Is Primary Care Providers' Trust in Socially Marginalized Patients Affected by Race?

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BACKGROUND: Interpersonal trust plays an important role in the clinic visit. Clinician trust in the patient may be especially important when prescribing opioid analgesics because of concerns about misuse. Previous studies have found that non-white patients are perceived negatively by clinicians.

OBJECTIVE: To examine whether clinicians' trust in patients differed by patients' race/ethnicity in a socially marginalized cohort.

DESIGN: Cross-sectional study of patient-clinician dyads.

PARTICIPANTS: 169 HIV infected indigent patients recruited from the community and their 61 primary care providers (PCPs.)

MAIN MEASURES: The Physician Trust in Patients Scale (PTPS), a validated scale that measures PCPs' trust in patients.

KEY RESULTS: The mean PTPS score was 43.2 (SD 10.8) out of a possible 60. Reported current illicit drug use and prescription opioid misuse were similar across patients' race or ethnicity. However, both patient illicit drug use and patient non-white race/ethnicity were associated with lower PTPS scores. In a multivariate model, non-white race/ethnicity was independently associated with PTPS scores 6.3 points lower than whites (95% CI: −9.9, −2.7). Current illicit drug use was associated with PTSP scores 5.5 lower than no drug use (95% CI −8.5, −2.5).

CONCLUSION: In a socially marginalized cohort, non-white patients were trusted less than white patients by their PCPs, despite similar rates of illicit drug use and opioid analgesic misuse. The effect was independent of illicit drug use. This finding may reflect unconscious stereotypes by PCPs and may underlie disparities in chronic pain management.

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INTRODUCTION

Interpersonal trust is an important aspect of the clinical encounter. Trust is defined as one's expectation that another will behave in a particular way[1] and implies that both parties understand that each others' interests will not be violated[2]. It reflects reliability, understanding and information sharing, all key components of high quality communication[3,4]. In contrast to patients' trust in clinicians,[3,5] clinicians' trust in patients has not been investigated.

While some clinical decisions are based on clear objective measures, others, such as the treatment of chronic non-cancer pain, are based on more subjective assessments. The treatment of chronic pain is further complicated by the fact that while consideration of opioid analgesics is reasonable for moderate to severe pain, their use must be balanced against the risk of opioid misuse[6–9].

A number of patient characteristics are associated with an increase risk of opioid analgesic misuse, including history of alcohol abuse or illicit drug use[10–12]. However, clinicians do not conform their decisions to these well described risk factors. Patients' race/ethnicity affect treatment decisions[13–15]. Additionally, the treatment of chronic pain varies by clinicians' experience and training[8,16].

In qualitative studies, clinicians have identified mutual trust as an important factor influencing chronic pain management and the prescription of opioid analgesics[7,17–19]. Clinicians judge patients' risk of misuse based on "gut feelings" rather than on specific clinical characteristics associated with risk of misuse[17]. Thus, clinicians' trust in their patients may play a large role in decisions surrounding chronic pain management.

Characteristics such as patients' race/ethnicity may affect clinicians' trust. Studies have demonstrated that physicians perceive African American patients more negatively[20]. Assessing the relationship between patient race/ethnicity and clinician trust in the patient may be helpful in understanding the effect of race/ethnicity on physician attitudes and behaviors. We analyzed a cohort of socially marginalized patients with HIV and their primary care providers in order to examine the association between race/ethnicity and trust in a uniformly low SES population with high rates of illicit drug use and prescription opioid analgesic misuse.

METHODS

Setting and Participants

In order to assess clinicians' trust in patients, we conducted a dyad study that involved a subset of community-based

indigent participants enrolled in a longitudinal observational cohort study of pain (the Pain Study) and their primary care providers (PCPs). We recruited participants for the Pain Study from the Research on Access to Care in the Homeless (REACH) study. The REACH study was a prospective cohort of HIV-infected homeless and marginally housed adults in San Francisco. The REACH cohort was recruited through systematic sampling from homeless shelters, free-meal programs, and single room-occupancy hotels[21,22] in three waves (1996–1998, 1999–2000, and 2003). REACH participants were interviewed quarterly regarding illicit drug use, housing status and healthcare utilization at a research field site (University of California San Francisco's Clinical and Translational Sciences Institute Tenderloin Clinical Research Center). For the Pain Study, we recruited all REACH participants who completed study visits between September 2007 and June 2008.

