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Unmet Mental Health Need Among Chinese and Latino Primary Care Patients: Intersection of Ethnicity, Gender, and English Proficiency

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BACKGROUND: Ethnic minorities who present with mental health symptoms in primary care are less likely to receive treatment than non-Hispanic whites; language barriers may magnify this disparity.

OBJECTIVE: We examined the contributions of ethnicity, gender, and English proficiency to unmet mental health need.

DESIGN: Cross-sectional study.

PARTICIPANTS: Chinese and Latino primary care patients with a preferred language of English, Cantonese, Mandarin, or Spanish.

MAIN MEASURES: Participants were interviewed within 1 week of a primary care visit and asked whether in the prior year they (1) needed help with emotional or mental health symptoms and (2) had seen a primary care physician or a mental health professional for these symptoms. Among those who reported "mental health need," we defined "unmet mental health need" as no reported use of services for these symptoms. Regression models explored independent and interaction effects among ethnicity, gender, and English proficiency, on the two outcomes.

KEY RESULTS: Among 1149 participants (62% women; 262 Chinese, with English proficiency [EP], 532 Chinese, with limited English proficiency [LEP], 172 Latino with EP; and 183 Latino with LEP), 33% reported mental health need. Among Chinese, but not Latino, participants, those with LEP were more likely than those with EP to report mental health need (AOR 2.55, 95% CI 1.73–3.76). Women were more likely to report mental health need than men (AOR 1.35, 1.03–1.79) regardless of ethnicity or English proficiency. Among participants reporting mental health need, 41% had unmet mental health need. Men with LEP, compared with those with EP, were more likely to have unmet mental health need regardless of ethnicity (AOR 2.53, 1.06–6.04).

CONCLUSIONS: We found high levels of mental health symptoms and unmet mental health need in both Chinese and Latino primary care patients. These results affirm the need to implement depression screening and targeted treatment interventions for patient subgroups at highest risk of untreated symptoms, such as men with LEP.

KEY WORDS: language barriers; limited English proficiency; mental health need; mental health-related service use.

INTRODUCTION

Depression, anxiety, and other mental health conditions are increasingly common in primary care.[1] Depression alone is the second leading cause of disability in the USA.[2] Effective mental health treatments exist, but disparities in access remain for ethnic minorities and immigrants.[3, 4] Population-based studies demonstrated that despite similar or higher rates of mental health symptoms compared with the general population, Asian and Latino individuals have both less access to and less use of mental health services for depression, anxiety, and other mental health conditions.[5–12]

Barriers to mental health care for Asian and Latino individuals are likely multifactorial. A recent systematic review[13] identified cultural and structural factors that present barriers to mental health service use among immigrants. Cultural factors include stigma and varied mental illness and symptom explanatory models. Structural factors include lack of culturally responsive services (e.g., few linguistically or culturally concordant services, poor patient-provider cross-cultural understanding), cost, lack of or limited insurance, and difficulties with transportation.[13] For the large and growing numbers of Asians and Latinos with limited English proficiency (LEP), language barriers present an additional challenge to obtaining mental health care.[5, 6, 12, 14–17]

When they do seek care, ethnic minorities and individuals with LEP are more likely to seek mental health services from primary care providers than from specialty mental health providers.[7, 8, 14, 15, 18–20] Yet, studies relying on large clinical administrative data often have no accurate measures of English proficiency (EP). It remains unclear whether the burden of unmet mental health need remains high among ethnic minorities with access to primary care. In this study, we sought to examine the prevalence of mental health need among Chinese and Latino patients in a primary care practice. Additionally, while prior population-based research has studied the independent contribution of ethnicity, gender, and English proficiency to mental health disparities, the intersecting effects of these factors are unknown. We investigated the individual association of ethnicity, gender, and English proficiency, as well as the intersection of these factors, with unmet mental health need. We identified subgroups at higher risk of untreated mental health conditions; this adds to the limited literature on the mental health needs of ethnic minorities in primary care.

