



WAYNE STATE
School of Medicine

The Extent of Medical Student Stigma in Healthcare Delivery to Populations Experiencing Houselessness or with Substance Use Disorders

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Background

Street Medicine Detroit (SMD) is a 501(c)(3) non-profit street medicine organization operated by 50 medical students at Wayne State University School of Medicine (WSUSOM) in Detroit, Michigan. Of the estimated 30,000 Michiganders experiencing houselessness, 5,000+ of persons experiencing houselessness (PEH) in Michigan reside in Detroit^{1,2}. The goal of SMD is to advocate and deliver equitable and unbiased access to primary and preventative care to patients in Detroit, particularly PEH.

Although Black families constituted 79% of those experiencing poverty in our city in 2020, they represented 97% of PEH³. PEH suffered from a quadrupled rate of hospital readmission demonstrating the stark disparity in health outcomes among this population³. This increased readmission rate illustrates underlying biases and factors that are impacting the care of PEH.

Additionally, 6% of the PEH in the state of Michigan engage in substance use¹. People who use drugs (PWUD) have been historically stigmatized and subject to bias both within the healthcare system and otherwise, contributing to adverse health outcomes including increased prevalence of Hepatitis C infections and related deaths as well as opioid-overdose rates, specifically in Black populations^{4,5}. Additionally, PEH and PWUD are susceptible to the harmful effects of stigma within health care and social settings, thus contributing to significant health inequalities^{6,7,8}.

Stigma and biases are perpetuated by misconceptions about marginalized individuals and heightened by use of improper and charged language which promotes labeling and separation of groups of people⁹.

Based on current literature, PWUD experiencing stigma and discrimination in healthcare settings have drastically negatively impacted recovery outcomes¹⁰. This “provider-based stigma” that PEH/PWUD experience is associated with internalization of biases leading to poorer health outcomes, increasing health comorbidities, reduction in treatment frequency, and lower quality of care^{6,10,11}.

To advance socially-just relationships with these historically disenfranchised communities, SMD is committed to investigating the prevalence of stigma among medical students when providing medical care to PEH and PWUD.

Study Objective and Methods

Our aim is to evaluate the prevalence of stigma among medical students when providing medical care to populations experiencing houselessness or using substances using an online survey delivered to medical students who have previously volunteered with SMD.

This is a WSUSOM IRB-approved study survey (n=47). Participants are from the graduating classes 2023-2026 at WSUSOM who have volunteered with SMD in either a clinical or outreach setting. The 10-minute online survey was distributed on the Qualtrics platform and elicits anonymized and deidentified information related to the volunteers’ demographics, experiences, and attitudes toward providing care to PEH or PWUD. Survey responses were voluntary. Question responses were elicited on a 5-point and 7-point Likert scale.



Results

A total of 58 responses were collected from students at WSUSOM. Subjects who graduated from medical school or did not volunteer with SMD were excluded from finishing the survey, leaving 47 responses. The age of participants ranged from 18-34 years old with 29.79% identifying as male, and 70.21% identifying as female. Subject demographics are included in Table 1.

Race	N = 47	Sexual Orientation	N = 47	Ethnicity	N = 47
African American or Black	6.38%	Straight/Heterosexual	87.23%	Hispanic	4.26%
Asian or Pacific Islander	27.66%	Bisexual	10.64%	Non-Hispanic	89.36%
Southwest Asian or North African	2.13%	Pansexual	2.13%	Prefer Not to Say	6.36%
Caucasian	51.06%				
Not Listed	10.64%				
Prefer Not to Say	2.13%				

Table 1: Survey demographics of a Qualtrics XM survey, aiming to identify stigma towards the PEH and PWUD in Detroit, MI. Subjects of the study included medical students from the Wayne State University SOM classes 2023 to 2026

Questions 12-17 yielded 43 complete responses. Questions 18-23 and 25 yielded 42 complete responses. Subjects were stratified into two groups, individuals who volunteered 1-3 times, and individuals who volunteered more than 3 times. Subject responses by group and p-values for likelihood ratios between groups for responses to questions 12 to 13 and 15 to 25 yielded no statistically significant results. Only question 14, regarding respecting the autonomy of PEH, yielded a statistically significant result for the likelihood ratio between these two groups (p = 0.050) (Figure 1). When subjects were stratified by gender, only question 17, identifying providing healthcare for PEH, yielded a statistically significant result for the likelihood ratio of responses between males and females (p=0.050) (Figure 2).

