doesn't matter what in the meantime happens to you. I brush my teeth obsessively because I don't have hair and my eyesight's going from all the drugs I get and the only thing I have is my teeth.*

Many participants shared the feeling of being caught in a system and having limited control over much of their lives. This appeared to evoke a sense of frustration and sometimes anger when trying to access needed dental care. As one participant told us:

> *It's so frustrating because I said to the lady that runs this house, 'at least if I was in the joint I could put up so much problems that they'd have nothing but to deal with me.' Here I can't do anything, because if I scream too loud or say anything too much, I risk having them pull my support and I end up back in jail.*

This frustration and anger also prompted some participants to fall back on what they know about how to get things that they need:

> *You'll find a lot of guys who will just say, 'Well, the hell with it, I'll just go and make my own money.' That's the problem that you're finding in this province is that it's easy to survive out here, but you get a guy frustrated from society and he's just going to give up and say to hell with it, doesn't matter to me and they're going to pay for it one way or another...They don't have any regret.*

Institutional conditioning

One unique perspective to consider when it comes to those with a history of incarceration is the impact of this form of institutionalization on the person. For many participants, re-entering society after being incarcerated for many years is not an easy task. As one participant stated, "all of a sudden, it's like you're stuck in society and it's like in your mind and everything you're still inside." Other participants described a sense of support they felt from outside organizations willing to help with their transition back to society. However, many participants spoke about the lack of shared decision making they experienced in prison and how little control they had over their day-to-day lives. Now released and faced with decisions to be made, some find this to be one of their biggest challenges:

> *Once you do get out in society, the follow up's done with an organization or whatever that's actually connected with the inside. You know, you get all the help and support while you're on the inside. Everything's there at your disposal, but when you actually get out there, you're kind of right back into where you first started.*

The daily routine many participants experienced over the years while in prison becomes their norm and hard to break, as one participant who had spent 10 years in prison described:

> *It's like you look at a closed door and if it's past 10:30, you don't even think to open it. You know it's locked. I've been stuck in my bedroom having to go to the bathroom past 10:30 before and got up to go open the door, stopped myself from touching the doorknob. [I*

thought] It's way past lockup. Went sat back down on my bed trying to figure out where I'm going to go to the bathroom. It's kind of stupid shit like that that happens to you.

The vast majority of those in the prison system re-enter a society that is very different from the one they left. Much of what they knew prior to their incarceration either doesn't exist, has changed dramatically or is all new. Another participant who had also spent over 10 years in jail found it extremely difficult to adapt to the societal changes around him:

Well, I've done a lot of time and I got out and even a cellphone was crazy for me, but things like looking for a job. 'You've got to go online to do this.' I'm like, 'What do you mean go online?'...Totally ignorant. They don't teach you anything in there about that shit, right...so they keep you totally ignorant to what's going on out here. You do 10 years. You get out. You're lost, totally.

When it comes to oral health and dental care, the transition from prison to free society also has an impact on thoughts and behaviours:

I think a lot of guys have given up on regular checkups. If any guy who's done a long bit, you know regular checkups are not an option. That sort of teeth and maintenance doesn't occur to you as something that you should be doing. You get conditioned to 'no that's not happening, don't ask, because you're not getting it.'

DISCUSSION

The aim of this study was to explore perceptions of oral health and access to dental care experiences among men with a history of incarceration to provide insight into the oral health disparities that this segment of society faces. We found that personal backgrounds, experiences related to health and dental care within prison, and unique challenges faced upon release to the community all influenced these perceptions and the ability and desire to access dental services. Many participants believed that they had unmet dental needs that were affecting their lives and reintegration.

The low value attributed to oral health and access to care appeared to be related to the lack of importance participants placed on it or the perceived inability to have their needs addressed. Such devaluation of oral health seems to be reinforced by the apparent apathy that correctional institutions show towards dental services.

Many individuals who become involved in the criminal justice system have a disadvantaged background that increases their risk for poor general and oral health.[2,19] In particular those with adverse childhood experiences, such as poverty, may not receive the education and resources necessary for the adoption of health-promoting behaviours.[26] The staff who participated in this study believe that childhood experiences have a large influence on their clients' oral health status even before they become justice involved. Given that overall health and oral health are often found to be poor among those incarcerated[2,27] and other disadvantaged populations,[28] this finding is not surprising. What we did find surprising was that, contrary to reports describing incarceration as a time in which health conditions are addressed and in general overall health improves,[29] our participants seemed to experience the opposite, as also found by Douds and colleagues in 2016.[30] Marshman and colleagues suggest that dental indifference is commonplace among those who have been incarcerated and tends to decrease their desire to access dental services,[31] compounded by the perceived fear of substandard or inappropriate care participants may have received while in prison and in the community.

Time spent in prison also appears to have conditioned our participants to focus less on prevention of oral disease, since those services were not available to them. This lack of access to preventive oral care services, especially for those serving longer sentences, seems to exacerbate conditions, creating a need for more extensive services while in prison and upon release. This conditioning tends also to reinforce emergency-seeking behaviour over regular care and, in some cases, substance use as a method of coping with pain.