METHODS

Sample

We analyzed data from the Language Access System Improvement (LASI) study, designed to evaluate the effects of simultaneously increasing access to professional interpreters and certifying bilingual physicians' language skills on communication and clinical outcomes in primary care. For the LASI study, we recruited patients from an academic primary care practice in San Francisco which serves an ethnically, linguistically, and socio-economically diverse population of > 24,000 adult patients. Providers ($n = 101$) agreed to have their patients contacted for the study; 6%, 3%, and 3% were bilingual in Spanish, Cantonese, and Mandarin, respectively. For language-discordant visits, video, telephone, or in-person professional interpreters were available. Patients were eligible to participate if they were ≥ 40 years; self-identified as Latino or Chinese; preferred English, Spanish, Cantonese, or Mandarin; received primary care in the practice; and were able to participate in a telephone interview. We targeted recruitment for a goal sample of 2 out of 3 participants with LEP and 1 out of 3 with EP, with distribution across providers congruent with their patient panel size. Research assistants who self-identify as Chinese or Latino and who speak Cantonese, Mandarin, or Spanish fluently conducted telephone interviews in the patient's preferred language within 1 week of the primary care visit. The larger study included two patient samples: (1) "pre"—before the improvement intervention and (2) "post"—after the intervention. Because mental health questions were not added until the "post" sample (January 2016–July 2017), only the "post" sample was included in this analysis.

Outcome Measures

Patient-reported primary outcomes were (1) perceived mental health need, (2) mental health service use, and (3) unmet mental health need in the prior year, using questions adapted from the 2013–2014 California Health Interview Survey and the 2002–2003 National Latino and Asian American Study (CHIS and NLAAS; both are population-based surveys).[9, 18, 21] *Perceived mental health need* in the prior year was assessed by asking, "During the past 12 months, did you think you needed help for emotional or mental health problems, such as feeling sad, blue, anxious or nervous?" As has been defined in prior studies, an affirmative response indicated that participants had experienced mental health problems and that they felt they needed help in addressing these problems.[21] To assess *mental health service use* in the prior year, we combined the response to the following questions: (1) "In the past 12 months have you seen your primary care physician or general practitioner for problems with your mental health, emotions or nerves?" and (2) "In the past 12 months have you seen any other professional, such as a counselor, psychiatrist, or social worker for problems with your mental health, emotions, or nerves?"[21] We considered a positive response to either or both questions as prior year mental health service use. Participants categorized as having mental health need who did not report mental health service use in the prior year were considered to have *unmet mental health need*.

Measures of Key Independent Variables

Latino and Chinese ethnicity as well as gender were defined by self-report. Participants were classified as those with EP or LEP based on a validated measure of English language proficiency that includes patient-reported preferred language for discussing healthcare and the patient's response to the US Census question, "How well do you speak English?"[17] Response options include "very well," "well," "not well," and "not at all." Participants who spoke English "very well" or who spoke English "well" and preferred to discuss their health care in English were classified as those with EP. All others were classified as those with EP.

Measures of Covariates

Additional demographics and participant characteristics included age, education, health literacy, and insurance type (private, Medicare, or Medi-Cal). Health literacy was determined using a single, validated question, "How confident are you filling out medical forms by yourself?"[22, 23] Participant clinical characteristics and health service utilization included Elixhauser comorbidities[24, 25] (from the electronic medical record), whether the participant had been in the practice for ≥ 1 year, and the number of primary care practice visits in the prior year.

Statistical analysis

Participants with responses to all measures (outcomes, independent variables, and all covariates) were included in

analyses. We computed prevalence of perceived mental health need, and, among those with perceived need, prevalence of unmet mental health need in the prior year. We performed chi-square tests accounting for clustering of patients within physicians to assess differences in demographic variables among the four ethnicity/English proficiency groups (Chinese with EP, Chinese with LEP, Latino with EP, and Latino with LEP). To model dichotomous outcomes of perceived mental health need and unmet mental health need in the prior year, we fit mixed logistic models with random intercepts for physicians to accommodate clustering of participants within physicians. A priori, all models included main effects for ethnicity, gender, and English proficiency (LEP vs EP). Initial models included 3-way interaction terms between ethnicity, gender, and English proficiency and all subordinate 2-way interactions. Through manual backward elimination, we retained main effects with p values < 0.20 and interaction terms with p values < 0.05. No 3-way interactions were retained. For significant 2-way interactions, we reported simple effects of one interacting variable within strata defined by the other interacting variable. Stata version 14.2 was used for all analyses (College Station, TX: StataCorp LP). This study was approved by the University of California, San Francisco (UCSF) Institutional Review Board (IRB).

