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Chelsea Kwan
Loyola Marymount University, ckatzema@lion.lmu.edu

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The Impact of Dental Care Inequality in Southern California Schools: Addressing the Issue Through an Ecological Level of Analysis

Chelsea Kwan

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Loyola Marymount University

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Abstract

Poor oral health is a systemic health issue in America, and dental care is the most common unmet health care need of children. Lack of access to dental care is a systemic issue greatly impacting school-age children in low-income neighborhoods. In this paper, I discuss the socioeconomic issue of dental healthcare inequality across low-income schools in Southern California communities. I provide a literature review and discussion on the cultural and social contexts and community participation in addressing the issue. I propose an ecological level of analysis of the problem and provide suggestions for further addressing the issue. Finally, I report on the beginning efforts of a pilot study organized at my school counseling fieldwork site.

Keywords: dental, healthcare, inequality

The Impact of Dental Care Inequality in Southern California Schools:

Addressing the Issue Through an Ecological Level of Analysis

In high school, nearly every night, I would have nightmares about my teeth falling out. A Google search told me this means that one is worried about money; however, I usually just assumed it was because I was generally stressed. Thinking about it now, these nightmares are most likely why I am so concerned about dental hygiene. These nightmares I had about my teeth falling out, plus growing up in a rural town in Ohio where the nearest dentist was 30 minutes away, are probably why I am so interested in dental hygiene inequality across the country, and what brings me to writing this paper today.

Method

Literature Review

Poor oral health is a systemic health issue in America, and dental care is the most common unmet health care need of children (Mouradian, 2001). A common oral health risk in children is early childhood caries (ECC). Caries are defined as the presence of one or more decayed (cavitated or non-cavitated), missing, or filled tooth surfaces in any primary tooth in children between birth and 6 years of age ("Statement on Early Childhood Caries," n.d.). Oral health is important, especially in children, because it influences and is related to "nutrition and growth, pulmonary health, speech production, communication, self-image, and social functioning" (Mouradian, 2001). Children from poor, typically minority, families are at an increased risk for unmet dental needs, equating to about 52% of school-age children who are at risk. A meta-analysis of the research has shown that socio-demographic factors such as lower family income; single-parent families; larger family size; low level of parental education; being of minority ethnicity or being of immigrant status; and living in a more deprived neighborhood,

rural areas, or areas with lower-than-recommended levels of water fluoride were all associated with a higher risk of early childhood caries (Hooley, Skouteris, Boganin, Satur, & Kilpatrick, 2012).

In 2019, California was ranked #4 for the most dentists per capita, yet it still ranked 42nd overall on a list of states with the best and worst dental health in America (McCann, 2019). Researchers in Los Angeles County found that the prevalence of dental caries in the population of disadvantaged children was 73%. The study measured the impact of poor oral health on the academic performance of disadvantaged children. After performing clinical dental exams on 1,495 disadvantaged elementary and high school students within the Los Angeles Unified School District, they found that students with toothaches were four times more likely to have a low grade point average. They also found that per 100 children, between 58 (elementary) and 80 (secondary) school hours were missed annually due to oral health problems. “Nineteen percent of the children had a toothache in the past 6 months, 22% had dental needs but could not access dental care in the past year, and 8.5% needed immediate dental care” (Seirawan, Faust, & Mulligan, 2012).

Teeth: The Story of Beauty, Inequality, and the Struggle for Oral Health in America by Mary Otto has become one of the most well-known anthologies discussing the state of dental healthcare in America. Otto notes the socioeconomic divide in dental care, stating that 49 million people live in dental professional shortage areas, though Medicare does not cover routine dental services. Public health workers have advocated to place dental hygienists and dental therapists in schools; however, these plans are squashed by dental associations. Dentistry has been a largely conservative profession, and a fear of socialized medicine has kept the profession mostly privatized. Because the dental industry evolved almost completely separately from the

healthcare industry, it has always revolved around a client's ability to pay. Though views are shifting toward the belief that no one should be denied healthcare based on one's ability to pay, dental care is still associated in our minds with beauty and privilege. It is considered a luxury; therefore, dental health is only an opportunity for the rich (Otto, 2017).

