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Background

Poorly managed pain has negative long-term outcomes, including needle phobia, increased pain and anxiety with subsequent procedures, and healthcare avoidance. Evidence-based interventions to reduce procedural pain and anxiety are vastly underutilized.

Objective

To measure residents' learning outcomes (knowledge, attitudes, perceived competence, and practice change) and satisfaction with a newly developed procedural pain and anxiety curriculum.

Methods

- We developed a multi-media-based lecture with PowerPoint, utilizing results from a focus group interview with 7 pediatric residents.
- Pediatric residents were invited to complete the curriculum online during their emergency medicine rotation.
- Data was collected between July 2019 and June 2020 (pre- and post- tests and a follow-up survey 3-12 months later).

Results

- Out of 72 residents, 28 of them participated in the intervention with pre- and post-tests (39%) and 12 of those residents completed the follow-up survey.
- Residents' knowledge increased by 24.3% ($p<0.0001$) (Figure 1).
- There was no significant change in attitudes toward pain and anxiety management.
- Positive improvements, although non-significant, were seen in perceived competence and reported change in medical practice (Figures 2 and 3).

Results

- 75% of residents planned to utilize knowledge from the course in the next few weeks (Table).
- In the follow-up survey, the majority of residents reported that knowledge learned improved their practice and/or led to changes in their practice.

Figure 1: Pre- and Post-Test Scores

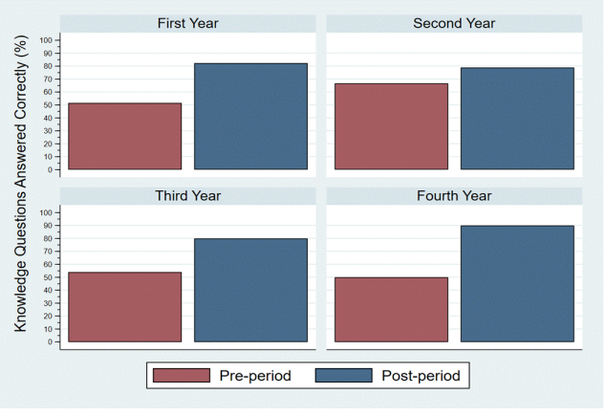

Figure 2: Perceived Competence

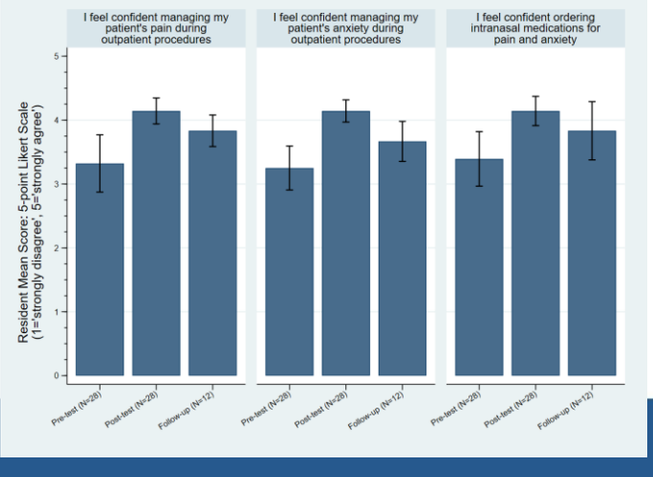

Figure 3: Reported Change in Medical Practice

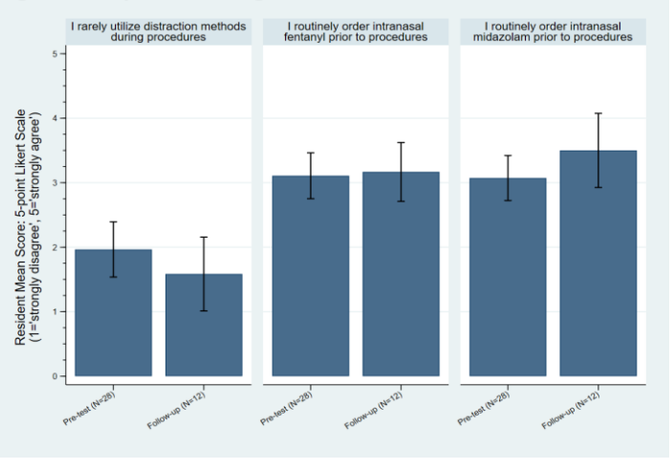

Table: Course Evaluation

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
During this course I learned new skills that I will utilize in the next 4 weeks.	0.0%	3.6%	21.4%	46.4%	28.6%
I am stimulated to learn more on this topic.	0.0%	3.6%	39.3%	39.3%	17.9%
I would recommend this course to a colleague.	0.0%	3.6%	21.4%	35.7%	39.3%
This educational activity was worth my time.	3.6%	3.6%	17.9%	53.6%	21.4%

Conclusions

Early outcomes show significant knowledge increase. These results provide the foundation for evaluation of an online game-based version of curriculum.

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