RESULTS

Sample Characteristics

We identified 2359 eligible participants during the study period; 662 (28%) were unreachable. Among 1697 reached, 1181 agreed to participate (69.6% participation rate). Of these, 1149 (434 with EP and 715 with LEP) with complete responses to all measures were included (97%).

We observed differences in the sociodemographic and clinical characteristics of study participants across the four groups categorized by ethnicity and English proficiency (Table 1). Participants with LEP were older, included more women, tended to have lower educational attainment and health literacy, and were less likely to have private insurance compared with participants with EP. Chinese participants with EP were more highly educated than the three other groups with 94% completing at least some college. Almost all participants had been in the primary care practice for at least 1 year with no significant difference across groups. Participants with LEP had a higher mean number of clinic visits in the prior year than did participants with EP, with higher visits for Latinos compared with Chinese participants. Latino participants had more comorbidities than Chinese participants.

Prevalence of Perceived Mental Health Need and Unmet Mental Health Need in the Prior Year (Fig. 1)

A third (33%; $n = 380$) of participants reported mental health need in the prior year. Among those with perceived mental

health need, 59% reported mental health service use in the prior year, leaving 41% ($n = 157$) with unmet mental health need.]–>

Multivariate Model of Perceived Mental Health Need

In the multivariate model of perceived mental health need in the prior year (Table 2), we found a significant interaction between ethnicity and English proficiency ($p < 0.001$). Among Chinese participants, those with LEP had 2.5 times the odds of perceived mental health need compared with those with EP. There was a non-statistically significant trend in the opposite direction among Latinos. All other interaction effects were not significant.

Women had significantly higher odds of perceived mental health need in the prior year than men, regardless of ethnicity or English proficiency. Increasing age was associated with significantly lower odds of perceived mental health need in the prior year; for every 10 years of age, there was a 28% decrease in odds of perceived mental health need. Participants with lower health literacy, more clinic visits, and those insured by Medicare (versus private insurance) also had significantly higher odds of perceived mental health need in the prior year.

Multivariate Model of Unmet Mental Health Need

In the multivariate model of unmet mental health need in the prior year (Table 3), while there were no significant ethnic differences in unmet mental health need, there was a significant interaction between gender and English proficiency ($p = 0.02$). Among men, participants with LEP had 2.5 times the odds of unmet mental health need compared with participants with EP, regardless of ethnicity. We did not find such an association for women. All other interaction effects were not significant.

For every 10-year increase in age, there was a 22% increase in the odds of unmet mental health need. Increasing number of visits in the prior year was also significantly associated with lower odds of unmet mental health need.

DISCUSSION

In this practice-based sample of Chinese and Latino primary care patients, a full third reported mental health need in the prior year, consistent with other clinical samples.[26] Among those, 41% reported unmet mental health need. Our analysis of the intersecting roles of ethnicity, gender, and English proficiency allowed us to identify men with LEP as a subgroup at higher risk for unmet mental health need.

Overall, we found lower unmet need in this primary care sample than previously reported in population-based samples. In fact, in this sample of Chinese and Latino primary care

Table 1 Patient Demographic Characteristics (by Ethnicity and English Proficiency; N = 1149)

	Chinese with EP[*] (N = 262), N (%)	Chinese with LEP[*] (N = 532), N (%)	Latino with EP[*] (N = 172), N (%)	Latino with LEP[*], (N = 183), N (%)	p value
Age, years (mean ± SE)	63 ±0.86	71 ± 0.97	62 ± 0.90	68 ± 0.85	p < 0.001
Women	152 (58)	338 (64)	94 (55)	129 (70)	p = 0.02
Education					p < 0.001
Less than high school	4 (2)	256 (48)	23 (13)	91 (50)	
High school diploma	12 (5)	109 (20)	37 (22)	42 (23)	
AA or some college	42 (16)	43 (8)	48 (28)	25 (14)	
College degree or higher	204 (78)	124 (23)	64 (37)	25 (14)	
Health literacy					p < 0.001
Inadequate	38 (15)	114 (21)	38 (22)	57 (31)	
Adequate	224 (86)	418 (79)	134 (78)	126 (69)	
Patient in clinic ≥ 1 year	241 (92)	490 (92)	164 (95)	171 (93)	p = 0.60
Number of clinic visits in past year (mean ± SE)	2 ± 0.2	3 ± 0.2	3 ± 0.3	4±0.2	p < 0.001
Comorbidities (count)[†] (mean ± SE)	2 ± 0.1	2 ± 0.1	3 ± 0.1	3 ± 0.1	p < 0.001
Insurance status					p < 0.001
Private	134 (51)	50 (9)	74 (43)	34 (19)	
Medicare	111 (42)	371 (70)	74 (43)	113 (62)	
Medi-Cal	17 (6)	111 (21)	24 (14)	36 (20)	

