Resource ID#: 4861

Oral Health Issues amon

Oral Health Issues Among Migrant Farmworkers

Sherri M. Lukes, RDH, MS; Faith Y. Miller, RDH, MSEd

Abstract

Purpose. The purpose of the study was to determine utilization patterns of dental services, unmet dental needs, access to care barriers, and oral health behaviors as perceived by migrant farmworkers at a rural southern Illinois farmworker health clinic.

Methods. Two bilingual dental hygiene students and one member of the local Hispanic community verbally administered a 26-item survey questionnaire to 119 migrant farmworker clients at a health center as they waited to receive care.

Results. Utilization results showed that 51% of those surveyed had not sought oral health care in the previous year, citing absence of pain or discomfort as the primary reason. Forty-one percent reported seeking oral health care on a yearly basis, while 42% only sought care when in pain. Primary services received were examinations, prophylaxes, and restorations. Having received brushing instructions was reported by 58%, while 45% had received instructions on flossing. Barriers to care were reported as limited clinic hours (57%), high fees (33%), and lack of transportation (17%). Most respondents reported regular brushing habits, but only 11% used floss daily, 38% occasionally, and 52% didn't use it at all. Only 7% reported smoking. Meanwhile, bleeding gingiva was reported by 50%, swollen or tender gingiva by 37%, and tooth loss by 49%.

Conclusions. The majority of migrant farmworkers in a southern Illinois community reported access to care barriers, and having never or episodically received dental services. Nearly half reported signs of periodontal disease.

Keywords. Migrant farmworkers, access to care, oral health behaviors, perceived dental need, seasonal farmworkers.

Introduction

Rural southern Illinois has a rich agricultural heritage. To meet the workforce needs of area farmers, thousands of migrant farmworkers and their families travel to the area to work in the fields and orchards during peak periods of the growing season.

Migrant farmworkers are at risk for numerous medical problems, including upper respiratory problems, high-risk pregnancies, genitourinary system disorders, and dental emergencies.[1-4] One medical/dental clinic located in a farmworker housing complex provides services for the entire southern Illinois area, and farmworkers often drive 30 or more miles to receive care. The access to care problem is compounded by the fact that the clinic is only operational during the growing season. The end of the year's harvest determines the termination of clinic operation each year. The clinic's operating hours during the season vary according to funding and availability of health care personnel, which are both difficult to maintain.

As with general health care, access to oral health care is a significant challenge for the migrant farmworker population. Dental problems in the form of tooth decay and periodontal disease affect migrants more than twice the rate found in the general population.[3] U.S. Surgeon General David Satcher, MD, PhD, refers to oral diseases affecting vulnerable groups such as migrant farmworkers as "a silent epidemic." He addresses disparities in oral health care in the first ever report written solely about oral health by a surgeon general, which was released in May 2000.[5] *Healthy People 2010*, the prevention agenda for the nation, has two goals, one of which is eliminating health disparities. It also addresses oral health disparity among migrant farmworkers and their families in its oral health section. For example, migrant farmworkers are cited as one of three minority populations that experience more periodontal disease than the national average. Therefore, one of the agenda's objectives is to reduce the disparity of periodontal disease in these populations.[6]

Studies are needed to identify underserved populations and their needs so disparities can be addressed. This study sought to identify 1) oral care services utilization patterns as reported by migrant farmworkers and their families at a southern Illinois farmworker health center, 2) unmet oral health needs as reported by this population, 3) their perceived access to care barriers, and 4) their reported oral health behaviors.