The Issue

Lack of access to dental care is a systemic issue greatly impacting school-age children in low-income neighborhoods. The immediate issue is focused at two levels: the individual level, which at the elementary school age is intertwined with the familial level, and at the level of the dental provider.

There are many issues focused at the individual and family level, especially when the individual is from a low-income community. Some problems with receiving dental care include the overall cost of dental care—especially when more than one appointment is necessary to treat ECCs—, finding a dentist who will provide treatment without insurance or through Medicaid, the language barrier when the client is from a minority or immigrant community, and problems with finding reliable transportation. Location and cost are the most pressing of these issues. In more affluent communities, such as Orange County, there is no shortage of dentists, and providers are scheduled to spend an hour to an hour-and-a-half with each client. Dentists in low-income neighborhoods employ a "conveyor belt of treatment," and will frequently see 40 clients in a day. Over an eight-hour work day, that is five patients an hour. The cost of dental care without insurance is astronomical, and in most cases when a parent has to decide between getting their child dental care or providing food for the entire family, food comes first (S. Fereshteh, personal communication, April 10, 2019).

To provide a personal example, my husband recently needed to have one cavity filled. Cavity fillings are typically covered by insurance plans at the basic services level, meaning they will cover filling the cavity using amalgam or "silver fillings." The resin composite, which appears to the eye to be the same color as the tooth, is beyond the "basic services level" and is only covered by insurance up to that point. My husband opted for the resin composite, and the cost not covered by our insurance of filling that one cavity was $346, a little less than what we spend on groceries for an entire month.

This brings us to an examination of the problems that exist at the provider level. It begins with the cost of obtaining a dental degree. Dental school is one of the most expensive medical degrees to receive, with students often exiting $400,000-$500,000 in student loan debt. Because of this, there is no incentive for recent graduates to work in rural or low-income communities where clients are more likely to rely on Medicaid for care. Because the Medicaid reimbursement rates are so low, the dental provider cannot make enough money to pay off their student loans, run a clinic, and take care of their own families and bills. In addition, the paperwork to receive Medicaid reimbursement is so cumbersome, that some providers do not even view it as worth the hassle, and they shift to only accepting patients with insurance or who can pay in cash. The present focus of dental care is on quantity over quality, which is causing long-lasting harm to patients.

Dr. Sanaz "Sunny" Fereshteh is the Director of the University of Southern California's Mobile Dental Clinic. This program was started in 1968 and includes four vehicles with 15 chairs. Last year, the USC Mobile Dental Clinic partnered with Title 1 schools in LAUSD and around southern California to come into a community for 10-11 days to provide dental assessments and initial appointments for students. Dr. Fereshteh stated that she typically sees

two types of young patients, which touch on both of the levels described above. The first is those children that have never been to the dentist and are "bombed out" with cavities. The second type has had dental treatment before but the quality was poor, so the next dentist has to focus on fixing the problems created by the previous dentist. Many of the kids in these Title 1 schools receive MediCal—the California-specific version of a medical assistance program serving low-income individuals—so the pattern of poor reimbursement resulting in poor treatment practices continues. Dr. Fereshteh views this as the greatest dental inequality (S. Fereshteh, personal communication, April 10, 2019).

Cultural and Social Contexts

Dental inequality exists by definition within a cultural and socioeconomical context. Poor dental practices more frequently impact students in low-income neighborhoods, which are often considered provider dead zones. Dental hygiene is also viewed overall as an individual issue and not a community issue. Poor dental health is not viewed as a public health issue; instead those with decayed teeth are perceived as not taking care of themselves. Like we fear the dentist, we fear the judgment from others that we have failed at something so personal as keeping our mouth clean. Willems, Vanobbergen, Martens, & De Maeseneer (2005) concluded that:

> ECC is a social, political, behavioral, and medical problem that can be controlled only through understanding the dynamic changes that are taking place in society, particularly as they pertain to environmental factors such as neighborhood, family structure, nurturing of children, and socioeconomic status. The fundamental solution for reducing socioeconomic inequalities, also in dental health, is to tackle poverty (p. 174).

As a caveat, not only is tackling poverty important, but it is also important at the same time to make goods and services, like dental care, more affordable. Coming out of poverty is only beneficial if the cost of services does not also increase.