[*]*EP English proficiency, LEP limited English proficiency*
[†]*Diagnoses were included from the Elixhauser comorbidities count (in alphabetical order): AIDS, alcohol abuse, anemia, cardiac arrhythmias, chronic kidney disease, chronic pulmonary disease, coagulopathy, congestive heart failure, coronary artery disease, diabetes, drug abuse, hypertension, hypothyroidism, liver disease diagnosis, lymphoma, metastatic cancer, fluid or electrolyte disorder, neurological disorder, non-metastatic cancer, obesity, paralysis, peptic ulcer disease, peripheral vascular disorder, pulmonary circulation disorder, renal failure diagnosis, rheumatoid arthritis, valvular disease, and weight loss*

patients, mental health service use approximated that of non-Latino whites in population-based samples (59% vs. 60%).[12] These same population-based studies have documented much lower service use for Chinese (~2–31%) and Latino (11–36%) individuals, as well as for the general immigrant population in the US (6%).[9, 12, 27] Access to mental health services in primary care may have improved the gap in unmet mental health need for both Chinese and Latino patients with mental health symptoms, compared with population-based studies. However, because our study did not have a general clinic or non-Latino white comparison group, it is possible that mental health disparities exist between Chinese and Latino primary care patients and their non-Latino white counterparts.

While primary care may have closed some of the gap between mental health need and service use, we still found subgroups at risk for unmet mental health need. Despite practice-wide access to behavioral health navigation (to direct

patients to available practice or community services) and interpreter services for patients with LEP, our analysis of ethnicity, gender, and English proficiency found that men with LEP were the most vulnerable to unmet mental health need. A systematic review[26] exploring the role of masculinity in help-seeking behavior for depression found that masculine norms adversely shape men's depression symptoms and help-seeking behavior in myriad ways. Men may be less likely to acknowledge mental health symptoms to their providers and to engage in treatments such as psychotherapy which may be viewed at odds with traditional masculine norms (such as limiting emotional disclosure) or contradicting masculine ideals of stoicism and strength. In our study, we found a striking disparity for men with LEP with their language barrier compounding a possible gender-based reluctance to seek care. To our knowledge, our study is the first to identify the subgroup of Chinese and Latino men with LEP as being at higher risk for unmet
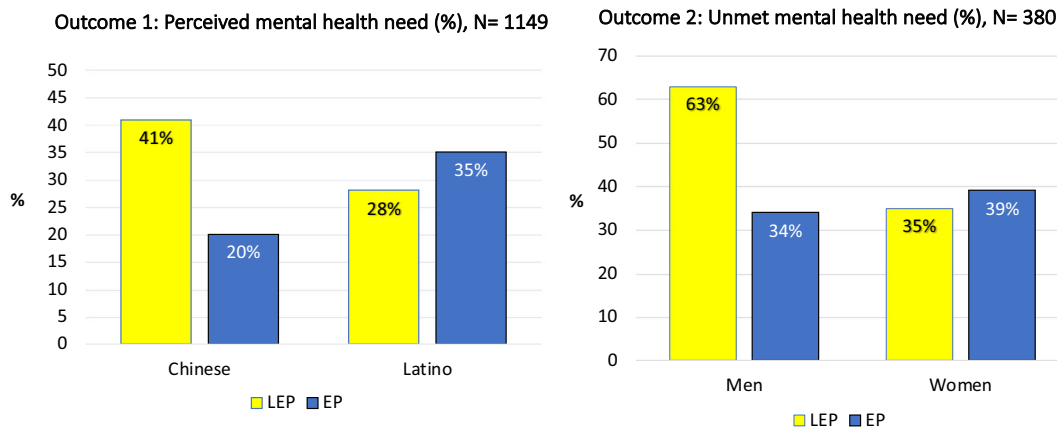

Figure 1 Prevalence of perceived mental health need and unmet mental health need in the prior year.