Review of the Literature

It is difficult to track health status and obtain conclusive information about migrant workers because they are a mobile population, and there is debate about the true definition of a migrant farmworker.[3] However, it has been well-documented that migrant farmworkers suffer from infectious, nutritional, occupational, and other diseases far more than the general population.[1-4] Also, utilization of dental and medical services is well below the national average.[2] Several barriers to care have been reported, including lack of transportation, inappropriateness of clinic hours, low incomes, and language problems.[4,7,8]

In 1984, Preciado conducted a study at the same farmworker health center. He reported finding few other studies concerning health or health-related issues of migrant farmworkers at that time. He designed a survey to determine selected health conditions, health practices, and health opinions as perceived by the farmworkers. Though not an oral health survey, tooth/gum trouble was reported as the most common health problem, but there was not a dental service component in the clinic at that time. Recommendations included expanding the clinic operational hours and expanding the services offered.[8] In this study, the access to care barrier most reported was also limited clinic hours.

With respect to oral health, Ismail and Szpunar also reported the scarcity of research related to this population.[9] Concerning migrant farmworkers, most oral health research in the past 10 years typically has been about their children, specifically concerning caries prevalence and early childhood caries.[7,10-12] Results from the Hispanic Health and Nutrition Examination Survey (HHANES), 1982 to 1984, are still cited as the most recent information on the oral health status of Hispanics.[9,13] Regarding oral health behaviors, such as home care, one study reported daily brushing by mothers.[14] Another cited a lack of flossing by children, but little data exists concerning oral hygiene practices.[7] Contributions to this body of knowledge are warranted.

Compared to the general population, migrant farmworkers suffer a higher rate of oral health problems, including decay and periodontal disease.[9,15] Disparities are demonstrated in both children and adults. However, when adjusting for effects of age, sex, income, and education, increased susceptibility to oral health problems is not demonstrated between migrant farmworkers and the general population.[16] The disparities for migrant farmworkers lie in more untreated dental problems, probably due to lack of care, rather than an increased susceptibility of the population to oral diseases.[16] This may explain why Hispanic adults have a higher number of decayed teeth than Hispanic children. There seem to be more services available for children as opposed to adults, and more research is being done concerning children than the population as a whole.

Acculturation has been shown to have an impact on the oral health of Hispanics. A study of disadvantaged Hispanics in Los Angeles found that for general physical/social health, being more highly acculturated was associated with better health.[17] From findings of the southwestern HHANES, Ismail and Szpunar reported that Hispanics with low acculturation tend to have more unmet dental needs than those exhibiting high acculturation.[9] Many migrant farmworkers appear to exhibit low acculturation; the language barrier serves as one example of this. By studying the population, ways to increase their acculturation status, and thereby possibly enabling them to improve their oral health, can be sought.

Methods and Materials

A descriptive study was designed by the researchers and a questionnaire verbally administered to a convenience sample of 119 migrant farmworkers and their families by bilingual interviewers at a migrant farmworker health center in rural southern Illinois in fall 2000. The study sought to examine perceptions of this population about the utilization of oral health care services, unmet dental needs, access to care barriers, and oral health behaviors of those who utilized the health center during the current growing season.

A 26-item survey instrument was designed by the researchers and reviewed by a research design specialist and a dental hygiene program director. Neither researcher was bilingual and the instrument was only written in English. The bilingual interviewers were two Hispanic dental hygiene students from a nearby university and one member of the local Hispanic community who verbally administered the surveys in Spanish to 119 farmworkers and their families over several weeks. The participants answered both open- and close-ended questions concerning age, gender, native countries and residence during growing season, utilization patterns of dental services, unmet oral health needs, access to care barriers, and oral health behaviors. While they were waiting to receive medical and/or dental services at the health center, the interviewers escorted clients to a private area of the clinic to administer the surveys one-to-one. Clients' participation was voluntary. The identity of the respondents was not recorded, and the Southern Illinois University human subjects committee approved all procedures prior to data collection. Data analysis included the report of frequencies based on the responses of the participants.

Results

Age of the participants ranged from 13 to 63 years, with 65 females and 54 males. The average age was 31. The average family size was

four, while total family members ranged from zero to nine. The majority of the respondents (93%) were born in Mexico, but two reported Honduras and Guatemala as places of birth. Only 28% reported actual migration to follow crops, while 72% reported living in the area year round, waiting for the next growing season.