Community Participation in Addressing the Issue

The level of community involvement in working to solve this issue depends on with whom one speaks. However, it appears that the focus on this issue is brought to the attention of the community through a top-down approach.

I first spoke with Francis Walsh, the Oral Health Program Manager at The L.A. Trust for Children's Health, a non-profit that works to improve student health through access, advocacy, and programs. Walsh and her team go into local Southern California schools and provide an education day to students on dental health. They also provide a screening and fluoride varnish, spending about 20 minutes with each student. While Walsh stated that the schools are appreciative of the services they provide, it is the responsibility of L.A. Trust to put on the event. Though the level of involvement varies by school, the burden of getting consent forms out and back is placed solely on the L.A. Trust. In January 2017, the LAUSD Board unanimously approved a resolution to enforce that all students must have a dental screening before the end of their first year of school. Because of the lack of buy-in from many schools, Walsh stated that they now just focus their attention on helping to fulfill the Kindergarten Oral Health Requirement (F. Walsh, personal communication, April 3, 2019).

Walsh's sentiment of the schools being appreciative of the work but not assisting with providing dental health education was evident when I next interviewed Susan Becker, the Assistant Principal at John Muir Middle School in South Los Angeles. Becker stated that the school got involved with the USC Mobile Dental Clinic when USC began reaching out to Title 1

schools. She stated that they loved having the partnership with USC to provide care for students; however, when I asked if they provided any dental education to students besides through the Mobile Dental Clinic, Becker responded, “no, because our students are older.” It was evident during this interview that the schools loved the partnership with the Mobile Dental Clinic and non-profits that come in and provide dental screenings and education, but that they are going to make the non-profits do all the work in preventing ECCs in children and more decay in youth (S. Becker, personal communication, April 5, 2019). This brings attention to many opportunities in which school counselors can get involved and be advocates for the dental health of their students.

Dr. Fereshteh, of the USC Mobile Dental Clinic, had a different perspective. While she stated that USC often makes the first contact with the schools, when the clinic comes to town, students have “extremely positive” reactions and parents are “so grateful” to be able to provide their children with free dental care. Dr. Fereshteh’s goal with the Mobile Dental Clinic is to start kids off with a positive dental experience so they do not have any fear of the dentist moving forward. The main objection to the mobile clinic that she has witnessed is from other dentists. When the clinic first rolls into town, community dentists are initially upset because they view the clinic as “stealing away their patients.” However, the community dentists often come around, and I personally feel that this is because of Dr. Fereshteh’s positive attitude and frequent reminders that all dentists initially get into the profession to help people.

Ecological Level of Analysis

An ecological level of analysis may be needed to best address the issue of dental inequality in Southern California and across the nation. At an individual level, society needs to move away from seeing poor dental health as a personal fault. However, more education needs to be provided at the individual level to ensure that people realize that they need to take care of

the one set of teeth they will have in their life. At the micro level, the focus needs to be on providing education and resources to low-income families and neighborhoods. The USC Mobile Dental Clinic and The L.A. Trust are already working toward solutions at this level by providing education and initial screenings to those demonstrating the most need.

At the organizational level, there needs to be more buy in from school administrators to encourage follow through for the Kindergarten Oral Health Requirement and to request opportunities like a Mobile Dental Clinic to come to the school. Though it would require more work on the school's part and take a small amount of time away from the students' education, the long-term benefits of receiving early dental intervention strongly outweigh the minor costs. At the organizational level there also needs to be more buy in from current and graduating dental students. Dr. Fereshteh stated that there needs to be a culture shift in the type of students who attend dental school. She stated that, specifically in California where there is a culture of materialism, dentists need to remember the reason they went into the profession in the first place. Based on the large amount of student debt they will acquire, the reason typically is not to make money in their first years out of school, but rather their purpose is to help people (S. Fereshteh, personal communication, April 10, 2019).

