Oral Health, Related Behaviors and Oral Health Impacts Among Homeless Adults

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Abstract

Objective: To assess the oral health needs, related behavior and oral health impact among homeless persons in Newark, New Jersey. Methods: Participants represented a convenience sample of adults (n=46) participating in Homeless Services Day, an annual event sponsored by the Homeless Services Division of the Newark, NJ Department of Health and Human Services. Their mean age was 40.4 yr (SD=10.0), and 51.1% were female. The majority (76%) reported African-American ethnicity; remaining participants self-identified as Hispanic, White or Asian. Participants reported being homeless for a median of 11 months, with a range of 1 to 108 months. Results: The 46 participants had 745 teeth (averaged 16.2 per person) that were either missing, had fillings or had untreated decay. Diseased teeth averaged 3.8 per person; missing teeth averaged 8.6 per person; and filled teeth averaged 3.7 per person. Only 28.3% had a dental visit in the past year. Approximately 87% reported negative oral health impacts impact: over half (55.6%) had current oral facial pain and two-thirds of our participants reported having dentalrelated face pain during the past year. Additional oral health impacts included: eating (42%), smiling (33%), concentrating (18%) and talking (16%). Conclusions: Consistent with other studies, this homeless sample presented with considerable oral health needs. Newark's homeless, like other homeless cohorts, face access to care and negative oral health impacts. This study informs the need for future research that can provide substantive evidence for care providers and policy makers.

Key Words: Oral health, homeless, DMFT, oral health impact, oral health-related behaviors

Introduction

The National Health Care for the Homeless Council strives to influence public policy makers and health care providers, and to educate the general public about the causes and consequences of homelessness in the US. Their slogan, "Because Health Care is a Right, Not a Privilege," provokes necessary questions surrounding the plight of homeless persons (1). Numerous studies have shown a high prevalence of general medical as well as dental problems among the homeless. The oral health status of the homeless population is reported to be significantly worse than that of the

general population and worse than that of the impoverished population living in residences (2,3,4). One study of homeless persons in Boston, MA found untreated caries in 91.4% of those examined and concluded that there exists a high need for preventive and restorative dental therapy in this population (5). In another report of homeless persons in 19 major US cities, 10% of the subjects were judged to have poor dentition (6). While there is clear evidence for a predictable need for dental care in the homeless population, scant data are available regarding the impact of unmet dental needs. There is also evidence that access to

dental care is limited among the homeless. This is also expected for, as Allukian reasoned, the homeless have no money or health insurance, and health care providers are often unwilling to serve this population (7). The inability of the homeless to access regular health care leads to high rates of emergency department visits (8). For example, one study showed that 40.4% of homeless subjects had one or more visits to the emergency department in the previous year, and that 7.9% had more than 3 visits (9). One might predict that these emergency visits might result in more extractions than restorations, but data are not available. In short, it seems that regular dental care is missing for the homeless. Finally, little is known about how homeless persons are able to practice dental hygiene, whether they believe that they have access to professional care, if needed, or whether they would establish a different pattern of care if it were available or possible.

The purpose of this pilot study was to assess the oral health, related behaviors and associated impact of oral health in homeless people in New Jersey's most populous city, Newark. The Newark Homeless Health Care Project (NHHCP), a local agency charged with providing social services to the homeless, recently estimated the homeless population in Newark between 7,000 and 12,000 individuals (10).

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Methods

Study subjects were recruited from among those adults participating in Homeless Services Day, an annual event sponsored by the Homeless Services Division of the City of the Newark, NJ Department of Health and Human Services The event provides homeless people the opportunity for free examinations and consultations from participating medical, dental, pediatric and ophthalmic professionals. All participants who sought dental screenings were seen. If unmet dental needs were identified, the participants were referred to either the New Jersey Dental School or a local clinic for free care.

After providing consent to a protocol approved by the university health center's IRB, participants had a face-to- face structured interview regarding oral health attitudes, behaviors, and oral health impacts with an experienced interviewer. Coaching and role- playing training sessions were conducted with the two interviewers prior to the enrollment. In considering issues like literacy and mental health/behavioral issues as well as time constraints, the questions developed for this study were direct and short. After the interview, participants were examined in a private area. Subsequent to the oral exam, participants were offered oral hygiene instruction, oral health aids and oral health promotion pamphlets.

The interview questions included:

- Demographic information (e.g., race/ethnicity, age, gender)
- Length of time of homelessness
- Date and reason for their last dental visit
- Date and reason for last medical appointment including last medical check-up
- Do you now have any pain in your teeth, mouth or facial area; and if yes, for how long have you had this pain?
- Have you had any pain in your teeth, mouth or face in the past year?
- If you needed to seek dental care, where would you go?
- Have your teeth or mouth kept them from carrying out daily ac-

tivities such as eating, smiling, talking clearly, concentrating or other?

- Do you own a toothbrush; if yes, how often do you brush?
- Smoking history

The clinical examination was conducted using a flashlight and tongue depressor. Missing, filled and decayed teeth were identified and charted. The team decided that 'teeth' versus 'surfaces' might expedite the screening exam and provide adequate data for this pilot study. Two experienced examiners were calibrated using live subjects.

Dichotomous data were summarized by frequencies and percentages, and continuous data by means (M) and standard deviations (SD). The data were examined within the context of a nationally representative sample (NHANES III) (11) that was stratified to match the demographic characteristics (e.g., age, ethnicity, sex) of this sample. Proportional comparisons were made between the study sample and the national population data.

