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Research Article

The Impact of Discriminatory Healthcare Experiences on Use of Medicaid-funded Dental Care Services in California

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Abstract

The present study conceptualized that prior experience of discrimination in healthcare settings would be a barrier to using dental care services among Medicaid beneficiaries in the states where dental care is a covered benefit (e.g., California). Using a sample of adult Medicaid beneficiaries included in the 2017 California Health Interview Study (CHIS; N = 4779), the present study examined the impact of discriminatory healthcare experiences on their use of dental care services. Over 36% of the participants reported that they had experienced discrimination in healthcare settings, and about 40% had no dental visit in the past year. Prior experience of discrimination reduced the odds of using dental care services by 18% (Odds Ratio = 0.82, 95% Confidence Interval = 0.72−0.93, $p < .01$). Findings provide implications for promoting oral health and dental care among those socially disadvantaged by addressing discrimination in healthcare settings.

Keywords: Oral Health; Dental Care; Discrimination; Medicaid; Medi-Cal; Healthcare Disparities; California Health Interview Study

1. Introduction

Dental insurance is a critical factor that enables the use of dental care services, lack of which contributing to oral health disparities [1-3]. Despite the urgent need to improve access to dental care for individuals with low income and/or disability, Medicaid coverage of dental care is limited and varies by state; only a few states, such as California, provide comprehensive dental care coverage to adult enrollees of Medicaid [2]. Known as Medi-Cal, Medicaid in California provides comprehensive dental benefits for adults, which include diagnostic and preventive dental hygiene (exams/x-rays/teeth cleanings), restorative services, root canal treatment, periodontal maintenances, dentures (partial/full), tooth extractions, oral and maxillofacial surgery, and emergency services [4]. One important question is whether this benefit is being fully utilized among those eligible. In studies with Medicaid enrollees in other states that offer dental coverage (e.g., Texas and New York), lack of knowledge of dental benefits and underutilization of dental services have been reported [5-7]. Identification of barriers that keep Medicaid enrollees away from their entitled dental benefits is critical to promoting their proper use of dental care services and efficient management of public healthcare expenditure. Stemming from their social disadvantages, many Medicaid beneficiaries encounter service barriers that go beyond insurance coverage. Such barriers may include logistic factors (e.g., transportation, childcare, and a long wait), low health literacy, lack of knowledge of benefits and coverage, and limited options for clinics accepting Medicaid and their suboptimal care quality [5, 7, 8]. The present study particularly focused on Medicaid enrollees' prior experience of discrimination in healthcare settings given that type of health insurance has shown to be a source of discrimination and that patients with Medicaid are particularly prone to discriminatory experiences in healthcare settings [9, 10]. The perception of disrespect or unfair treatment during patient–medical service provider interactions is known to be associated with decreased medication adherence, medical follow-up, and perceived quality of care [11-13], and it may also pose barriers to the use of healthcare. Drawing from a sample of adult Medicaid enrollees in California, the aims of the study were: (1) to explore the rates of discriminatory experiences experienced in healthcare settings and of utilizing dental care services and (2) to examine the effect of the discriminatory healthcare experiences on the use of dental care services. We hypothesized that individuals with discriminatory experiences would be less likely to use dental care services despite their entitled dental benefits. A set of contextual variables associated with discriminatory experiences and/or dental care utilization were also considered, which included demographic information (e.g., age, gender, race/ethnicity, marital status, and education), English proficiency, and self-described teeth condition. English proficiency was included given the high proportion of non-English speaking residents in California as well as the California Health Interview Study's special effort to reach out to them [14]. Self-described teeth condition was included to assess need for dental care service use, as previous studies demonstrate a high correlation between self-reported oral health and clinical assessment [15].

2. Methods

2.1 Participants

Data were drawn from the CHIS, a state-wide health survey conducted in all 58 counties of California. In this population-based random-dial telephone survey, more than 20,000 Californian adults and children were interviewed yearly on a wide variety of topics on health and healthcare. In order to reflect the diversity of the

California population, efforts were made to include hard-to-reach ethnic subgroups and individuals from other underrepresented groups. More information on the CHIS is available elsewhere [14]. Among 21,153 participants aged 18 and above in the 2017 CHIS, those who were covered by Medi-Cal (n = 4,779) were included in the present study.