The Pain Study involved a baseline visit and seven quarterly follow-up interviews that occurred every three months coinciding with REACH follow-up quarterly interviews. For the Pain Study, participants completed a structured interview about pain, opioid analgesic use and misuse, and health care utilization related to pain management. At baseline, we conducted the Diagnostic Interview Schedule-IV (DIS-IV)[23] substance and alcohol modules. At each follow-up visit, participants completed the REACH questionnaire and the Pain Study Follow-up Questionnaire, a 25-minute abbreviated version of the baseline questionnaire. Trained interviewers administered all of the questionnaires, except for questions about opioid analgesic misuse, which participants completed using Audio Computer Assisted Self Interview (ACASI) technology. ACASI is an acceptable method to use with low-literacy populations and improves the reliability of sensitive information[24].

We recruited one PCP for each participant who was active in follow-up one year into the study. If a participant provided informed consent to contact their PCP, and identified a provider who fit our definition (a medical doctor, nurse practitioner (NP), or physician assistant (PA) in outpatient practice providing longitudinal, comprehensive care), we contacted the PCP and asked them to complete a questionnaire about themselves and a separate questionnaire specific to each of their patients enrolled in the study. The provider-specific questionnaire included questions about the PCP's demographics and practice characteristics. The patient-specific questionnaire included questions about the patient's medical conditions, use and misuse of prescription opioid analgesics, and the Physician Trust in Patients Scale[25]. We recommended, but did not require, that PCPs refer to patient medical records when they completed the survey. The study was approved by the University of California San Francisco's Institutional Review Board and patients and PCPs provided written informed consent.

Independent Variables: Patient-Level

We obtained patient self-reported biological sex, date of birth, race/ethnicity and history of incarceration in state or federal prison at entry in the REACH cohort. We ascertained race/ethnicity by having patients select racial or ethnic categories from the following list: White, African American, Latino, Asian, Native American, Pacific Islander, or mixed race. We collapsed Asian, Native American, Pacific Islander and mixed race into a single category due to the small number of respondents in each of these categories. We measured alcohol abuse and dependence through responses to the DIS-IV[23]. In the DIS-IV, alcohol abuse and dependence is defined in a manner consistent with the Diagnostic and Statistical Manual of Mental Disorders[26]. We assessed current use of illicit drugs using responses from the patient's REACH questionnaire completed closest in time to the PCP's completed questionnaire. We defined current use as a "yes" response to questions about use of cocaine, heroin or methamphetamines in the past 90 days. We combined use of cocaine, heroin or methamphetamine into a single variable, as we hypothesized that PCPs would not distinguish between the three categories with regard to trust[10].

We measured opioid analgesic misuse through patients' responses to yes/no questions about specific misuse behaviors using ACASI technology[27]. Items addressed using opioid analgesics to get high; trading them for money, illicit drugs or sex; lying to their PCP about opioid analgesics; forging prescriptions for opioids; or augmenting the effect of prescription opioid analgesics with illicit drugs or alcohol. We aggregated responses, defining misuse as an affirmative answer to any one of these questions on the Pain Study questionnaire completed closest in time to the PCP survey.

Independent Variables: Clinician-Level

In addition to PCPs' sex, age, race and ethnicity, we evaluated years in practice and training (physician, PA or NP.) We asked each PCP to estimate the proportion of their patient panel with chronic pain. We collapsed PA and NP into a single category. We collapsed PCP race and ethnicity into two categories, non-Latino white and all others, owing to the small number of PCPs who were of minority racial or ethnic groups. We recorded years in practice as a categorical variable: 0 to 3, 4 to 9, 10 to 19 and 20 or greater.

Dependent Variable

We measured PCPs' trust in patients with the Physician Trust in the Patient Scale (PTPS), which was validated in the Pain Study cohort[25]. The PTPS has high internal reliability with a Cronbach's alpha of 0.93 and was shown to have convergent validity with clinician reported perceptions of patients' behaviors expected to be associated with lower levels of trust.

The PTPS consists of 12 questions that are rated on a 5-point Likert scale with responses that range from (0, "not at all confident") to (5, "completely confident") (Text Box). A total score is the sum of the 12 items that can range from 0 to 60. Higher scores indicate greater perceptions of trust.