Self-reported results from the respondents concerning their perceived oral health needs were compiled with relation to the research questions.

1) What are the utilization patterns of dental care services as reported by the migrant farmworkers at a southern Illinois farmworker health center?

Results revealed 51% (61) of the respondents had not sought oral health care in the previous year, while 49% (58) reported they had (Figure 1). The primary reason for not seeking care was the absence of pain or discomfort, although other reasons given included lack of time, fees, and no available facility. Table I shows the self-reported type of oral health services received in the previous year (N=58). None of the respondents reported receiving pit and fissure sealants or dentures, and only one received endodontic therapy.

Figure 2 depicts the frequency of oral health care self-reported by the respondents, in addition to the percentage of those who received preventive care instructions (brushing and flossing). The majority (50) only sought care when there was an episode of pain, while almost as many (49) sought care on a yearly basis. However, almost half (69) reported having received brushing instructions, while 54 reported having received instructions on flossing.

2) What are the unmet dental needs as perceived by the migrant farmworkers?

Figure 3 represents the percentage of respondents self-reporting the perceived met and unmet oral health needs of themselves as well as those of their family members. The majority (65) of the respondents felt they had received oral health services that were needed, while 54 reported they had not received the care they perceived was needed. Regarding family members, the majority (75) reported members of their family received the care they felt was needed, and 42 indicated that family members did not receive the care that was perceived as necessary.

Figure 4 represents self-reported symptoms and results of oral disease among the 119 respondents. Bleeding gingiva were reported by half of the participants, and 44 reported swollen or tender gingiva. Almost half had lost permanent teeth.

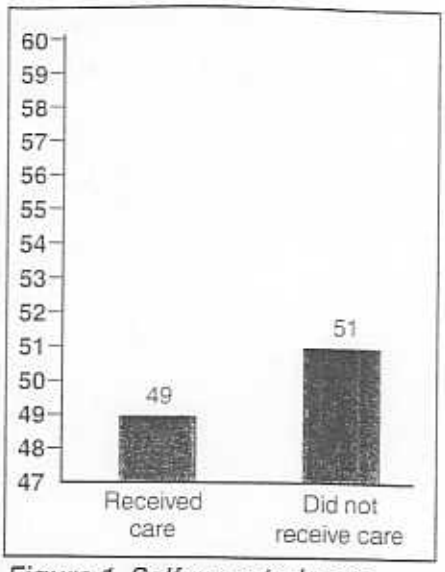


Figure 1. Self-reported care received in the previous year (N=119).

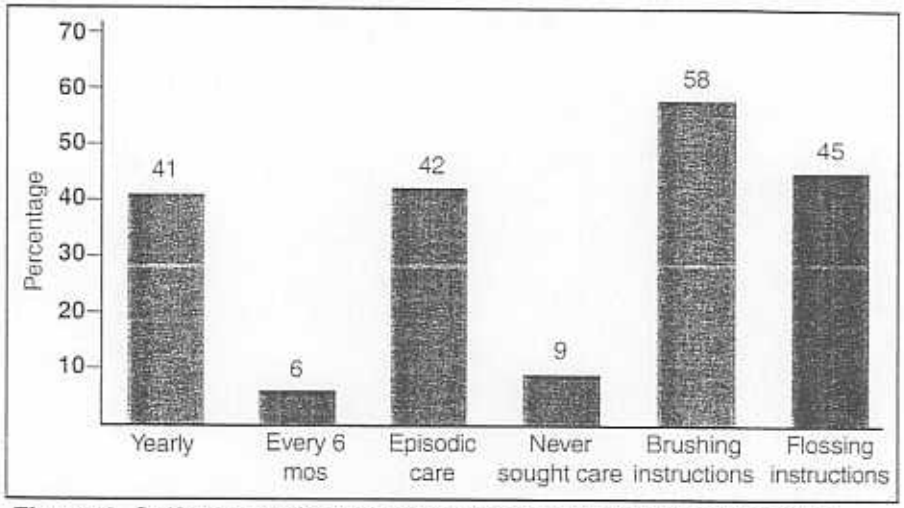


Figure 2. Self-reported oral health care services and preventive care instructions received

