

A Novel Method for Teaching Anatomy and Ultrasound Improves Resident Confidence and Competence with Ultrasound-Guided Procedures



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BACKGROUND

- Ultrasound guided procedures have a steep learning curve, but the ideal teaching method is still unknown.¹
- The University of Saskatchewan Physiatry Residency Program developed a new way to teach ultrasound-guided procedures: cadaver anatomy sessions & ultrasound workshops.

METHODS

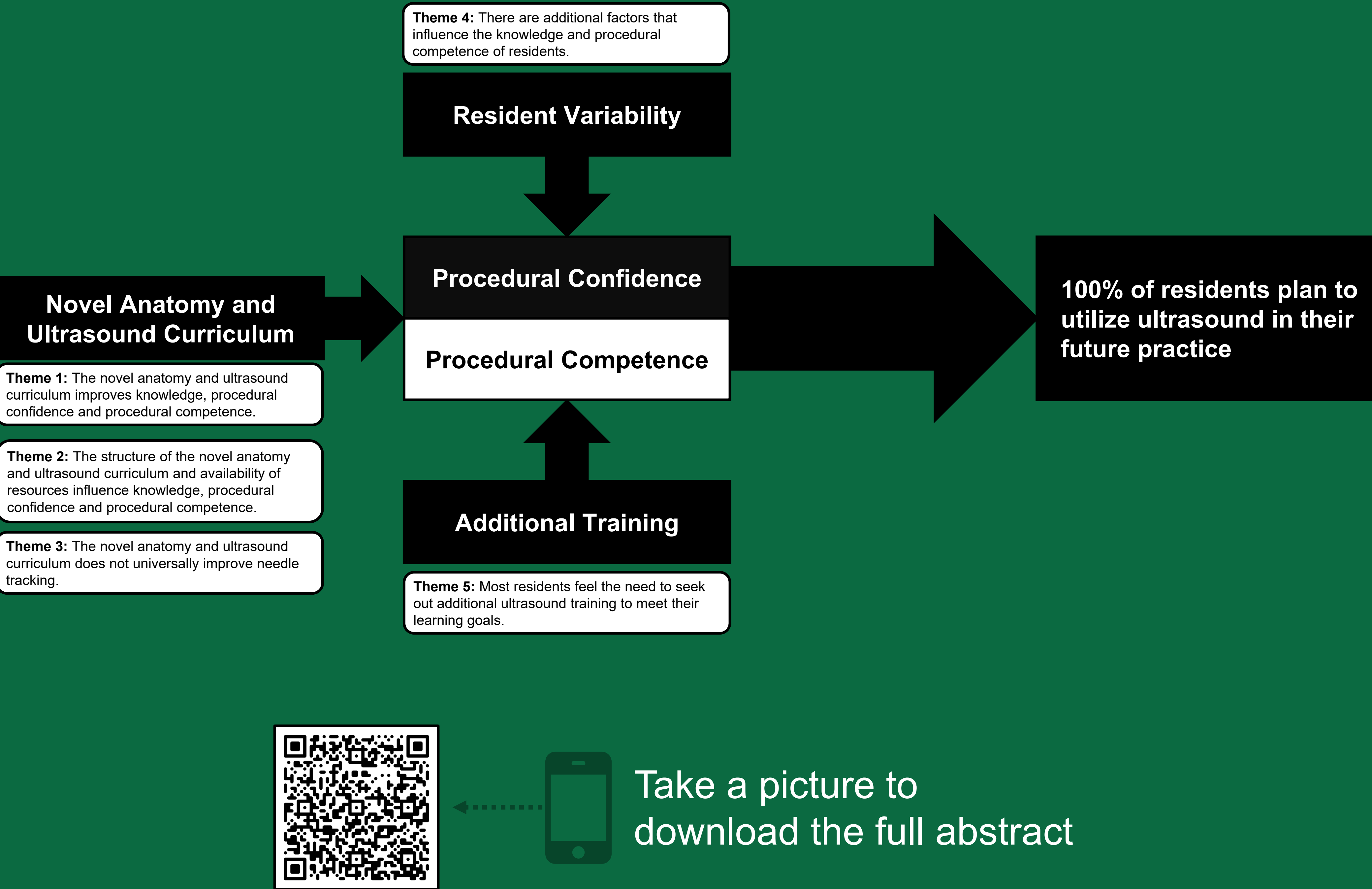
1. We collected survey data from 9 physiatry residents and 9 physiatrists.
2. We asked them how the new curriculum was working.
3. We calculated the proportion of respondents that felt the new curriculum was beneficial.
4. We used thematic analysis to identify themes and subthemes.