Participants who did try to access dental care upon release found that the perceived stigma of incarceration was difficult to escape especially when they had to present corrections identification. This, in addition to the poor state of their oral health, the inability to afford needed care or limited control over their daily schedules corroborate previous findings that the walls of incarceration follow individuals into the community.[32] In turn, individuals with no other option might fall back on methods of survival that led them to be in conflict with the law originally, increasing the likelihood of recidivism.[24]

Upon re-entry to the community, if social and financial needs are not addressed and plans for this transition do not include oral health, needs that were not met in prison continue to be a problem.[33] Obtaining housing, employment, and social connections are integral for successful reintegration and each can be affected by poor oral health.[24,30,32] Dental professionals can aid in lessening this impact by creating a safe space free of discrimination and stigma for these individuals to access and receive care comfortably. In order to do so it is important to appreciate how past negative dental experiences both in and outside of prison may shape behaviour and the ability or desire to navigate a complex system within an unfamiliar society. Collaborations among dental professionals, correctional

institutions, and community organizations such as the John Howard Society are an important step to enable needed oral health care so successful transitions are possible.

Limitations

Limitations of this study include the small sample of participants and the fact that they all came from one organization, which limits any generalization. Although attempts to conduct member checking with the participants were made, none was interested in giving feedback to our thematic analysis. We did not seek information about current dental services within correctional institutions as they vary widely in Canada and can change regularly. The study instead focused only on the perceptions of the men, which may or may not accurately reflect the delivery of oral health care within all correctional settings. The apparent lack of standardization for dental service delivery needs further attention, as do the development and monitoring of policies that support the oral health of those in prison. Future studies should include men with a history of incarceration from other organizations and also include the voice of corrections staff and administration officials.

CONCLUSIONS

Men with a history of incarceration may experience poor oral health. The personal backgrounds, experiences related to health and dental care both before and during prison time, and the unique challenges faced by these men upon release to the community all influence their perceptions of oral health and their ability to access dental services. Dental professionals can improve the experience of this population by creating a safe space for these individuals to access and receive care comfortably.

ACKNOWLEDGEMENTS

This study was funded by the Canadian Foundation for Dental Hygiene Research and Education. We would like to thank the John Howard Society of the Lower Mainland for their collaboration on this project and their clients who so candidly shared their thoughts with us. We would also like to thank Ms Donna Lee for her assistance with data collection.

CONFLICTS OF INTEREST

The authors have declared no conflicts of interest.

REFERENCES

1. Malakeih J. Adult and youth correctional statistics in Canada, 2016/2017 [juristat]. Ottawa: Statistics Canada; 2018 [updated 2018 Jun 28; cited 2018 Aug 10]. Available from: https://www150.statcan.gc.ca/n1/pub/85-002-x/2018001/article/54972-eng.htm
2. Heidari E, Dickson C, Newton T. An overview of the prison population and the general health status of prisoners. *Br Dent J.* 2014 Jul 11;217(1):15–19.
3. Braithwaite RL, Treadwell HM, Arriola KR. Health disparities and incarcerated women: A population ignored. *Am J Public Health.* 2005 Oct;95(10):1679–84.
4. Granger-Brown A, Buxton JA, Condello LL, et al. Collaborative community prison programs for incarcerated women in BC. *BC Med J.* 2012 Dec;54(10):509–513.
5. Binswanger IA, Krueger PM, Steiner JF. Prevalence of chronic medical conditions among jail and prison inmates in the United States compared with the general population. *J Epidemiol Community Health.* 2009 Nov;63(11):912–19.
6. Miller A. Prison health care inequality. *CMAJ.* 2013 Apr 2;185(6):E249–E250.
7. Kulkarni SP, Baldwin S, Lightstone AS, Gelberg L, Diamant AL. Is incarceration a contributor to health disparities? Access to care of formerly incarcerated adults. *J Community Health.* 2010 Jun;35(3):268–74.
8. Harner HM, Riley S. Factors contributing to poor physical health in incarcerated women. *J Health Care Poor Underserved.* 2013 May;24(2):788–801.
9. Fazel S, Baillargeon J. The health of prisoners. *Lancet.* 2011 Mar 12;377:956–65.
10. Kouyoumdjian F, Schuler A, Matheson FI, et al. Health status of prisoners in Canada: narrative review. *Can Fam Physician.* 2016 Mar;62:215–22.
11. European Centre for Disease Prevention and Control and the European Monitoring Centre for Drugs and Drug Addiction. *Systematic review on active case finding of communicable diseases in prison settings.* Stockholm: ECDC; 2017 Nov [cited 2018 Dec 15]. Available from: http://www.emcdda.europa.eu/joint-publications/ecdc/communicable-diseases-prisons_tr
12. Beaudette J. Prevalence of mental health disorders among incoming federal offenders: Atlantic, Ontario, and Pacific regions [Internet]. Ottawa (ON): Correctional Service of Canada; 2013 [cited 2018 Jul 2]. Available from: www.csc-scc.gc.ca/research/005008-err13-3-eng.shtml
13. Brochu S, Cousineau MM, Gillet M, Cournoyer LG, Pernanen K, Motiuk L. Drugs, alcohol, and criminal behaviour: A profile of inmates in Canadian federal institutions. *Forum Corrections Res.* 2001 Sept;13(3):20–24.
14. Sapers H. Annual report of the Office of the Correctional Investigator, 2013–2014. Ottawa (ON): The Correctional Investigator Canada; 2014 Jun [cited 2018 Nov 25]. Available from: www.oci-bec.gc.ca/cnt/rpt/pdf/annrpt/annrpt20132014-eng.pdf
15. Kouyoumdjian FG, Pivnick L, McIsaac KE, Wilton AS, Lofters

