

Using Board Games to Promote Collaboration and Communication in Healthcare Students: A Pilot Study

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Introduction

- Interprofessional collaboration and communication (IPCC) in healthcare improves patient outcomes.¹⁻⁵
- Medical students have lower levels of appreciation for IPCC compared to other health professional students.⁶⁻⁷
- Board games can be used to improve clinical knowledge and promote collaborative skills.⁸⁻⁹
- While board games improve attitudes toward collaboration amongst medical students in Germany, this has not been explored in the United States (US).⁹
- In this study, we explore the use of a cooperative board game in teaching communication and collaboration (CC) skills and improving attitudes towards IPCC.

Aims and Objectives

To evaluate whether the gaming intervention is more effective than didactic lecture in promoting attitudes toward IPCC and improving communication and collaboration skills.

Methods

Research Study Sessions

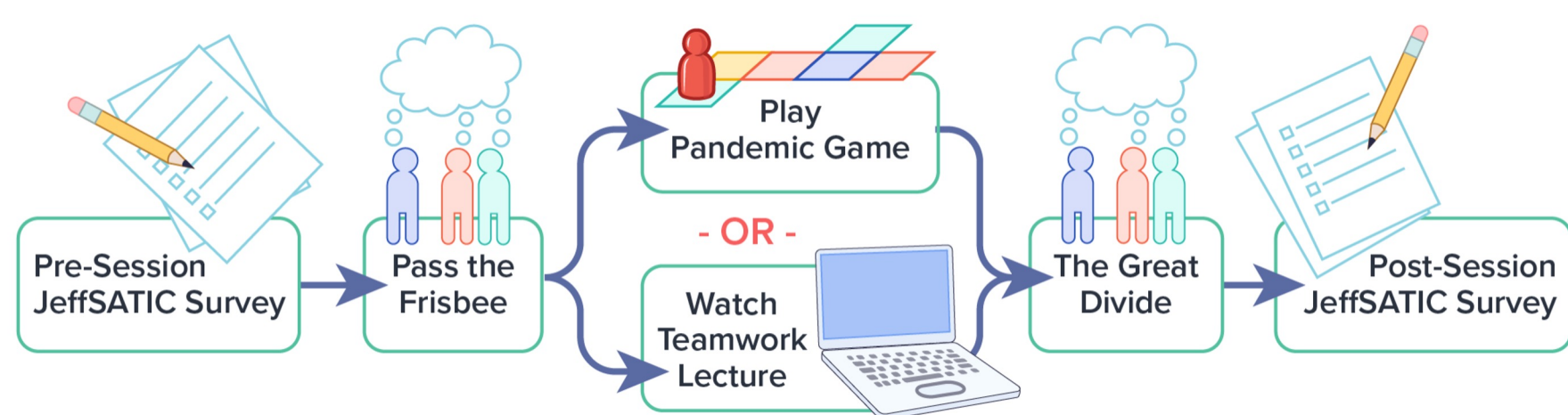


Figure 1. The Jefferson Scale of Attitudes toward Interprofessional Collaboration (JeffSATIC) survey was administered to all participants before and after each study session. Participants were randomly assigned to a video control group (N=2) or a gaming intervention (N=3). Both groups participated in the same baseline activity and post-intervention activities to assess CC skills. The control group watched a teamwork lecture provided by OUWB School of Medicine. The gaming intervention group participated in the board game Pandemic.

Statistical Analysis

Variable	Statistical Test
Change in CC	Paired T test
Change in JeffSATIC Score	Paired T test
Perceptions of Participants	Chi Square Test Cramer's V

Table 1. The alpha value for all tests is 0.05.

Methods Continued

Variable	Response	Pandemic game (N=13)	Video lecture (N=10)
Year	M1	3 (23.1%)	0 (0.0%)
	M2	8 (61.5%)	7 (70.0%)
	Nursing	2 (15.4%)	3 (30.0%)
Gender	F	10 (76.9%)	5 (50.0%)
	M	3 (23.1%)	5 (50.0%)

Table 2. Demographic information for participants. The original number (N) determined was 78 students, but the study ended early due to the COVID-19 pandemic.

Results

JeffSATIC Survey Data

		Pandemic game (N=13)	Video lecture (N=10)
	N	13	10
p = 0.719	Mean (SD)	3.15 (9.20)	1.60 (11.24)
	Median	3.00	1.50
	Min, Max	-18.00, 15.00	-15.00, 24.00

Table 3. Summary of the difference in JeffSATIC survey scores before and after the study sessions comparing the Pandemic game group (N=13) and the control group (N=10). p

Observation data

Post Activity Score – Baseline Score	Difference Mean ± SD	Number of Observers	P
Lecture intervention	2.50 ± 3.00	4	0.19
Gaming intervention	4.50 ± 5.50	10	0.03

Table 4. Change in Observed CC Within the Lecture (control, N=4) and Gaming Intervention Groups (N=10).