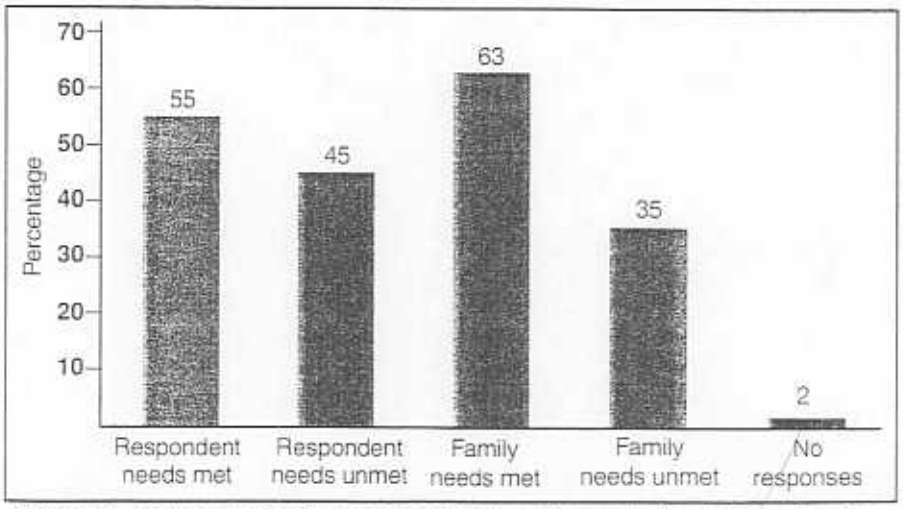


Figure 3. Percent of self-reported met and unmet dental needs of respondents and their families

3)What are the access to care barriers as perceived by migrant farmworkers?

Self-reported access to care barriers are listed in Table II. The majority of the respondents (68) reported that limited clinic hours prevented them from receiving oral health care, while fees for dental services prevented one-third of them from seeking care. Lack of transportation, fear of dental work, no knowledge of the clinic, and its closure at the end of harvest also were reported as barriers.

4) What are the oral health behaviors reported by the farmworkers?

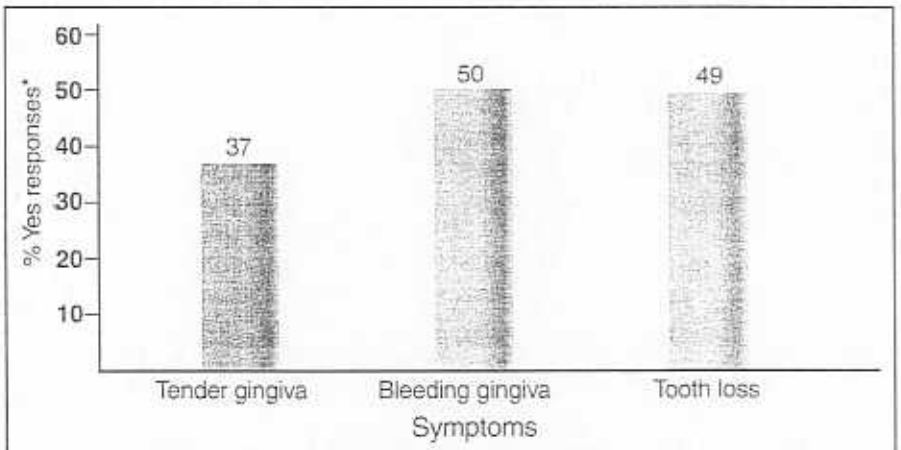
With respect to oral health behaviors, (Figure 5), 62 of the respondents reported tooth brushing at least daily. Flossing, however, was performed less frequently with only 13 using floss on a daily basis, and more than half never using dental floss. Most notable among the results were self-reported smoking habits of the farmworkers, with 93% (111) indicating they did not smoke. Since the respondents were not questioned as to how many cigarettes they smoked or how frequently they smoked, an assumption may be made that at least one cigarette was used per day.

