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Efficacy of a Social Determinants of Health Training Intervention

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Introduction

- Social determinants of health (SDOH) are circumstances, such as living and work conditions, that affect patient health outcomes.¹
- SDOH contribute to health inequalities observed across various populations, but these topics are often not considered as part of health care.²
- Understanding patients' SDOH can help physicians recognize and combat barriers to care.
- However, the majority of physicians do not feel confident in their ability to meet their patients' social needs.³
- Therefore, it is important that medical students learn to gather information on SDOH to better understand patients and provide effective care.

Purpose

The purpose of our study is to:

- Determine whether a training intervention about SDOH increases the frequency that SDOH are discussed when taking a patient history
- Analyze what type of questions (yes/no versus open-ended) students use to discuss SDOH

Methods

- In 2018, rising third-year medical students completed a clinical skills training in which they learned about and practiced asking about SDOH.
- We analyzed recorded standardized patient (SP) encounters in which students elicited a new patient history in a primary care setting.
- SP encounters were randomly sampled from 2017 (pre-intervention, $n_1 = 37$) and 2018 (post-intervention, $n_2 = 40$) of the same patient case.
- Discussions regarding SDOH categories were coded, including the language used by the student and question type (yes/no versus open-ended).
- This study was approved by the University of Louisville Institutional Review Board.

Results

Figure 1: Frequency SDOH topics were addressed in patient history before and after the training intervention

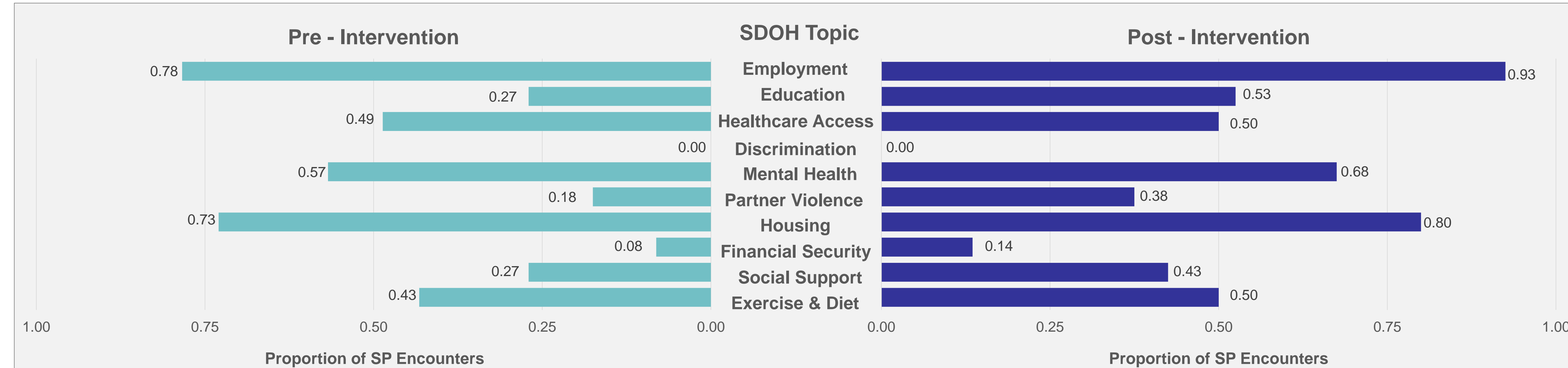


Figure 2: Comparison of SDOH discussions pre/post training intervention by question type