2.2 Measures

2.2.1 Dental care service use: The outcome variable was dental care service use in the past year. Participants were asked "About how long has it been since you visited a dentist or dental clinic?" The original response categories (have never visited/6 months ago or less/more than 6 months up to 1 year ago/more than 1 year up to 2 years ago/more than 2 years up to 5 years ago/more than 5 years ago) were regrouped to indicate 'no use in the past year' (0) and 'use in the past year' (1).

2.2.2 Discriminatory experience in healthcare settings: Participants were asked how often they had been treated unfairly when getting medical care over their entire life. Responses were rated on a 4-point Likert scale (never/rarely/sometimes/often). The original responses of 'never' and 'rarely' were regrouped to indicate 'no experience of discrimination' (coded as 0). The original responses of 'sometimes' and 'often' were regrouped to indicate 'experience of discrimination' (coded as 1).

2.2.3 Covariates: Demographic variables included age group (0 = 18−39, 1 = 40−59, 2 = 60 and above), gender (0 = male, 1 = female), race/ethnicity (0 = non-Hispanic White, 1 = Hispanic, 2 = African American, 3 = Asian, 4 = other), marital status (0 = not married, 1 = married), education (0 = ≤ high school graduation, 1 = > high school graduation). English proficiency was constructed by using the items on primary language and self-reported English-speaking ability. The latter was assessed by asking respondents whose primary language was not English how well they spoke English. Responses were coded on a 4-point response scale ranging from 'not at all' to 'very well.' Following the definition used in the U.S. Census [16], those who used English as a primary language or reported that they spoke English 'very well' were categorized as English proficient (0), and those who reported their English speaking ability as less than 'very well' were categorized as having limited English proficiency (1). Participants were also asked to describe the condition of their teeth using a 5-point scale: excellent, very good, good, fair, or poor. Individuals without natural teeth were separately coded. Responses were recoded into three categories: 'excellent/very good/good' (0), 'fair/poor' (1), and 'no natural teeth' (2).

2.3 Analytical strategy

After reviewing the descriptive characteristics of the sample and the associations among study variables, logistic regression models of dental care service use were examined. An unadjusted model with discriminatory experience as the only predictor was fitted first, followed by an adjusted model with age, gender, race/ethnicity, marital status, education, English proficiency, and self-described teeth condition as covariates. All analyses were performed using IBM SPSS Statistics 25.

3. Results

3.1 Descriptive characteristics of the sample

Table 1 summarizes descriptive characteristics of the overall sample. Age ranged from 18 to 85, with an average of 49.7 (SD = 20.2). Age group distribution was

fairly even, and more than 60% were female. The sample included non-Hispanic White (42.5%), Hispanic (39.2%), African American (7.4%), Asian (5.7%), and other (5.2%). About three quarters of the sample were unmarried, and more than half (51.1%) had the education level of high school graduation or less. Approximately 18% of the sample had limited English proficiency. More than 38% rated their teeth condition as fair or poor, and 6.6% reported that they had no natural teeth. Over 36% of the participants reported that they had experienced discrimination in healthcare settings, and about 40% had no dental visit in the past year.

Characteristics	**%**
Age	
18–39	31.6
40–59	38.3
60+	30.0
Gender	
Male	39.9
Female	60.1
Race/ethnicity	
Non-Hispanic White	42.5
Hispanic	39.2
African American	7.4
Asian	5.7
Other	5.2
Marital status	
Not married	74.9
Married	25.1
Education	
≤ high school graduation	51.1
> high school graduation	48.9
English proficiency	
Proficiency	82.5
Limited proficiency	17.5
Self-described teeth condition	
Excellent/very good/good	55.2
Fair/poor	38.2
No natural teeth	6.6
Discriminatory experience in healthcare settings	

No	63.9
Yes	36.1
Dental care service use in the past year	
No	39.5
Yes	60.5

Table 1: Descriptive Characteristics of Medi-Cal Recipients in California (n = 4,779).