Service	N=58	% of Respondents
Examination	44	76
Prophylaxis	41	71
Restorations	23	40
Extractions	9	16
Dental X rays	2	3

†Respondents could select more than one option; therefore percentages do not total 100%.

Reported barriers to care	N=119	% of Respondents
Limited clinic hours	68	57
High fees	39	33
Lack of transportation	20	17
Fear of dental work	6	5

†Respondents could select more than one option; therefore, percentages do not total 100%.



*This figure represents the total percentage of "yes" responses only. The sum of these variables will not total 100% as each is represented independently.

Figure 4. Percent of self-reported symptoms and results of oral disease

Discussion

Demographic results of this survey are consistent with several studies that indicate migrant farmworkers are primarily from Mexico. Most are males, though this study sample was comprised of more females.[7,8,12,13] The average age of the sample was 31—very near the average age of farmworkers surveyed by Preciado in 1984 in a study at the same farmworker health center.[8] The average family size was four, which was consistent with Waldman's 1994 findings that reported that parents usually are accompanied by an average of two children.[13] The majority of the respondents in this study reported living in the area yearround. Only 28% reported actual migration to follow crops. As stated previously, there are discrepancies in the literature concerning the definition of a migrant farmworker. The Health Centers Consolidation Act of 1996 defined a migrant agricultural farmworker as "an individual whose principal employment is in agriculture on a seasonal basis, who has been so employed in the last 24 months, and who establishes a temporary abode for the purpose of such employment." It defined the term seasonal agricultural farmworker as "an individual whose principal employment is in agriculture on a seasonal basis and who is not a migratory agricultural worker."[18]

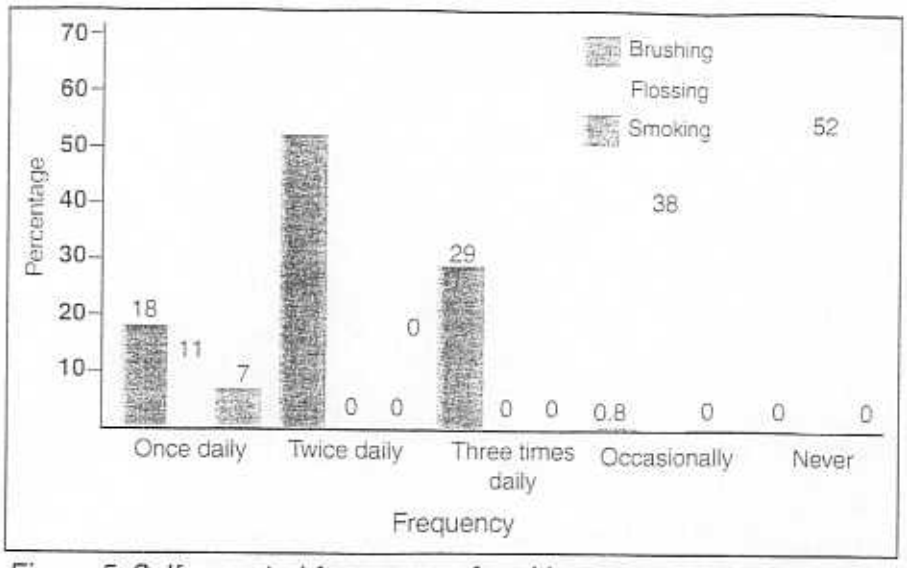


Figure 5. Self-reported frequency of oral home care and smoking

The latter definition appears to fit the majority of respondents in this study; however, it is unknown whether the small sample was representative of the entire population. Therefore, it is prudent to continue to refer to the respondents as migrant farmworkers. Waldman also noted that not all migrants follow the crops, but that some remain in particular locations for varying periods. Only 33% follow the crops within the United States, while 83% of migrants actually "shuttle" periodically between Mexico and farm sites in the United States with one state considered to be their "home base."[13]

