

ORIGINAL RESEARCH

The Impact of Case Role Play on Medical Students in Addressing Social Determinants of Health

Fredricka Barr, MD, FAAFP¹

¹ Family Medicine, University of North Texas Health Science Center

Keywords: Social Determinants of Health, Medical Education, Case Role Play, Family Medicine, Clinical Competency

Texas Family Medicine Research Journal

Vol. 1, Issue 2, 2025

Context

This study evaluates the effectiveness of case role play as an educational tool for integrating social determinants of health (SDOH) into medical training. Understanding SDOH is essential for delivering patient-centered care.

Objective

The primary objective is to assess whether case role play enhances medical students' knowledge, skills, and comfort in addressing SDOH. The study aims to determine the effectiveness of this method in improving students' understanding, knowledge acquisition, skill development, and comfort in handling SDOH-related issues.

Design

A mixed-methods approach is employed, combining qualitative and quantitative data. The study is conducted during a 4-hour session in the Family Medicine Clerkship at the University of North Texas Health Science Center (UNTHSC). Components include pre- and post-assessments, a lecture, interactive activities, and role play. Evaluation tools consist of surveys, scenario-based assessments, and peer evaluations.

Setting

The study is set at the UNTHSC campus during the Family Medicine Clerkship.

Participants

Approximately twenty medical students from the Family Medicine Clerkship at the HSC Health Pavilion participate, without exclusions based on gender, age, or ethnicity.

Intervention

Students engage in a structured case role play where they assume roles such as student doctor, patient, and evaluator. Scenarios are centered on incorporating SDOH into patient care.

Outcome Measures

Primary outcomes include students' understanding, application of SDOH, knowledge acquisition, and skill development. Secondary outcomes measure comfort levels in addressing SDOH, evaluated through pre- and post-session surveys and scenario-based assessments.

Results

Preliminary results indicate significant improvements in SDOH-related competencies, with a two-tailed P value of less than 0.0001. The 95% confidence interval for the difference is from -0.78 to -0.31, reflecting a meaningful increase in students' abilities.

Conclusions

Early findings suggest that case role play is a highly effective educational tool for enhancing competencies in SDOH, with potential to improve patient outcomes in family medicine.

Purpose/Background

Addressing Social Determinants of Health (SDOH) is crucial for improving health outcomes.

Case role-playing scenarios in medical education help students practice in simulated clinical settings, increasing comfort with addressing SDOH routinely.

The study evaluates the impact of case role playing on addressing SDOH in medical education.

It provides practical experiences for students to enhance their navigation of SDOH in patient encounters.

Develop future physicians who instinctively address SDOH in every patient encounter due to early implementation of case role play educational activities.

Methods

Setting: UNTHSC TCOM campus

Participants: Third Year Medical Students in Family Medicine Clerkship

Measures: Pre and Post Surveys, individual reflections, and focus group discussions

Outcomes: Improved knowledge and skills, increase comfort in addressing SDOH, and enhanced understanding of challenges.

Analyses: Quantitative and qualitative analysis of assessments/surveys, reflections, and discussions

Sequence of Activities

First Activity: Pre-Survey

Second Activity: SDOH Didactic Lecture

Third Activity: Case Role Play

Student Evaluator – Student Doctor – Student Checklist Assessor – Student Patient

Fourth Activity: Individual Reflection, Small Group Discussion & Large Group Discussion

Fifth Activity: Post Survey

Sample Script of Activity

47 year old woman presents to your office for an annual physical examination. She reports that she is very healthy and has no specific complaints. Her PMH is significant for seasonal allergies and well controlled mild, intermittent asthma. She is married and has 2 children via normal spontaneous vaginal delivery without complication. She takes a multivitamin daily and antihistamines and a puff of an albuterol inhaler on occasion. Her family history is significant for hypertension and type 2 diabetes mellitus in her father, depression in her mother and sister, and breast cancer diagnosed in her maternal grandmother at age 72. The patient is married and monogamous, gets regular exercise, and does not smoke cigarettes, drink alcohol, or use illicit drugs.

Vitals: Her vitals are blood pressure is 129/79 mmHG, pulse is 74 beats/min and regular, height is 67 inches, weight is 152 pounds, BMI is 23.8kg/m² and abdominal waist circumference is 32 inches.

Physical Exam: Her physical examination is unremarkable.