"How confident are you that this patient will…"

- provide all the medical information you need?
- let you know when there has been a major change in his or her condition?
- tell you about all medications and treatments he or she is using?
- understand what you tell him/her?
- follow the treatment plan you recommend?
- be actively involved in managing his/her condition/problem?
- tell you if he/she is not following the treatment plan?
- respect your time?
- respect personal boundaries?
- not make unreasonable demands?
- not manipulate the office visit for secondary gain (e.g., for inappropriate disability certification or prescription of controlled substances)?
- keep his or her appointments?

Note: Response options were on a 5-point Likert scale ranging from "not at all confident" to "completely confident." Total scores were the sum of all 12 items, ranging from 0 to 60.

Text Box. Physician Trust in Patient Scale (PTPS) questions.

Analysis

Our main analytic goal was to estimate the association of patient race/ethnicity and PTPS scores. We selected independent variables *a priori* that might confound the relationship between patient race/ethnicity and PCPs' trust in patients. We entered all variables into the model simultaneously. After testing confirmed that all non-white patient groups had lower PTPS scores, we collapsed them for the multivariate analysis. We analyzed bivariate and multivariate associations using generalized estimating equations, an extension of the linear model providing robust standard errors, p-values, and confidence intervals that account for the correlation among the multiple responses of each PCP for a panel of patients[28,29].

RESULTS

Of the 296 patients initially enrolled in the Pain Study, 240 were active in the study at one year and provided written consent that allowed us to contact their PCP. We contacted a total of 90 PCPs for these patients of whom 61 PCPs returned completed questionnaires for a total of 169 patients.

Two-thirds of patients were male (65.1%), half were African American (46.8%), and their average age was 50 years. Approximately one quarter (27.8%) reported current use of illicit drugs. Approximately one quarter (22.5%) reported misusing opioid analgesics in the past 90 days. Most had experienced homelessness (82.0%) though few were homeless at the time of the study (5.0%). Most had a high school education or less (73.4%). The median annual income was $11,280. PCPs were mostly white (78.3%). Approximately half (46.0%) were male. The majority were in practice between 10 and 19 years. None were in practice fewer than four years. Most (83.6%) were physicians (Table 1).

The prevalence of current illicit drug use as well as opioid analgesic misuse did not differ in a manner that was statistically significant between racial or ethnic groups ($p=0.71$ and $p=0.18$ respectively). The mean PTPS score was 43.2 (SD 10.8.) Bivariate models showed an association of both African American and "other" patient race with lower mean PTPS scores, as well as an association between current illicit drug use, as reported by the patient and lower mean PTPS scores (Table 1). Bivariate models showed a trend towards lower PTPS scores among patients who reported opioid analgesic misuse although the effect did not reach statistical significance.

In the adjusted multivariate analysis, non-white patient race/ethnicity was significantly associated with lower PTPS scores (Table 2). Current drug use was also associated with lower PTPS scores ($p<0.01$). Opioid analgesic misuse was not significantly associated with differences in PTPS scores ($p<0.01$). PCPs with more than 20 years in practice rated patients as having significantly lower PTPS scores ($p<0.05$). The test for trend across categories was significant at $p<0.05$. The Wald statistic for the multivariate model was 52.4 with $p<0.001$.

DISCUSSION

Our study found that in a cohort of socially marginalized patients with HIV infection receiving primary care, PCPs

Table 1. Patient (n=169) and Provider (n=61) Demographic Characteristics, and Unadjusted Association of Predictors with Physicians' Trust in Patients Scale (PTSP) Scores