Deloris Smith, regional director of the Illinois Migrant Council, termed the farmworkers' taking up local residence as "settling out," a term the researchers had not encountered before. She also expressed frustration about the ability to obtain only estimates, rather than definite statistics concerning the population (D. Smith, personal communication, October 10, 2001). As migrant farmworkers and their families remain in areas instead of following crops, they are likely to become better acculturated and seek more health care. Personal observations of the researchers of this study indicate that over the years more of the Hispanic population, who formerly migrated to the area in the spring and left in the fall, have now settled in the area and are becoming integrated within the community. They have purchased homes and the children are in local schools. More research is warranted to obtain a better assessment of the population in terms of numbers, residences, and needs.

When considering this populations' oral health needs, a definition is warranted for this term as well. Perceived dental needs are what the individuals within the population consider to be their oral health needs. Normative dental needs, on the other hand, are those determined by health care professionals. In this study the data were self-reported; therefore, the dental needs as perceived by the respondents, may be different from what an oral health care provider would perceive as needed for members of the population to be dentally healthy. In this paper, when met and unmet needs were reported, a distinction must be made between perceived met needs and perceived unmet needs. All data reported were the individual respondents' perceived needs and whether they thought those needs had been met or unmet. This distinction is important when interpreting the results of the study. As Woolfolk, et al. point out, self-reported data should be interpreted cautiously.[14]

Only half of those surveyed had sought oral health care in the previous year. The primary reason for not seeking care among the other half was they had experienced no pain or discomfort so they felt no need for services. Lack of oral health knowledge could be a contributing factor to the perception that no care is needed unless there is an acute problem. Woolfolk, Sgan-Cohen, Bagramian, and Gunn found that Mexican mothers reported oral health problems in the family were resolved with analgesics and dental extractions. They did, however, seemingly attach importance to preventive care for the children.[14] Another reason for episodic care could be that an acute problem may be the only one that merits missing work, since the clinic has limited evening hours. Preciado reported the inability to take time off from work as a reason cited by migrant farmworkers for not seeking health services.[8] The dental clinic is open one to two evenings per week, depending on funding and availability of health care personnel in any given year. Funds allow the health clinic to operate only a fixed number of hours and health care personnel are not always readily available.

Of those farmworkers who did seek care within the year, preventive services were what they reported most as having received—examinations and prophylaxes. This suggests the dentists' time must have been spent delivering preventive services, those typically performed by a dental hygienist, as much or more than restorative services. With the difficulty of finding dentists to provide care at the clinic during the growing season, this is not efficient utilization of the dentist's time. Relaxing supervision laws in the state for dental hygienists could solve part of the problem. If dental hygienists in Illinois could work under general rather than direct supervision, preventive services could be provided without a dentist actually being present. The dental hygienist could make triage decisions much like community health nurses do, in order to prioritize individual client needs. The den-

tists' time then could be more productive when they are providing care at the clinic and, therefore, more needs could be met.

The symptoms of oral disease reported most by these respondents were bleeding gingiva and tooth loss, with swollen or tender gingiva close behind. These are all risk indicators for periodontal disease. This is consistent with the objective for reducing periodontal disease in *Health People 2010*, which states the number of cases of gingivitis and periodontal disease is higher in the migrant farmworker population than in the general population.[6] These symptoms could be due to the fact that very few use dental floss. Clinical research is needed to assess the actual periodontal status and needs of this population.