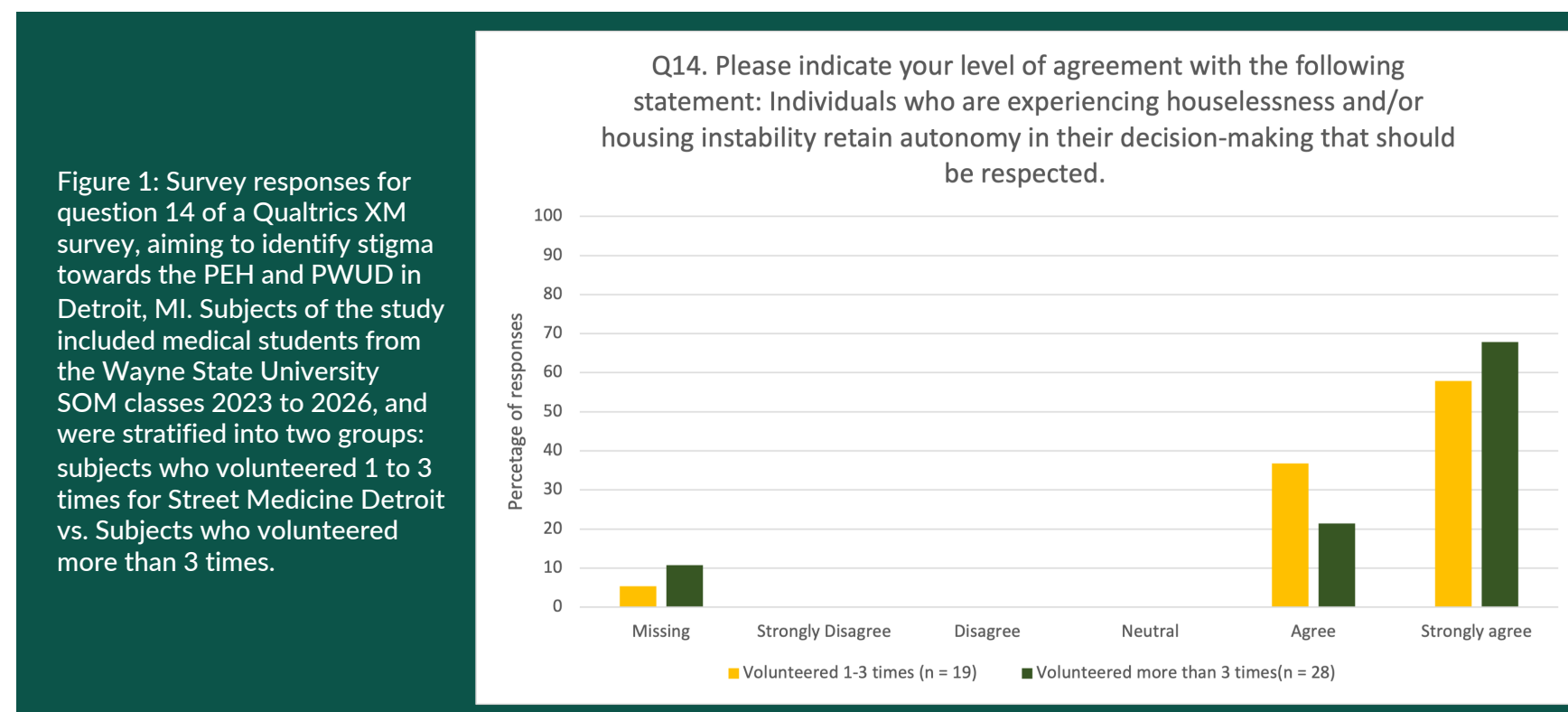


Figure 1: Survey responses for question 14 of a Qualtrics XM survey, aiming to identify stigma towards the PEH and PWUD in Detroit, MI. Subjects of the study included medical students from the Wayne State University SOM classes 2023 to 2026, and were stratified into two groups: subjects who volunteered 1 to 3 times for Street Medicine Detroit vs. Subjects who volunteered more than 3 times.