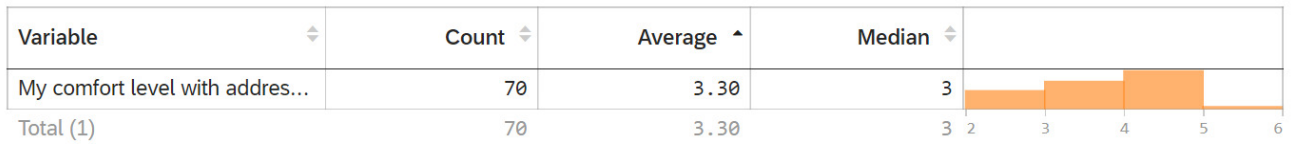
Sample of Visit Checklist

1. Screening

- Blood pressure
- Breast cancer
- Cervical cancer
- Intimate Partner Violence
- Colon Cancer
- Hepatitis C
- HIV

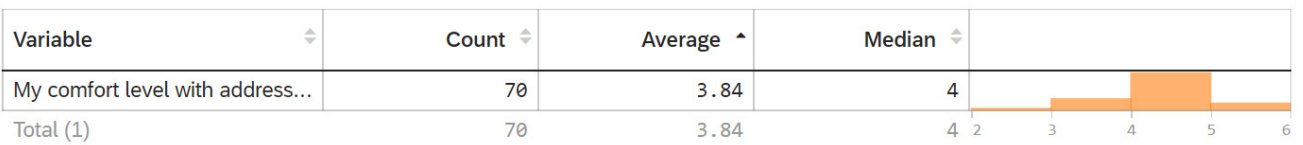
Summary of Q8: On a scale of 1-5, please rate your comfort level with addressing social determinants of health during a patient encounter.

Bucketing



Summary of Q8: On a scale of 1-5, please rate your comfort level with addressing social determinants of health during a patient encounter.

Bucketing



- Social Determinants of Health
- Tobacco use
- Alcohol use
- Drug use
- Anxiety
- Depression
- Cardiovascular risk evaluation – going over vitals; labs HLD evaluation
- 2. Immunizations
 - Tdap
 - Flu
 - COVID
 - PCV 20 – Due to history of asthma

SDOH Pre-Survey

SDOH Post-Survey

P value – 0.0001 Confidence Interval -0.78 to -0.31

What were some challenges you encountered when participating in this activity?

REFLECTION COMMENTS BY STUDENTS

“Hard to bring up social determinants of health and explain in your own words”

“You had to establish trust to get better answers on Social determinants of health”

“The next most challenging was transitioning the conversation to discuss social determinants of health.”

Based on the challenges you provided above, create an action plan.

REFLECTION COMMENTS FROM STUDENTS

“Try to work in questions regarding social determinants of health throughout the encounter”

“I will also continue reviewing and become familiar with general resources that are available at the clinic and in the area”

Key Findings

Students found discussing and transitioning to SDOH discussion challenging.

They planned to integrate social determinants questions throughout interactions and review available resources.

Case role play activity increased their comfort in addressing SDOH during patient encounters.

Conclusion

Main Findings and Interpretations

Initial challenges in discussing SDOH highlight the need for case role play interventions.

Post-activity action plans show case role play positively influences clinical practice.

Overall, the activity boosts student comfort in addressing social determinants, enhancing skills and potential better patient outcomes.

Future Implications of Study

Extend case role play to high-yield Family Medicine topics beyond SDOH.

Enhance education for diverse healthcare professionals at all levels of education and foster a patient-centered approach during clinic encounters.