	n (%)	PTPS score (SE)	p
Total sample (mean, SD)	–	43.2 (10.8)	–
Patient age (years, SD)	49.5 (6.9)	0.1 (0.1)*	0.52
Patient sex			
Male	110 (65)	44 (1.1)	–
Female	59 (35)	42 (1.5)	0.26
Annual income (median, IQR)	11,280 (10,440, 11,904)	–	–
Education			
Less than high school	49 (29)	–	–
Finished high school	75 (45)	–	–
Greater than high school	44 (26)	–	–
Patient race/ethnicity			
White	60 (36)	47.3 (1.4)	–
African American	79 (47)	41.6 (1.2)	<0.001
Latino	12 (7)	42.8 (2.5)	0.11
Other	13 (8)	35.9 (2.9)	<0.001
Opioid analgesic misuse†			
No	73 (43)	44.3 (2.0)	–
Yes	96 (57)	39.7 (1.8)	0.03
Current drug use‡			
No	122 (72)	44.8 (1.0)	–
Yes	47 (28)	39.2 (1.6)	<0.01
Lifetime alcohol abuse or dependence§			
No	68 (41)	43.3 (1.4)	–
Yes	96 (59)	43.2 (1.27)	0.93
Lifetime history of homelessness	136 (82)	–	–
Homeless at time of interview	10 (5)	–	–
Incarceration (prison)	25 (16)	–	–
Provider sex			
Male	28 (46)	44.1 (1.27)	–
Female	33 (54)	42.5 (1.25)	0.35
Provider age (years, s.d.)	46.7 (8.3)	–	–
Provider race/ethnicity			
White	47 (71)	43.2 (1.0)	–
Non-white	13 (29)	43.3 (1.9)	0.97
Provider type			
PA/NP	10 (16)	45.1 (1.8)	–
MD	51 (84)	42.7 (1.0)	0.23
Years in practice			
4 to 9	11 (18)	45.2 (2.6)	–
10 to 19	31 (51)	43.6 (1.1)	0.57
> 20	19 (31)	41.9 (1.4)	0.28
Clinic panel with chronic pain			
Some	29 (48)	43.8 (1.4)	–
About half	24 (39)	41.8 (1.3)	0.32
Most to almost all	8 (13)	45.3 (1.9)	0.52

Change in PTPS per 1 year change in patient age

†*Answering yes to any of the following in the past 90 days: using opioid analgesics to get high; trading them for money, illicit drugs or sex; lying to their PCP about opioid analgesics; forging prescriptions for opioids; or augmenting the effect of prescription opioid analgesics with illicit drugs or alcohol*

‡*Answering "yes" to having used cocaine, heroin or methamphetamines in the past 90 days*

§*DIS-IV criteria*

reported less trust of patients with a history of illicit drug use and patients who were of non-white race/ethnicities. Our findings are consistent with studies that suggest variations in PCPs' attitudes and prescribing decisions in different racial

groups with chronic pain[14,30]. They extend the literature by specifically investigating the construct of trust within a low socioeconomic status cohort. In this sample, where every patient is indigent and many have significant illicit substance use and incarceration histories—and therefore is at higher than average risk for opioid analgesic misuse—one might not expect such variation in trust scores across different racial/ethnic groups. Our finding of attitudes of distrust towards non-white patients is consistent with studies of the general population[31–33]. In our study sample, rates of illicit substance use and opioid analgesic misuse were similar among racial groups. This finding is consistent with previous reports that showed that African Americans are no more likely to misuse prescription opioid analgesics than are whites[10].

Trust in patients represents an important component of the clinical encounter and may serve as a provider-level mediator of disparities in care[34]. Even in this study of socially marginalized patients, PCPs' trust in patients appears to be guided in part by perceptions of racial/ethnic groups, and not solely by individual patients' illicit drug use or opioid analgesic misuse. Trust is based on a subjective assessment of the patient, and may be influenced by unconscious biases and stereotypes. Clinical situations with high degrees of "cognitive load" (e.g. risk, stress, uncertainty) generally increase providers reliance on biases and stereotypes[35,36]. Chronic pain management, with the possibility of medication diversion and the simultaneous concern of under-treatment of pain, presents just such a situation. Thus, PCPs' differential trust of non-white patients' in a cohort of indigent patients might underlie well demonstrated disparities in pain management[13,37–39].