Table 2 Association of Individual Characteristics with Perceived Mental Health Need in the Prior Year (N = 1149)

Perceived mental health need in the prior year		
	AOR	**95% CI**
Age[*]	0.72	0.62, 0.84
Women	1.35	1.03, 1.79
Education[†]	–	–
Health literacy		
Lower	1.61	1.19, 2.22
Adequate	ref	–
Patient in clinic ≥1 year[†]	–	–
Number of clinic visits in past year	1.15	1.10, 1.21
Comorbidities (count)[‡]	–	–
Health insurance		
Medicare	1.71	1.11, 2.61
Medi-Cal	1.26	0.81, 1.96
Private	ref	–
Ethnicity-by-English proficiency interaction[§]		
Latino with LEP vs. EP[‖]	0.64	0.40, 1.04
Chinese with LEP vs. EP[‖]	2.55	1.73, 3.76

[*]*Per 10-year increase in age*
[†]*Variable dropped though backward elimination (p value > 0.20 for main effects).*
[‡]*Diagnoses were included from the Elixhauser comorbidities count (in alphabetical order): AIDS, alcohol abuse, anemia, cardiac arrhythmias, chronic kidney disease, chronic pulmonary disease, coagulopathy, congestive heart failure, coronary artery disease, diabetes, drug abuse, hypertension, hypothyroidism, liver disease diagnosis, lymphoma, metastatic cancer, fluid or electrolyte disorder, neurological disorder, non-metastatic cancer, obesity, paralysis, peptic ulcer disease, peripheral vascular disorder, pulmonary circulation disorder, renal failure diagnosis, rheumatoid arthritis, valvular disease, and weight loss*
[§]*Main effects not reported due to significant interaction of language and ethnicity (OR 3.98, 95% CI 2.19, 7.23; p < 0.001)*
[‖]*EP English proficiency, LEP limited English proficiency*

Table 3 Among Patients with Perceived Mental Health Need, Association of Individual Characteristics with Unmet Mental Health Need (No Mental Health Service Use in the Prior Year; N = 380)

Unmet mental health need in the prior year		
	OR	**95% CI**
Age[*]	1.22	1.004, 1.50
Education[†]	–	–
Health literacy[†]	–	–
Patient in clinic ≥ 1 year[†]	–	–
Number of visits in past year[†]	0.92	0.85, 0.99
Comorbidities (count)[‡]	–	–
Health insurance[†]	–	–
Ethnicity		
Chinese	1.17	0.67, 2.02
Latino	Ref	–
English proficiency-by-gender interaction[§]		
Women with LEP vs. EP[‖]	0.74	0.39, 1.38
Men with LEP vs. EP[‖]	2.53	1.06, 6.04

[*]*Per 10-year increase in age*
[†]*Variable dropped though backward elimination (p value > 0.20 for main effects)*
[‡]*Diagnoses were included from the Elixhauser comorbidities count (in alphabetical order): AIDS, alcohol abuse, anemia, cardiac arrhythmias, chronic kidney disease, chronic pulmonary disease, coagulopathy, congestive heart failure, coronary artery disease, diabetes, drug abuse, hypertension, hypothyroidism, liver disease diagnosis, lymphoma, metastatic cancer, fluid or electrolyte disorder, neurological disorder, non-metastatic cancer, obesity, paralysis, peptic ulcer disease, peripheral vascular disorder, pulmonary circulation disorder, renal failure diagnosis, rheumatoid arthritis, valvular disease, and weight loss*
[§]*Main effects not reported due to significant interaction of language and ethnicity (OR 3.98, 95% CI 2.19, 7.23; p < 0.001)*
[‖]*EP English proficiency, LEP limited English proficiency*

mental health need. While prior studies have found men, including minorities, at increased risk for undertreatment,[28–31] the role of LEP has not previously been reported.

Consistent with prior studies, increasing age was associated with decreasing perceived mental health need, but, among those with need, higher unmet need. Prior studies suggest that late-life depression may often be missed by providers and that older adults are less likely to seek care for their depressive symptoms.[9, 27, 32] Older adults may lack knowledge of available services, have difficulties contending with fragmented services and arranging transportation for appointments, and face limited availability of affordable services.[33, 34] These barriers may be compounded for older adults with language barriers.[27, 32]

Our study builds on prior population-based studies and ones reliant on administrative databases to characterize unmet mental health need among racial-ethnic populations with language barriers. One of the strengths of this study is the use of a combined English proficiency measure that considers both English proficiency and self-reported language preference for health care settings (often not accounted for in large population or administrative datasets). This allowed us to assess the interaction of ethnicity, gender, and English proficiency in determining perceived mental health need and related service use. Additionally, our study allowed us to investigate prevalence and predictors of unmet mental health need in a sample with access to primary care.