In this study, access to care barriers listed most by the respondents were limited clinic hours and high fees. Limited clinic hours at the same farmworker health center also was reported by Preciado as one of the most significant access to care barriers perceived by migrant farmworkers there in 1984. He cited the language barrier as being most frequently reported, followed by limited clinic hours, and losing income from work to seek care.[8] The health center serves migrant and seasonal farmworkers for all of southern Illinois. With such a large number of farmworkers seeking care, and a limited number of hours for clinic operation, obtaining appointments presents a challenge. Pilotto discovered the same challenge when studying farmworkers in east Tennessee.[4]

Low income often is reported as a reason for migrant farmworkers not seeking oral health or general health care.[3,4,7,8,13] The health center described in this study is government funded, but patients do pay reduced fees according to a sliding scale. Additional operating hours would require additional funds. Therefore, with fees a perceived barrier already, an increase in government funding may be needed to keep clients' payments to a minimum. Migrant health centers and other migrant agencies in Illinois have relied on reports from other states to justify proposals for federal funding.[8] Therefore, more studies on migrant health topics could help substantiate the need for additional funding in Illinois. These two barriers—limited clinic hours and limited income, among others—have all been reported in the literature.[4,7,8,13] The results of these barriers may be disproportionate rates of oral disease in this population.

A very small number of subjects in this study reported smoking cigarettes. This is inconsistent with HHANES findings from 1982 to 1984 which found that 42.5% of Hispanics aged 20 to 74 smoked.[19] Surgeon General Satcher reported in 1998 that tobacco use varies among racial/ethnic minority groups but fewer Hispanics smoke than whites.[20] The small number in this study could possibly have been due to the sample being only those in the population who presented for care at the health center. Their presence at the health center may have been because they were individuals who were more health conscious in the first place; therefore, fewer of them were smokers.

This study has several limitations, one being the small sample size. Those present at the health center could have been those that were perhaps more acculturated, lived near the health center year-round, or were more health-conscious members of the population. Data collected in one location limits generalizations to farmworkers in other states. All data in the study were self-reported which, as previously stated, were perceptions of the farmworkers and should be interpreted cautiously.

Though the interviewers were all bilingual Hispanics, delivering the survey in Spanish may have produced different interpretations of the questions than if they had been delivered in English. Two of the interviewers were dental hygiene students from the Chicago area. They were very acculturated but perhaps unfamiliar with the cultural characteristics of migrant and seasonal farmworkers and their lifestyles. One interviewer consistently had three of the same questions unanswered on several of the surveys she administered. The interviewers all worked from the same form written in English, so there could have been some variability in the way questions were asked and interpreted. Better calibration of the interviewers may have produced different results.

No oral health exam was administered which would have provided clinical data to support items on the questionnaire. As an example, the respondents reported met dental needs and unmet dental needs. These were perceptions on the part of the respondents and may not be normative clinical needs. The researchers are currently conducting another study to examine the clinical decay status of clients at the same farmworker health center by using the Decayed Missing and Filled Teeth Index (DMFT).

Conclusions

The majority of farmworkers in this study were not migrants in the strictest sense. A more accurate term for the workers in this study was determined to be migrant and seasonal agricultural farmworkers.

The farmworker health center in this region appears to be unable to meet the perceived oral health needs of area migrant farmworkers and their families. Limited operation of the health center may have contributed to the perceived unmet needs. Additional clinic hours implemented into its operation could provide time to serve more clients; however, this would require more funding and manpower. The lack of available dentists to provide care at this migrant health center has been a problem. Relaxing supervision laws regulating the practice of allied dental personnel might help with the manpower needs, since most of the oral health services received by subjects in this study were preventive.

Funding limitations as well as available oral health personnel may continue to be barriers. Increased funding, either from the government or from payments by clients, may be necessary to provide additional services for the population. A survey written in Spanish might produce better results both for the interviewer, as well as for literate clients who prefer reading and answering survey questions alone.

This localized population had risk indicators for periodontal disease, consistent with the periodontal status of migrant farmworkers reported in *Healthy People 2010*.[6] More research is needed to document the periodontal status of this, and other migrant farmworker populations.

Acknowledgments

The survey was administered by Sandra Miranda, Selene Leon, and Alma Gomez.