Results

Forty-six participants consented to participate in the study. Their mean age was 40.4 yr (SD=10.0), and 51.1% were female. The majority (76%) reported African-American ethnicity; remaining subjects identified themselves as Hispanic, White or Asian. Participants reported being homeless for a median of 11 months, with a range of 1 to 108 months. In terms of education, 47.8% attended the 12th grade, another 17.8% attended some college and only 4.4% reported less than an 8th grade education.

Clinical assessment of the participants showed that a mean of 6.6 (SD= 7.8) teeth had visible plaque and a mean of 5.9 (SD= 6.2) teeth had visible calculus. Almost all participants (97.8%) were referred for further treatment. Using the DMFT system, there were a total of 745 diseased, missing or filled teeth, for an average individual score of 16.2. This is substantially higher than the 11.3% reported in persons of the same race, gender and age in NHANES III (11). While

there were 180 diseased teeth (for an average of 3.8 per person), and 394 missing teeth (for an average of 8.6 per person), there were only 177 filled teeth (3.8 per person average). The number of filled teeth in this sample is less than expected from NHANES III; while missing teeth are more than double the rate expected from NHANES III (11). These data suggest that when treatment is needed, extraction is "chosen" over restoration.

With regard to oral health behaviors and quality of life issues, all but one of the participants (98.6%) reported owning a toothbrush, and approximately three-quarters reported brushing at least once a day. Smokers accounted for 73.9% of the participants. More than half (55.6%) of the participants reported current oral facial pain, and 66.7% reported oral facial pain during the past year. Additionally, 60.9% reported one or more negative social impact(s) related to their oral health impacts: "eating" impacts were reported by 42%, "smiling" by 33 %, "concentrating" by 18%, "talking" by 16% and "other" by 3%. In summary, 87 % of the study sample reported oral health impacts.

When asked where they would seek dental care if needed, 40% responded "clinic", 22.5% responded "private dentist" and 35.6% responded "I don't know." Only 28.3% of the participants reported a dental visit in the past year, considerably less than the 60.8% reported by NHANES III subjects with similar demographic characteristics (11). When queried, their last dental visit was reported to have occurred, on average, 5.7 years ago (SD= 6.4), a considerably longer interval than had elapsed since their last medical visit, which averaged 1.5 years ago (SD= 3.3). Similarly, only 26.1% reported that their last visit to the dentist was for preventive care, while more than twice as many (56.5%) reported that their last visit to a medical doctor was for preventive care.

Discussion

Although the interview schedule was designed with only 11 yes/no or very short-answer questions, it some-

times took between 20 and 30 minutes to complete. Time increased as a function of the amount of additional information shared by many interviewees. In addition, many participants took time to be friendly, and to express their gratitude for the team's efforts. Substantively, this study identified a high rate of oral health needs in this homeless sample, where missing teeth were extremely prevalent. Rates of tooth extraction were higher, and rates of filled teeth were lower in this sample, than among community-dwelling population samples, suggesting that the oral health of this homeless sample is worse than demographically similar adults in the general population. Participants' number of missing teeth was double that of diseased or filled teeth, thereby suggesting that when treatment is sought, extraction prevails over restoration. It is unclear from these data whether this is the result of the lower cost of extraction, or a reflection of having let decay go too long, both factors, or other factors. Access to care also presents a problem in Newark, where 98.7% of participants required referral for further dental care, and only 28.3%, about half that expected from population samples with housing, reported a dental visit in the past year. In addition to low dental care utilization, one-third of this study sample did not know where to seek dental care if they needed it. Fewer recent dental visits and smoking were noteworthy risk factors. The smoking rate in the general population (NHANES III survey) was lower (46.3%) compared to the 79.8% in the study sample. Interestingly smoking rates were very similar to the 1,152 homeless veterans surveyed from 31 different Domiciliary Care for Homeless Veterans facilities throughout the United States as reported by Gibson (11,12).

Thirty-nine of the 46 participants reported having dental-related face pain during the past year and/or impaired oral health resulting in impacts related to eating, smiling, concentrating, and talking. While the disease and utilization data are consistent with other studies of homeless persons showing poor dental health, the negative impact on daily activities and pain was higher than expected and typically unreported in oral health accounts of homeless adults.

A weakness in this study is the small convenience sample. Yet, one could speculate that the participants might be higher functioning, healthier or more interested in helping themselves than homeless adults who chose not to participate and/or were unaware of the services to them. It should be noted that the inclusion of oral health exams had never been part of this health day in the past. The data indicated that poor oral health, low utilization and access to care were evident, thereby supporting the notion that not having a regular dental provider was likely associated with the high level of unmet dental needs and negative oral health impacts. When dental services were sought, tooth extraction was a common mode of treatment that may only exacerbate and explain the high level of negative impact like eating, talking and mouth pain.

Given that homelessness does not have to be a chronic situation, it is clear that additional information to better understand ways to foster oral health and reduce negative oral health impacts are indicated so that appropriate advocacy resources can be implemented to assist this extraordinary population. Based on this pilot study, using face-to-face interviews is important to establish rapport with this these individuals as well as to ensure that the question is understood. Verbal administration of a validated oral health-related quality of life measure is recommended in future studies. Additional information about nutrition and diet may be useful in oral health promotion programs for this target group. Lastly, to increase trust and receptivity from homeless adults,

partnering with agencies that are known to service this population is highly recommended.

Acknowledgment

The authors would like to acknowledge the City of Newark, Department of Health and Human Services, Homeless Services Division for its passion and devotion to the underprivileged members in the community.

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