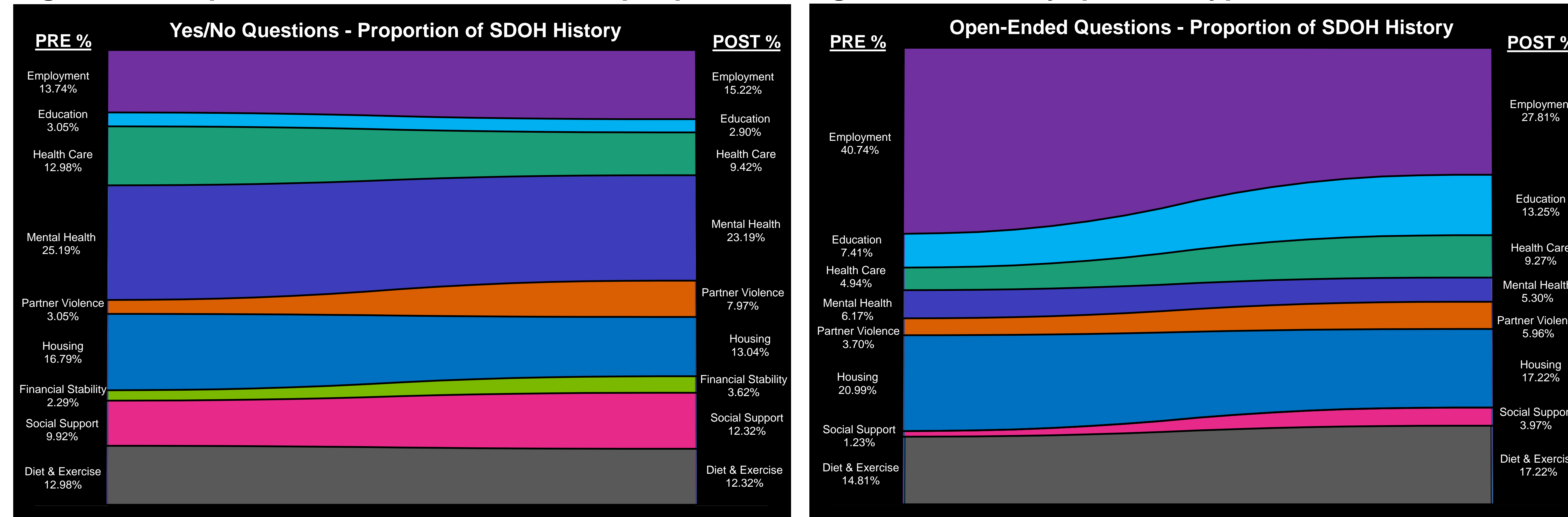


Table 1. Comparison of language used to ask about social determinants of health (SDOH)

SDOH	Typical Yes/No Questions	Model Open-Ended Questions
Exercise & Diet	Do you exercise? Do you eat a healthy diet?	How often and what types of exercise do you do? What is your diet normally like?
Social Support	Do you have a good support system?	How would you describe your social support right now?
Financial Security	Is there anything you are worried about paying for?	How would you describe your financial situation?
Housing	Do you live alone?	What is your living situation like? Who lives at home?
Intimate Partner Violence	Do you feel safe with your current partner?	How is your relationship mentally and emotionally?
Mental Health	Are there any significant stressors in your life?	How is your mental well-being?
Discrimination	<i>No questions asked</i>	<i>No questions asked</i>
Healthcare Access	Were you seeing a primary care physician regularly?	When was the last time you saw a physician?
Education	Are you in school/did you go to school?	What is your highest level of education and what in?
Employment	Are you currently working right now?	Tell me about what you do for work?

Summary & Conclusions

- The post-intervention cohort more frequently discussed all SDOH topics during their encounters except discrimination (0% for both years).
- Open-ended questions allowed patients to give more details and spark further conversation with students.
- After the intervention, the mean number of SDOH questions asked increased ($M=5.7$ vs 7.2 , $p = 0.05$).
- The proportion of open-ended questions asked in the post-intervention cohort was also significantly higher than pre-intervention (38.2% vs 52.2% , $p = 0.002$).
- Housing, mental health, education, and employment were the only SDOH categories discussed in more than 50% of encounters for either cohort, suggesting that there are still opportunities for more students to routinely elicit this information from patients.
- SDOH and open-ended questioning skills can be emphasized in training to help address health inequalities and improve clinical decision making.

Future Study

Future studies will examine:

- If an earlier introduction of the existing SDOH training would further increase the frequency that SDOH are discussed as part of routine history taking
- Effective ways for students to discuss discrimination with patients as this topic was not introduced by either cohort and may be perceived as difficult to discuss

Acknowledgements

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Bibliography

1. Social Determinants of Health: Know What Affects Health (2020, August 19). Retrieved from: <https://www.cdc.gov/socialdeterminants/about.html>
2. Braveman & Gottlieb. The social determinants of health: it's time to consider the causes of the causes. Public Health Rep. 2014 Jan-Feb; 129 (Suppl 2): 19-31.
3. Andermann, A. Screening for social determinants of health in clinical care: moving from the margins to the mainstream. Public Health Rev 2018; 39, 19.