Results Continued

Student Perceptions Survey Data

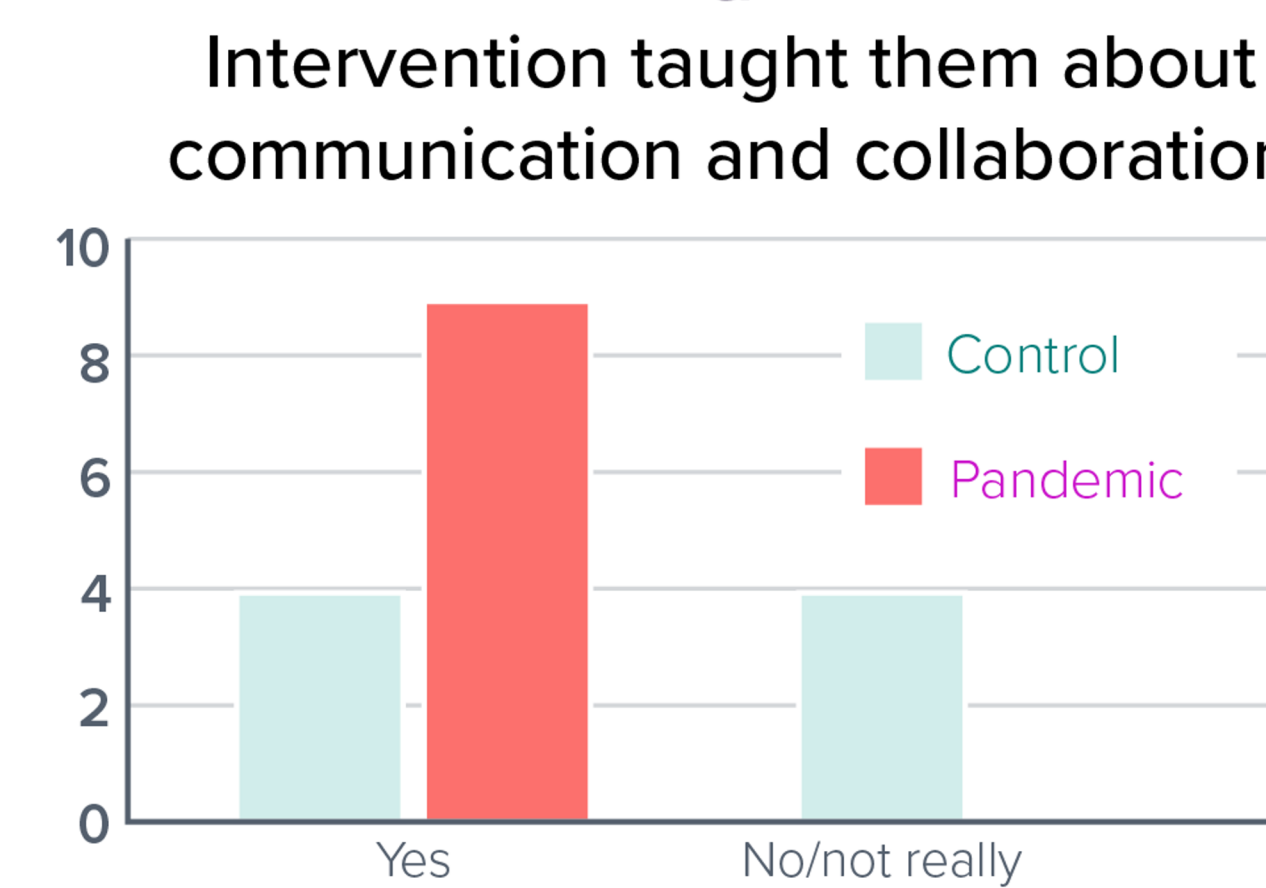


Figure 2. Participant perceptions about their respective interventions. Students were asked whether or not the activity taught them about CC (N=17, p=0.02, V=0.59).