3.2 The impact of discriminatory health care experiences on dental care service use

Findings of both unadjusted and adjusted logistic regression models examining the association between discriminatory healthcare experience and dental care service use are presented in Table 2. The unadjusted model indicated that the odds of using dental service was reduced by 21% for those who had prior experience of discrimination in healthcare settings (OR = .79, 95% CI = .70 – .89). The association between dental service use and discriminatory healthcare experience remained significant in the adjusted model, after controlling for covariates (OR = .82, 95% CI = .72 – .93). As for covariates, gender, race/ethnicity, marital status, education, English proficiency, and self-described teeth condition were significantly associated with dental care service utilization. The odds of using dental service were higher for those who were female, Hispanic, African American, married and had higher level of education, whereas the odds were reduced among those with limited English proficiency, fair or poor ratings of teeth condition and no natural teeth.

Characteristics	**Odds Ratio (95% Confidence Interval)**	
	Unadjusted model	**Adjusted model**
Discriminatory healthcare experiences		
No	1.0 [reference]	1.0 [reference]
Yes	0.79*** (0.70−0.89)	0.82** (0.72−0.93)
Age		
18-39	-	1.0 [reference]
40−59	-	0.95 (0.81−1.10)
60 and older	-	0.98 (0.83−1.16)
Gender		
Male	-	1.0 [reference]
Female	-	1.23** (1.08−1.38)
Race/ethnicity		
Non-Hispanic White	-	1.0 [reference]
Hispanic	-	1.24** (1.05−1.45)
African American	-	1.32* (1.03−1.67)

Asian	-	1.11 (0.83−1.45)
Other	-	0.95 (0.73−1.26)
Marital status		
Not married	-	1.0 [reference]
Married	-	1.20* (1.04−1.38)
Education		
≤ high school graduation	-	1.0 [reference]
> high school graduation	-	1.16* (1.02−1.32)
English proficiency		
Proficient	-	1.0 [reference]
Limited	-	0.78* (0.64−0.95)
Self-described teeth condition		
Excellent/very good/good	-	1.0 [reference]
Fair/poor	-	0.62*** (0.55−0.71)
No natural teeth	-	0.31*** (0.24−0.40)

* p < .05. ** p < .01. *** p < .001.

Table 2: The Effect of Discriminatory Healthcare Experiences on Dental Care Service Use.

4. Discussion

This study examined the prevalence of and barriers to dental care service use among adult enrollees of the Medicaid-funded program in California where dental care is a covered benefit, with a particular focus on the impact of prior discriminatory experiences in healthcare settings. Approximately 61% of the present sample had a dental visit in the past year, and this rate is comparable to that found in a national sample of adult Medicaid beneficiaries [17]. Although the Medicaid-funded program enables individuals with low income and/or disability to access to dental care, its enrollees continue to lag behind privately insured individuals [18,17]. The fact that about 40% of the sample had never visited a dentist in the past year supports our notion that the entitled dental benefit, including preventive care, is not being fully utilized among Medicaid beneficiaries, suggesting that consistent with use of primary care [11] there are barriers to dental service use despite access to care. One focus of this study was the role of Medicaid enrollees' prior experience of discrimination in healthcare settings. More than 36% of the sample reported experiencing discrimination in healthcare settings. This finding is consistent with previous research indicating that Medicaid beneficiaries are more prone to discriminatory experiences in healthcare settings than those with private insurance [12, 13] For example, healthcare providers may have concerns about low payments from public insurance plans, which could lead them to hold public insurance holders in lower regard [18]. Relatedly, inability to find dentists who accept public insurance may also be perceived as a discriminatory experience by patients [19]. Feelings of disrespect and being treated unfairly are also often reported among patients with social disadvantages [11-13]. Our multivariate analyses further demonstrate that

prior discriminatory experience in healthcare settings significantly lowers the likelihood of use of dental care services, reducing the odds by 18% after controlling for the effect of covariates. Discriminatory healthcare experiences were found to impede patients' future use of dental care service use, adding support to the literature demonstrating that negative interactions between patients and medical providers lead to noncompliance with doctors' advice and follow-ups [12, 13]. Such experiences discourage help-seeking behaviors of individuals with social disadvantages, which is against the intention of public insurance programs. Furthermore, no use of preventive care and delayed treatment may result in unnecessary financial burdens to the healthcare system.