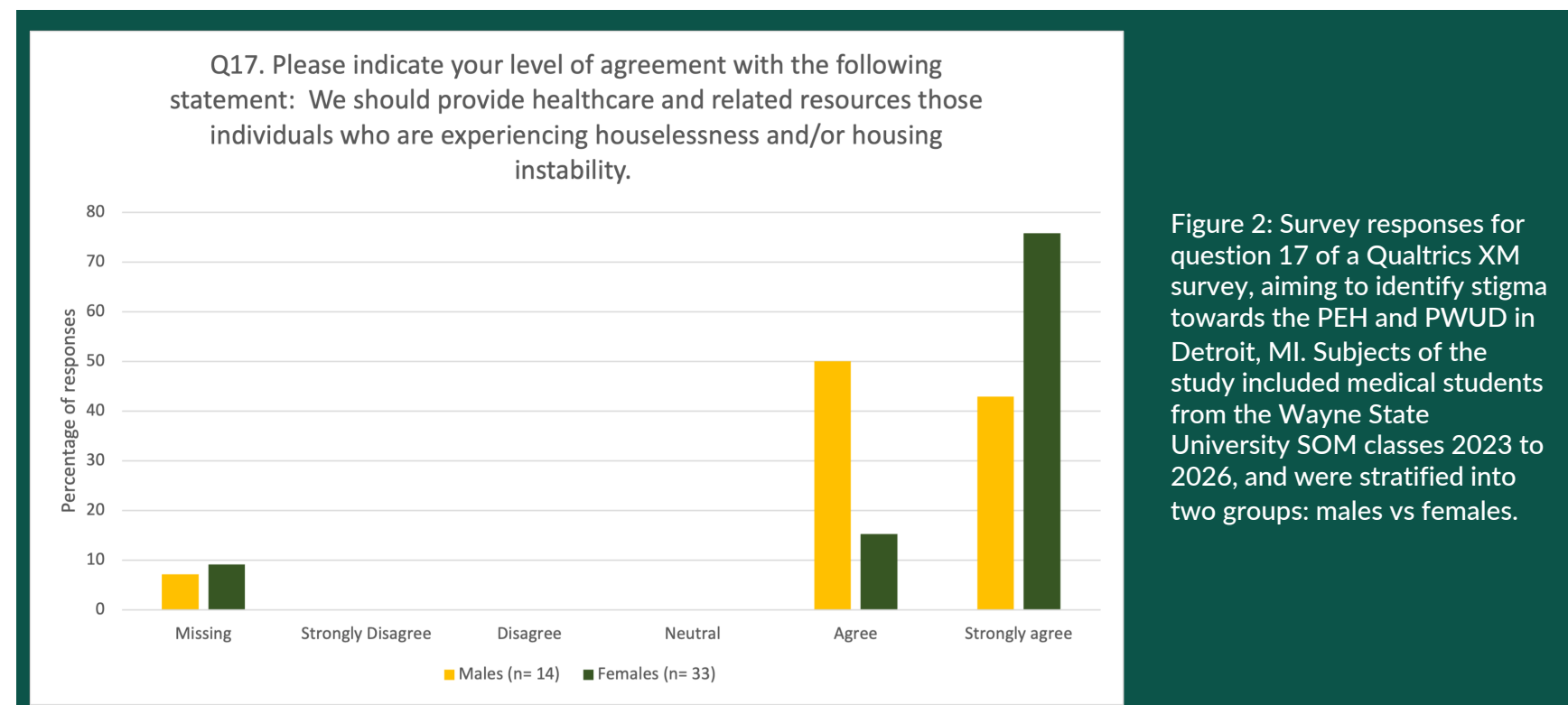


Figure 2: Survey responses for question 17 of a Qualtrics XM survey, aiming to identify stigma towards the PEH and PWUD in Detroit, MI. Subjects of the study included medical students from the Wayne State University SOM classes 2023 to 2026, and were stratified into two groups: males vs females.

Discussion and Conclusion

The 47 WSUSOM medical students were trained by SMD and volunteered with the organization at least once where they were exposed to PEH and PWUD. Hence, the results of this study may support the importance of educating and training medical students in effective communication with PEH and PWUD. Early exposure to these patient populations may reduce the stigma surrounding them.

A test of significance for the likelihood ratio between responses for those who volunteered 1-3 times vs. those who volunteered more than 3 times yielded a p-value > 0.05 for questions 12-13 and 15-25, indicating no difference in stigma between the groups towards PEH and PWUD.

Question 14 yielded a p-value=0.05 indicating the difference in responses between the two groups is statistically significant. It was found that individuals who volunteered more than 3 times were more likely to select strongly agree (67.9%) compared to those who volunteered 1-3 times (57.9%) (Figure 1). This suggests that with increased knowledge and exposure to PEH, medical students are more likely to show support and empathy towards them, emphasizing the importance of educating medical students about PEH and PWUD. Students in both groups were more likely to disagree with statements stigmatizing PEH and PWUD and were more inclined to agree with statements supporting PEH and PWUD.

When stratifying the groups into males and females, Question 17 yielded a p-value=0.05, indicating a statistically significant differences in responses between groups. Females were more likely to strongly agree (75.8%) to the statement above compared to males (42.9%) (Figure 2). A possible explanation for the significant difference could be that females are more empathetic towards helping PEH compared males. Strelakova *et al.* (2019) found that female nursing students were more likely utilize opportunities to show empathy compared to their male counterparts which parallels the results seen in this study relating to empathy in medical students¹². Further studies could shed more concrete evidence towards this correlation.

Limitations and Future Direction

This study was conducted at WSUSOM where medical students are more likely to interact with PEH or PWUD, as compared to other medical schools in Michigan. The findings of this study may not be representative of the views of all medical students.

Future direction may include assessing medical student bias of WSUSOM students regardless of their participation in SMD. Exploring the extent of medical student stigma towards PEH and PWUD across multiple schools could yield more representative information about the students' attitudes.

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