At a local level, more focus needs to be placed on moving dental providers to rural communities and decreasing the concentration of dental providers in high income neighborhoods. At the macro level, dental health inequality needs to be recognized as a public health issue. Legislation, such as the Kindergarten Oral Health Requirement, has been passed but more is needed. Dr. Fereshteh stated that the focus of future legislation needs to be on the quality of care provided. There is currently a focus on pending legislation that will require dentists to provide before-and-after x-rays to show proof of good work in order to be reimbursed

by insurance. This will greatly impact the quality of care from Medicaid providers; however, by adding more work to the Medicaid reimbursement process it could continue to deter dentists from taking on Medicaid patients. Therefore, legislation also needs to be passed to make the Medicaid process simpler and to provide higher Medicaid reimbursement rates to dentists.

Suggestions for Addressing the Issue

Both Walsh and Dr. Fereshteh agreed that addressing the issue needs to begin from both a bottom-up and a top-down approach. There needs to be more educational programs in schools, at all grade levels, to promote individual responsibility for dental hygiene. There should be more mobile dental clinics in more urban cities to connect the children to ongoing dental care. School counselors need to advocate for the holistic health of their students, and they can work to help educate parents on the importance of taking their children to the dentist.

There should also be an increase in dental therapy programs across the nation. While dentists treat the teeth and gums, dental therapists can provide preventative and restorative dental care. Dental therapy is a relatively new field which was created to provide oral health care to rural and Indigenous communities; however, the field has come under scrutiny from dentists and dental organizations who are threatened by potentially losing patients. The goal of this new field was not to steal patients away from providers, but to provide travelling practitioners who are trained to triage and provide care in rural communities which lack dental providers to begin with. Currently, only eight states authorize the practice of dental therapy.

More work needs to be done to ensure follow-through with the Kindergarten Oral Health Requirement in California, and work could be done to expand the law to more states. As discussed above, there needs to be legislation passed to allow for higher reimbursement rates for Medicaid patients, which would allow the practice to be more focused on quality of care than

quantity of patients. Both Walsh and Dr. Fereshteh hope to get to the point where they are just doing preventative, instead of restorative, work.

Discussion

The "cure" for dental healthcare inequality lays in both prevention and promotion. Poor dental hygiene *is* preventable. In 1964, George Caplan distinguished between three types of prevention (Kloos, Hill, Thomas, Wandersman, Elias, & Dalton, 2012). Primary prevention focused on interventions given to an entire population when there is no need or distress. In relation to dental care, an example of this is the American Dental Association and the Centers for Disease Control and Prevention advocating in the 1940s to add fluoride to community water in order to prevent cavities. The ADA stated that fluoride in water is effective in preventing tooth decay by 25% in adults and children ("Fluoride in Water," n.d.). Secondary prevention involves intervention at the early signs of difficulty. The USC Mobile Dental Clinic's partnership with Title 1 schools is a great example of a method of secondary prevention, providing early intervention to those at risk. Finally, tertiary prevention is targeted intervention at the group level. There is still work to be done at this level in regards to dental inequality, limiting the intensity and duration of this problem and preventing future recurrence. Because dental health inequality is a systemic issue, changes need to be implemented at every level to work toward solving this community health problem.

Pilot Study Implementation

As a graduate student at Loyola Marymount University, I have been completing my school counseling internship year at WISH Charter Middle School in Westchester, California. WISH Middle is a Title 1 charter school associated with the Los Angeles Unified School District serving approximately 280 students in grades 6-8. When tasked with implementing a data driven

intervention at our school, I immediately knew that I wanted to assess dental hygiene practices among the students to see if there was an opportunity to provide prevention and intervention on the topic.

To gather data on this area of potential need, I created a Google Form survey with six questions which the School Counselor then distributed to teachers for students to complete on Tuesday, November 5th, 2019. Students from every grade level complete the survey, but the majority that participated were 6th graders (Appendix 1), and we had about an even split of boys and girls responding (Appendix 2). The demographic data of the students who responded to the survey closely matched the overall demographic breakdown of the middle school community (Appendix 3).

Fortunately, almost 90% of respondents answered that they do brush their teeth twice a day, which is what is recommended by the American Dental Association (Appendix 4). I also wished that I had asked if students flossed at least once a day, as this is also recommended by the ADA for teeth and gum health. Again, fortunately, 92% of the students responded that they had visited the dentist in the past year (Appendix 5). It is recommended by the ADA that people visit the dentist twice a year, but I just wanted to make sure that students were going to the dentist at all. It is important to note that 8% responded that they had not visited the dentist in the past year.