With regard to covariates, our findings of higher odds of dental service use among those who were female, married, and had a higher level of education than their respective counterparts are consistent with previous research [20, 21]. It is notable that we found higher odds of using dental care services among Hispanics and African Americans compared to non-Hispanic Whites. While inconsistent with most studies of racial/ethnic healthcare disparities [20, 21], this finding reflects the unique characteristics of the sample whose dental care is covered by public insurance. When comprehensive dental care services are entitled, non-Hispanic Whites were less likely to use such services than Hispanics and African Americans. A similar finding was reported in a study showing that after controlling for insurance and other demographic characteristics, African American men reported more preventative screening visits than did non-Hispanic White men [22]. These findings may also reflect the intersection of race/ethnicity with other individual or sociocultural characteristics. In line with previous studies [5, 7], limited English proficiency was identified as a significant factor that reduces the odds of using dental care services. Because English proficiency is a critical component of healthcare navigation in the U.S. (e.g., making appointments, medical information seeking, and patient-provide communications), individuals with low acculturation resulting in language barriers are particularly disadvantaged [23, 25]. Our finding also showed that fair or poor ratings of teeth condition and having no natural teeth reduced the odds of using dental care services. A similar finding was reported in a recent study [26], demonstrating that the presence of presumably higher oral health needs (based on severity of periodontitis and self-perceived poor oral health condition) was associated with lower odds of using dental services. These findings suggest the gap between oral health needs and dental care service use and call for further inquiry.

Our findings have implications for outreach efforts to educate and encourage use of dental care services among adults with public insurance. One consequence of discriminatory healthcare experiences is anticipatory stress [27] or the expectation that future discrimination or other negative experiences will occur if dental services are sought. While fear of dental procedures may be addressed as a known barrier to care [8], there remains a need to broaden the notion so that anticipatory stress is also included in outreach interventions. Also, prior negative experiences may result in patients feeling misunderstood and not valued by dental providers; this may be exacerbated as dentists often do not actively involve patients in decision-making [28]. Training dental providers to educate patients so as to facilitate shared decision making could increase patients' active involvement in seeking and adhering to dental care regimens [29]. The overall findings underscore the importance of training dental

care professionals to be respectful and sensitive when interacting with and delivering services to patients with diverse backgrounds. Some limitations to the present study should be noted. First, the cross-sectional design of the study limits causal inferences. Future research with a longitudinal design could aid in further establishing time-order relationships between discriminatory healthcare experiences and dental care service use. Also, the use of a regionally defined sample of California residents limits the generalizability of the study findings to the larger population of Medicaid beneficiaries from other geographic locations. This limitation may be partially attenuated by a recent international meta-analysis that found global consistency in most individual-level characteristics associated with dental service use in studies spanning more than a decade [20]. Another limitation is that a single-item self-reported oral health measure was used to assess oral health needs. Future research should employ more objective and refined measures of oral health status and needs by including clinical measures. In addition, although the study placed an emphasis on discriminatory healthcare experiences as a potential barrier to dental service use, future research should also examine how prior negative experiences with healthcare or dental care services might interact with a broader range of other potential barriers, such as Medicaid enrollees' lack of knowledge about dental coverage and limited options for dental care. Our findings demonstrate that despite the comprehensive dental benefits available for adult Medicaid enrollees in California, many eligible individuals underutilize dental services and therefore remain untreated. Thus, better understanding of the multidimensional nature of discriminatory healthcare experience and its impact will be essential in addressing service underutilization issues among Medicaid enrollees, and reducing healthcare disparities for publicly insured yet underserved populations.

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