Limitations

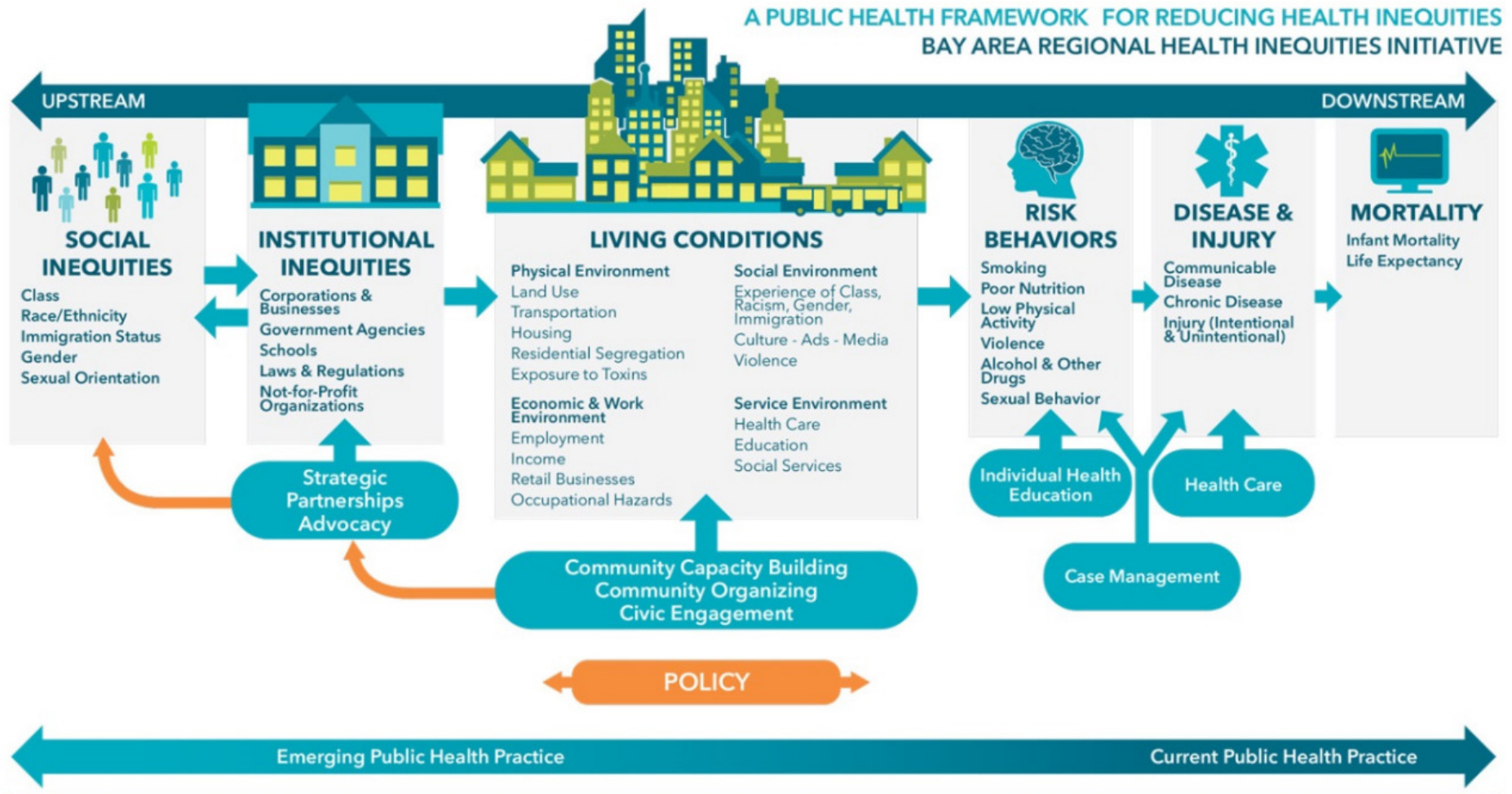
Limited generalizability due to single-institution study.

Potential bias in self-reported comfort levels

Case role play scenarios may not fully replicate real-world patient encounters.

Lack of long-term follow-up to assess sustained impact.

Submitted: May 20, 2025 CST. Accepted: October 04, 2025 CST. Published: November 30, 2025 CST.



REFERENCES

1. American Board of Family Medicine. *Health Equity Progress Report 2023*. Accessed December 9, 2023. <https://www.theabfm.org/>
2. American Academy of Family Physicians. Social Determinants of Health in Family Medicine: Position Paper. American Academy of Family Physicians. Accessed December 9, 2023. <https://www.aafp.org/about/policies/all/social-determinants-health-family-medicine-position-paper.html>
3. Bharti RK. Contribution of Medical Education through Role Playing in Community Health Promotion: A Review. *Iran J Public Health*. 2023;52(6):1121-1128. doi:[10.18502/ijph.v52i6.12954](https://doi.org/10.18502/ijph.v52i6.12954)
4. Bickerton L, Siegart N, Marquez C. Medical Students Screen for Social Determinants of Health: A Service Learning Model to Improve Health Equity. *PRiMER*. 2020;4:27. doi:[10.22454/PRiMER.2020.225894](https://doi.org/10.22454/PRiMER.2020.225894). PMID:33111054