Among patients with LEP, language concordance (or when patients with LEP and their primary care doctors speak the same non-English language) may influence disclosure of mental health symptoms and willingness to engage in care, as well as affect provider recognition of symptoms and treatment initiation. In a prior study among Asians, needing an interpreter to communicate made it less likely that individuals with LEP would discuss mental health concerns with their providers.[35] Future work among Asians and Latinos with and without language barriers in primary care should focus on identifying factors associated with patient disclosure of symptoms and willingness to engage in mental health care, as well as provider recognition of symptoms, further assessment, and treatment initiation. A better understanding of the effect of language concordance on mental health service utilization could further guide interventions and help close some of the identified gaps in care.

This study has several limitations. First, this cross-sectional study relies on patient recall of mental health need and service use in the past year; responses may be subject to recall and reporting biases. We have no data on presence of mental health disorders, prior diagnoses based on *DSM-IV* criteria, or severity of the mental health symptoms reported. While perceived mental health need may underestimate need among those who do not believe their symptoms require treatment, it is an important measure of the patient experience of symptoms and desire for help. Prior studies have shown this to be a direct measure of help-seeking that has been associated with mental

health services and lifetime treatment.[6, 16] Another limitation is the possibility of unmeasured confounders. We did not collect information on some characteristics associated with mental health need and help-seeking behaviors among different Chinese and Latino immigrant groups in prior studies. These include nativity for Latinos, immigration-related characteristics, cultural representations, or understandings of mental health symptoms, and socioeconomic measures. Spanish-speaking Latinos in particular may represent a heterogeneous group, despite sharing a common language. We further did not include provider explanatory variables (such as gender and language proficiency in Cantonese, Mandarin, or Spanish) given that there was likely variable continuity of care with providers over the course of the prior year (the time period for retrospective recall for our primary outcomes).

Additionally, we may be over-estimating mental health service use in our sample because no data was available on extent of services or quality of care received. Patients with LEP and ethnic minorities often receive lower quality of care even when they do seek services, with studies demonstrating lower likelihood of depression follow-up visits and inadequate treatment with anti-depressants.[15, 36, 37] These disparities persist even when accounting for insurance coverage and similar access to care.[38] Finally, our academic practice may be unique in ways that influence access to services and generalizability. The behavioral health navigation and improved interpreter services available in the study practice may not be as readily available elsewhere and so disparities may be greater in those settings.

CONCLUSION

Compared with prior population-based studies, our practice-based study found higher mental health service use among Chinese and Latino patients; primary care may ameliorate some mental health disparities. However, in our sample, men with LEP remained at high risk of unmet mental health. This finding has significant potential public health impact as men are at higher risk of undertreatment and suicide. To decrease disparities among subgroups, we will need targeted approaches at different points in the care continuum. Systems approaches, such as systematic depression screening which has since been implemented in this practice, could provide effective ways to identify high-risk patients for treatment interventions to reduce mental health disparities. However, to be effective, primary care practices must ensure that screening is closely tied to the provision of culturally, linguistically, and gender-appropriate services. Potential interventions could target patient engagement and activation, increase provider training, provide patient navigation, involve social support systems and community resources, or include a combination of these approaches.

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Compliance with Ethical Standards:

This study was approved by the University of California, San Francisco (UCSF) Institutional Review Board (IRB).

Conflict of Interest: *The authors certify that they have NO affiliations with or involvement in any organization or entity with any financial interest, or non-financial interest (such as personal or professional relationships, affiliations, knowledge, or beliefs) in the subject matter or materials discussed in this manuscript.*

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Prior presentations: *Our findings were presented as oral presentations at the Society for General Internal Medicine Annual Meeting in Washington, DC, in May 2019, as a finalist for the Milton W. Hamolsky Junior Faculty Award, and at the Resource Centers for Minority Aging Research (RCMAR) Annual Meeting in June 2019.*

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