According to the Los Angeles Unified School District, dental pain is the number one reason given for children missing school, and more than 50,000 children report to school nurses complaining of a toothache annually. When surveyed, 9.6% of students responded that they had missed school due to a toothache before (Appendix 6). While the "No" answer had a much greater response rate, it is still important to note that almost 10% had experienced a toothache so bad that it kept them home and caused them to miss school. The most concerning data was that

about half of students reported that they have had a cavity in the past (Appendix 7), which makes me question the 90% of students who said they brushed twice a day. I think that the data conveyed through this graph at least shows that there is an area of need in providing dental hygiene education to help students prevent more cavities from developing. Though it seems like the students here understand the importance of good dental hygiene, I presented this data at a meeting of the administration team on Wednesday, November 13, 2019. In addition to the data, I researched and discussed three free interventions to help provide more preventive education for the students.

The first was Big Smiles Dental, and they offer free services to schools. When you schedule a date for them to come to your school online, they will then send you permission forms for the students. The school is in charge of distributing and collecting the signed permission forms, and then you mail them back. On the day of the visit, the dental team sets up an in-school "dental office for the day" and provides the necessary dental care for students. Each student gets a dental health "report card" to take home and leaves with a free toothbrush. Big Smiles Dental already has a service agreement with LAUSD, and they provide the most comprehensive services of all the proposed interventions. They can provide both preventive care and restorative care as needed at most schools. I argued that Big Smiles Dental would be the best intervention to bring to campus if students needed actual dental services.

The L.A. Trust for Children's Health is a non-profit that works to improve student health through access, advocacy, and programs. They offer free programming and services for Title 1 Schools in Los Angeles. The team go into local Southern California schools and provide an education day to students on dental health. They also provide a preventive screening and fluoride varnish, spending about 20 minutes with each student. If the school is just looking for

educational materials, The L.A. Trust also provides for free all of the materials to be able to do a dental education presentation at the school ourselves.

Finally, the USC Mobile Dental Clinic partners with Title 1 schools in LAUSD and around southern California to come into a community for 10-11 days to provide dental assessments and initial appointments for students. They typically partner with a nearby, local dentist's office to provide referrals for more intensive services, as needed. The goal with the Mobile Dental Clinic is to start kids off with a positive dental experience so they do not have any fear of the dentist moving forward.

In addition to any of the free programming interventions I just mentioned, there are many ways to promote good dental hygiene at the school. WISH could use automated phone calls or text messages to parents to remind them to take their kids to the dentist twice a year. Back to school forms or registration packets could include information about the importance of dental hygiene. Signage in the school and reminder announcements over the PA system could provide those constant reminders that students need to change behavior. Utilizing the PTA and parent letters/emails/newsletters can help spread the word about the campaign. Bulletins on the school website could also provide information to parents, students, and visitors and show that the school emphasizes the importance of good dental hygiene.

Other benefits that could come from implementing these interventions include seeing an increase in the number of students who visit the dentist twice a year, providing students with a positive impression of going to the dentist so that fear does not prevent them from going in the future, and promoting how important it is to take care of our teeth throughout our lives. The school may also see a decrease in hygiene-based bullying. Though students at WISH Middle already seem to be knowledgeable of the importance of good dental hygiene, implementing an

educational program would drive the point home and promote dental healthcare for the rest of the students' lives.

The feedback I received from the administration after presenting these options was overwhelmingly positive. When I returned to the school in January after Winter Break, I was informed by the Principal that the school wanted to implement one of these interventions and provide a “Dental Day” for students. I immediately reached out to my first choice, Big Smiles Dental. Through coordination and collaboration between myself, the School Counselor, the Principal, the Facilities Manager, and Big Smiles Dental representatives, we were able to schedule the opportunity for three dental hygienists to provide dental cleanings for interested students at the school on Friday, March 20, 2020. We were in the process of sending out and collecting permission slips to parents via the bi-weekly Parent Newsletter and physical copies sent home during the students’ advisory period. The students even advertised for Dental Day in their bi-weekly student-run video news broadcast. There was demonstrated administration and student buy-in at the school site. Students would attend a Dental Day presentation (which I created) and receive their cleanings during their PE period that day. After, students would complete a survey on their experiences (which I created) to evaluate the effect and impact of the oral hygiene lesson and the dental cleaning experience.