The risk, uncertainty, and lack of objective findings that typify the management of chronic pain are not unique to this

Table 2. Multivariate Model for Physicians' Trust in Patients Scale (PTPS) Scores

	Change in PTPS score (95% CI)	p
Patient		
Female	3.1 (−1.1, 7.2)	0.15
Age (years)	0.1 (−0.1, 0.3)	0.45
Non-white	-6.3 (−9.9, -2.7)	<0.01
Opioid analgesic misuse*	-4.7 (−10.1, 0.7)	0.09
Current drug use†	-5.5 (−8.5, -2.5)	<0.01
Lifetime alcohol abuse or dependence‡	1.2 (−1.7, 4.1)	0.42
Provider		
Female	-1.1 (−5.3, 3.1)	0.62
Non-white	0.6 (−3.3, 4.4)	0.76
Physician	-2.7 (−7.9, 2.4)	0.29
Years in practice		
4 to 9	0	–
10 to 19	-2.6 (−7.7, 2.4)	0.31
> 20	-6.8 (−12.2, -1.5)	0.01
Clinic panel with chronic pain		
Some	0	–
About half	0.3 (−3.6, 4.2)	0.88
Most to almost all	2.3 (−1.9, 6.5)	0.29

Answering yes to any of the following in the past 90 days: using opioid analgesics to get high; trading them for money, illicit drugs or sex; lying to their PCP about opioid analgesics; forging prescriptions for opioids; or augmenting the effect of prescription opioid analgesics with illicit drugs or alcohol

†*Answering "yes" to having used cocaine, heroin or methamphetamines in the past 90 days*

‡*DIS-IV criteria*

condition. Many conditions commonly encountered in primary care lack clear objective findings and are managed very differently between providers. Therefore, it is likely that trust in patients plays a role in many other clinical decisions.

Aside from clinical uncertainty, there are two characteristics of trust in patients that make it particularly relevant to clinical decision-making. First, the construct of trust is future oriented: it involves an expectation of future actions[40,41]. Especially in primary care relationships that involve prevention or management of chronic diseases, differential expectations of patients' future actions have the potential to modify clinical decisions such as medication intensification. Second, trust is closely related to power. Communication strategies such as patient-centered communication, where the patient's perspective is elicited and incorporated into decision making, requires sharing power and responsibility[42]. Clinicians' trust of their patient is a necessary step in this process[2]. Differences in trust may affect the degree to which patient-centered communication can be achieved.

PCPs who were in practice longer reported lower trust scores of his or her patients. It is possible that an accumulation of negative experiences with patients may lead to decreases in trust. Alternatively, this association may represent broader issues of decreased professional satisfaction, more prevalent among older providers[43]. Finally, while our study was underpowered to explore whether the length of time in practice differentially affected trust in patients by race/ethnicity, a third potential explanation is that recent increased emphasis in educational settings about disparities and biases/stereotypes has led to more recently trained providers' greater trust scores.

Our findings speak to the need to better train clinicians in how to recognize and account for unconscious racial biases and stereotypes. Unconscious attitudes represent an important aspect of disparities education. Training about assumptions and biases may be best integrated into teaching clinical decision-making: increasing clinicians' awareness of biases and encouraging careful consideration of decisions based on intuition. Alternatively, tests of implicit assumptions may serve an educational role in increasing clinicians' self-awareness of unconscious biases[44].

Several limitations need to be acknowledged. The social marginalization of patients (marginally housed, HIV infected, with high rates of illicit drug use) limits the generalizability of findings to other populations. Our sample size was relatively small and, in particular, the number of non-white PCPs was small. This limited our ability to analyze patient-clinician racial/ethnic concordance, an important contributor to processes of care[45]. Finally, although socioeconomic status (SES) is a common confounder of race and affects PCPs' perceptions,[20] the uniformly low SES of the patients in this study decreases the chance of SES confounding the relationship.

Findings from this study suggest that patients' race/ethnicity affects PCPs' trust in patients in a socially marginalized cohort. PCPs caring for similar populations should be aware of the potential for both their trust in patients and their interpretation of behaviors to be affected by unconscious racial biases. Our findings add support for the implementation of standardized policies regarding chronic pain management as an alternative to management strategies that rely on PCP discretion. Policies such as urine toxicology and pain treatment agreements have the potential to standardize care. However, recent evidence suggests that their routine use should be reconsidered because of limited evidence of their effectiveness[46]. As new approaches to chronic pain management are developed, close attention must be paid to the role of providers' unconscious biases, and the potential for racial biases to be translated into disparities in care. Future research on PCPs' trust in patients should target its role as a potential mediator of clinical decision-making, the role of PCP race/ethnicity, as well as whether our findings generalize to other clinical settings and to less marginalized populations.

Conflicts of Interest: *None disclosed.*

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