A, Hwang SW. Cancer prevalence, incidence and mortality in people who experience incarceration in Ontario, Canada: A population-based retrospective cohort study. *PloS One*. 2017 Feb 22;12(2):e0171131.

16. Maruschak L. *Medical problems of prisoners*. Washington DC: US Department of Justice/Office of Justice Programs/Bureau of Justice Statistics; 2008 Apr [updated 2008 Apr; cited 2018 Dec 15]. Available from: https://www.bjs.gov/content/pub/pdf/mpp.pdf
17. Levy M. Health services for prisoners. *BMJ*. 2011 Feb 22;342:d351.
18. Hallberg U, Haag P. The subjective meaning of dentition and oral health: Struggling to optimize one's self-esteem. *Int J Qual Stud Health Well-being*. 2007;2:86–92.
19. Bose A, Jenner T. Dental health in prisons. In: Møller L, Stöver H, Jürgens R, et al., editors. *Health in prisons: A WHO guide to the essentials in prison health*. Copenhagen, DK: WHO Regional Office for Europe; 2007 [cited 2018 Dec 15]. Available from: http://www.euro.who.int/__data/assets/pdf_file/0009/99018/E90174.pdf
20. Treadwell H, Formicola AJ. Improving the oral health of prisoners to improve overall health and well-being. *Am J Public Health*. 2005 Oct;95(10):1677–678.
21. Kouyoumdjian FG, McIsaac KE, Foran JE, Matheson FI. Canadian Institutes of Health Research funding of prison health research: a descriptive study. *CMAJ Open*. 2017 Jan-Mar;5(1):E14.
22. John Howard Society of British Columbia. Welcome to the John Howard Society of the Lower Mainland [Internet] [date unknown; cited 2018 Sept 15]. Available from: https://www.johnhowardbc.ca/regions/lower-mainland/welcome
23. John Howard Society of the Lower Mainland—Community Services. *Planning for success: Release planning*. Vancouver (BC): JHSLM; 2017 Apr [cited 2018 Sept 15]. Available from: https://www.johnhowardbc.ca/files/jhslm-planning-for-success-english%20(2017).pdf
24. Janssen PA, Korchinski M, Desmarais SL, et al. Factors that support successful transition to the community among women leaving prison in British Columbia: A prospective cohort study using participatory action research. *CMAJ Open*. 2017 Sept;5(3):E717–E723.
25. Finch H, Lewis J. Focus group. In: Ritchie J, Lewis J, McNaughton Nicholls C, et al., editors. *Qualitative research practice: A guide for social science students and researchers*. Thousand Oaks (CA): Sage; 2003. pp. 211–43.
26. Bellis MA, Lowey H, Leckenby N, et al. Adverse childhood experiences: Retrospective study to determine their impact on adult health behaviours and health outcomes in a UK population. *J Public Health (Oxf)*. 2014 Mar;36(1):81–91.
27. Walsh T, Tickle M, Milsom K, et al. An investigation of the nature of research into dental health in prisons: a systematic review. *Br Dent J*. 2007 Jun 28;204(12):683–89.
28. Wallace B, Browne AJ, Varcoe C, et al. Self-reported oral health among a community sample of people experience social and health inequities: Cross-sectional finding from a study to enhance equity in primary healthcare settings. *BMJ Open*. 2015 Dec 23;5(12):e009519.
29. Kinner SA, Wang EA. The case for improving the health of ex-prisoners. *Am J Public Health*. 2014 Aug;104(8):1352–355.
30. Douds AS, Ahlin EM, Kavanaugh PR, Olaghere A. Decayed prospects: A qualitative study of prison dental care and its impact on former prisoners. *Crim Justice Rev*. 2016 Mar;411(1):21–40.
31. Marshman Z, Baker SR, Robinson PG. Does dental indifference influence the oral health-related quality of life of prisoners? *Community Dent Oral Epidemiol*. 2014 Oct;42(5):470–80.
32. Moran D. Leaving behind the "total institution"? Teeth, transcarceral spaces and (re)inscription of the formerly incarcerated body. *Gender Place Culture*. 2014;21(1):35–51.
33. Graves WC, Blanks SH, Caplan LS, Erwin KA, Ditslear CS, Treadwell HM. Factors associated with the utilization of community dental services among newly incarcerated adults. *J Ga Public Health Assoc*. 2017;6(3):341–47. Available from: https://augusta.openrepository.com/augusta/handle/10675.2/621782