Unfortunately, due to the cancellation of school due to the coronavirus pandemic, we had to cancel the Dental Day for this school year. My hope is that I have left all of the resources and procedures in place for the school to be able to try to implement Dental Day in the Fall semester or anytime next school year. I have really grown to love this school, the students, and the staff and administration. I am thankful to WISH Middle School Principal Chelsie Murphy and School Counselor Trisha Lee for allowing me to attempt to put theory into practice and begin to address

the systemic health issue of dental hygiene at an organizational level. A whole child approach to education requires taking dental health care needs into consideration.

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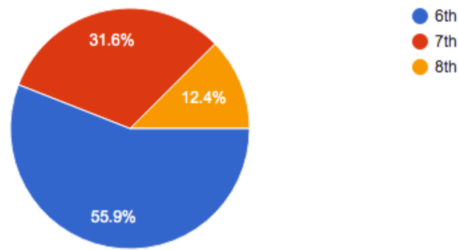
Appendix 1

Your Grade Level:

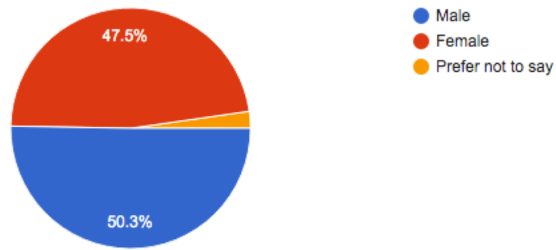
177 responses



Appendix 2

Your gender:

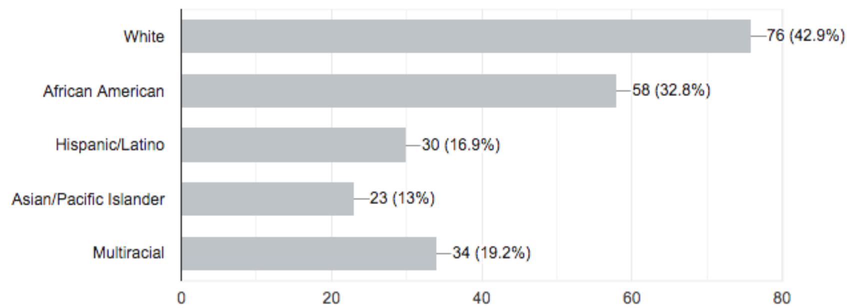
177 responses



Appendix 3

What is the race/ethnicity you best identify with?

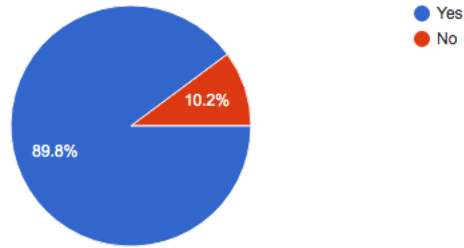
177 responses



Appendix 4

Do you brush your teeth twice a day?

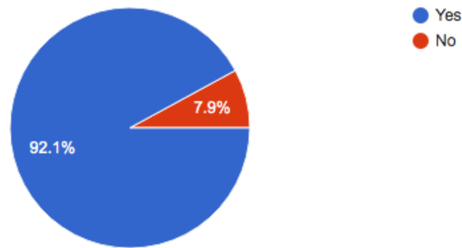
177 responses



Appendix 5

Have you visited the dentist in the past year?

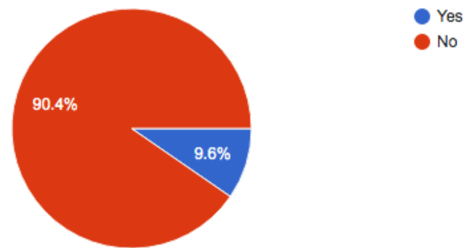
177 responses



Appendix 6

Have you ever missed school due a toothache?

177 responses



Appendix 7

Have you ever had a cavity?

177 responses