



Evaluating the effectiveness of video as a feedback instrument for peripheral intravenous cannulation simulation. A randomised control trial.

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BACKGROUND & OBJECTIVES

Clinical skills training is a core element of nursing programmes.¹ Evaluating whether new approaches to teaching clinical skills improve educational outcomes is important.²

The objective of this study was to investigate if whether a structured self-evaluation tool for video recorded performance would have a positive impact on nursing students’ educational outcomes in relation to peripheral intravenous cannulation.

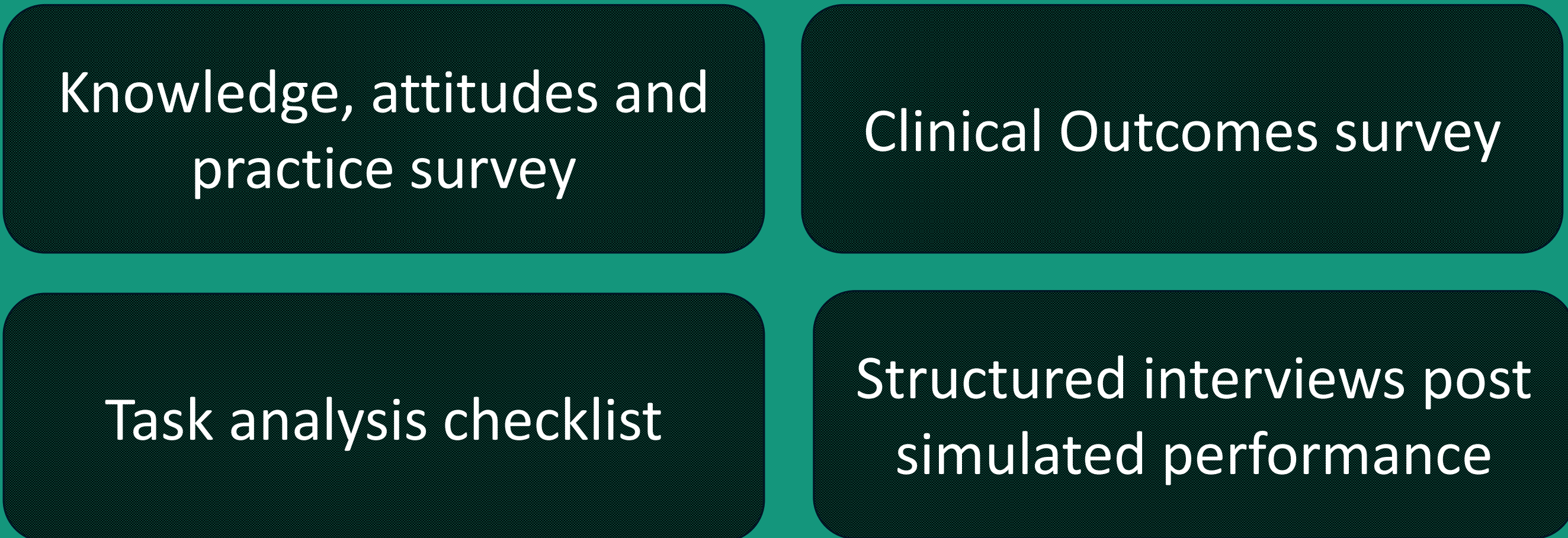
METHODS

Guided by Ericsson’s deliberate practice theory we designed a mixed methods randomised control trial.

Both the control and experimental groups were video recorded performing the skill using high-definition video technology in a state-of-the-art simulation facility.

Experimental	Control
Directly after their practice sessions students watched and self-evaluated their video-recorded simulated PIVC insertion performance using a task-analysis checklist	Students were video-recorded performing their simulated PIVC insertion, but they did not watch nor self-evaluate their performance using a task-analysis checklist

Quantitative and qualitative data was collected using;



RESULTS

45 students remained in the study. Using the ANCOVA model we analysed if there was any differences between the control and intervention group, the outcomes scores demonstrated no significant differences in average improvement.

Outcomes	95% CI	p-value
Knowledge	-1.01 to 1.50	0.695
Performance	-3.88 to 0.12	0.065
Attitude	-1.46 to 1.03	0.728

However, using a paired t-test, we analysed both groups separately and both control and experimental groups improved significantly in their average knowledge, performance, and attitude scores from baseline to follow-up.

Experimental group	95% CI	p-value	Control group	95% CI	p-value
Knowledge	0.27 - 2.85	0.021	Knowledge	0.85 - 2.25	<0.001
Performance	3.42 - 7.24	<0.001	Performance	2.18 - 5.24	<0.001
Attitude	1.78 - 5.00	<0.001	Attitude	1.81 - 3.59	<0.001

CONCLUSION

Additional simulated practice sessions and self-evaluating video-recorded performance are both effective teaching strategies to improve educational outcomes.

References

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