Frequency of playing games

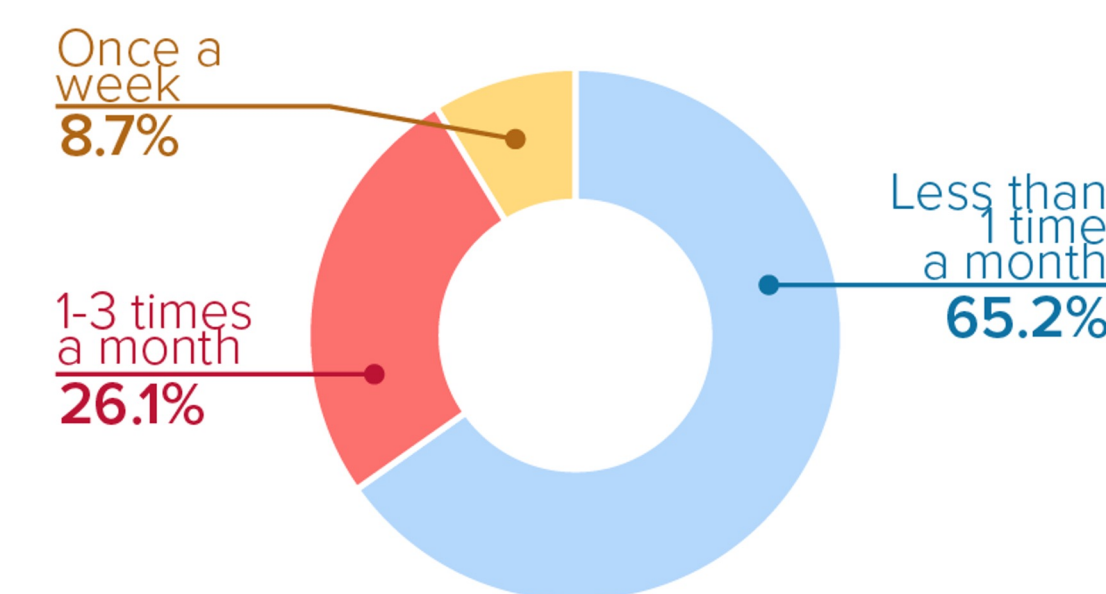


Figure 3. Data regarding the frequency of participation in playing board games (N=23).

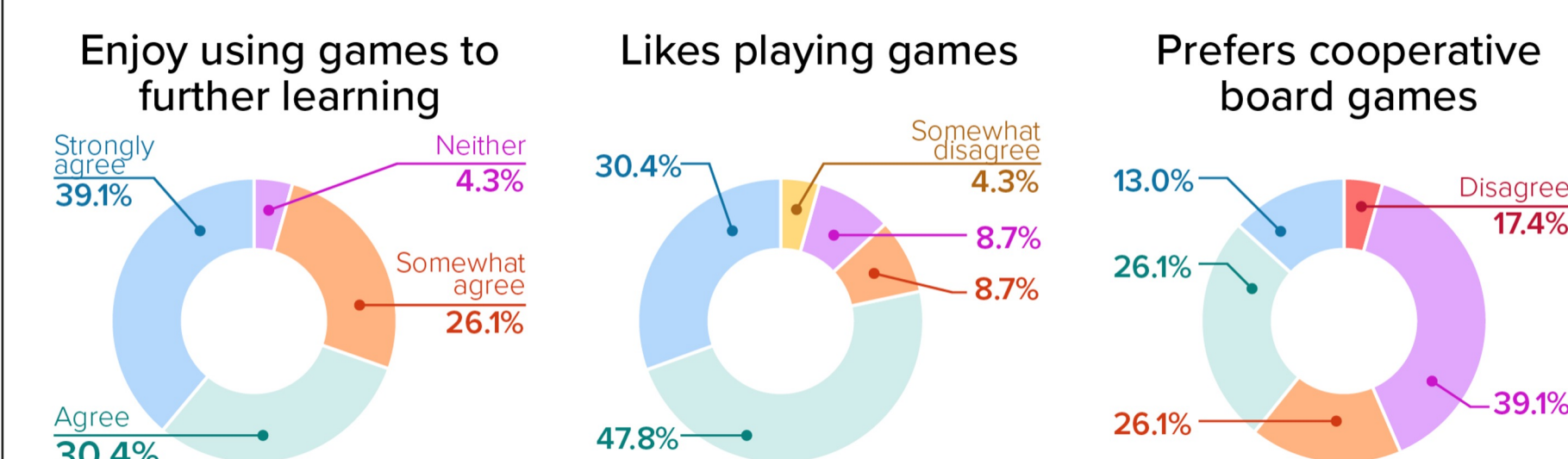


Figure 4. Participation perceptions regarding games and the intervention. Students were asked about their feelings regarding playing board games. N=23.

Conclusions

- Board games are a useful method for improving communication and collaboration skills in health professional students.
- Students appeared more engaged during the board game activity and an increase in communication and collaboration behaviors were observed.
- Interestingly, OUWB students had significantly higher JeffSATIC scores compared to published data from other medical schools (data not shown). This will be explored in future studies.

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