Sherri Lukes, RDH, MS, and Faith Miller, RDH, MS, MSEd, are both assistant professors of dental hygiene in the Department of Health Care Professions, College of Applied Sciences and Arts at Southern Illinois University, Carbondale, Illinois.

References

1. Entwistle BA: Dental needs and perceptions of adult Hispanic migrant farmworkers in Colorado. *J Dent Hyg* 1989; 63:286-92.
2. Watkins EL, Larson K, Harlan C, Young S: A model program for providing health services for migrant farmworker mothers and children. *Public Health Reports* 1990; 105:567-575.
3. Rust GS: Health status of migrant farmworkers: A literature review and commentary. *J Public Health* 1990; 80 (10), 1213-1217.
4. Pilotto L: Assessment of health care providers' capacity to deliver services to migrant and seasonal farmworkers in east Tennessee [dissertation]. Knoxville (TN): University of Tennessee; 1995.
5. U.S. Department of Health and Human Services. *Oral Health in American: A Report of the Surgeon General.* Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
6. U.S. Department of Health and Human services. *Healthy People 2010 (Conference Edition, in Two Volumes).* Washington, DC: January 2000.
7. Nurko C, Aponte-Merced L, Bradley EL, Fox L: Dental caries prevalence and dental health care of Mexican-American workers' children. *J Dent Child* 1998;65:65-72.
8. Preciado JA: A descriptive study of the selected health conditions, health practices and health opinions reported by Mexican migrant farmworkers in two southern Illinois counties [dissertation]. Carbondale (IL): Southern Illinois University; 1984.
9. Ismail, AI, Szpunar, SM: Oral health status of Mexican-Americans with low and high acculturation status: Findings from southwestern HHANES, 1982-84. *J Public Health* Dent 1990; 50(1): 24-31.
10. Ramos-Gomez FJ, Tomar SL, Ellison J, et al.: Assessment of early childhood caries and dietary habits in a population of migrant Hispanic children in Stockton, California. *J Dent Child* 1999; 66(6): 395-403, 366.
11. Domoto P, Weinstein P, Leroux B, et al.: White spots caries in Mexican-American toddlers and parental preference for various strategies. *J Dent Child* 1994; 61(5-6): 342-6.
12. Weinstein P, Domoto P, Wohlers K, Koday M: Mexican-American parents with children at risk for babybottle tooth decay: Pilot study at a migrant farmworkers clinic. *J Dent Child* 1992; 59(5):376-83.
13. Waldman HB: Invisible children: The children of migrant farmworkers. *J Dent Child* 1994; 61(1): 218-221.
14. Woolfolk MP, Sgan-Cohen H, Bagramian R, Gunn, SM: Self-reported health behavior and dental knowledge of a migrant worker population. *Commun Dent Oral Epidemiol* 1985; 13(3): 140-2.
15. Ismail AI, Szpunar SM: The prevalence of total tooth loss, dental caries, and periodontal disease among Mexican Americans, Cuban Americans, and Puerto Ricans: Findings from HHANES 1982-1984. *J Public Health* 1990; 80: 66-70.
16. Burt BA, Eklund SA: *Dentistry, Dental Practice, and the Community* (Philadelphia: W.B. Saunders1999), 221.
17. Atchison KA, Der-Martirosian C, Gift HC. Components of self-reported oral health and general health in racial and ethnic groups. *J Public Health Dent*, 1998; 58 (4): 301-8.
18. Health Centers Centers Consolidation Act of 1996, Pub. L. No. 104-299, 110 Stat. 3626 (Oct. 11, 1996).
19. Haynes SG, Harvey C, Montes H, et al.: Patterns of cigarette smoking among Hispanics in the United States: Results from HHANES 1982-1984. *J Public Health* 1990; 80 Suppl: 47-53.
20. U.S. Department of Health and Human Services. *Tobacco Use Among U.S. Racial/Ethnic Minority Groups—African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A Report of the Surgeon General.* Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1998.