RESULTS

- This teaching method improves resident competence and confidence with ultrasound-guided procedures.
- Residents do not universally feel it increases confidence with needle tracking.
- Residents and attendings agreed that the addition of needle tracking practice with high-fidelity phantoms would improve learning.
- Additional training and resident-specific variables also influence procedural competence.

1. Amatto MD, Rambaransingh B, Yu JC. An evaluation of musculoskeletal interventional ultrasound training in Canadian physical medicine and rehabilitation residency programs. PMR 2021; 13:1148-1156.

Combining **ultrasound** training with **anatomy** training improves **resident learning**.



Interactive Anatomy Session (0800-1200)
• Cadaver prosecution anatomy review with a skilled Anatomist • Interactive anatomy, physiology and pathology review led by a resident • Clinical pearls delivered by an attending physiatrist
Social Lunch (1200-1300)
• Program-funded lunch for learners and facilitator(s)
Hands-On Ultrasound Session (1300-1600)
• Hands-on review of sonographic anatomy • Hands-on review of optimal views for ultrasound-guide procedures • Needle tracking practice on a CAE Blue Phantom™ injection training block

Figure 1. The structure of each anatomy and ultrasound day.

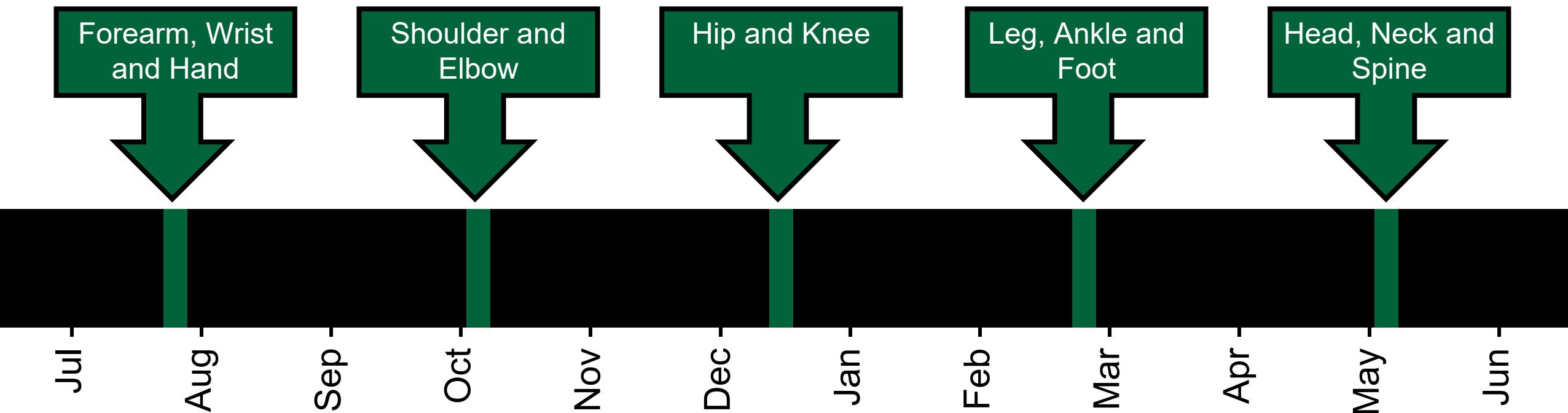


Figure 2. The structure of the anatomy and ultrasound curriculum.

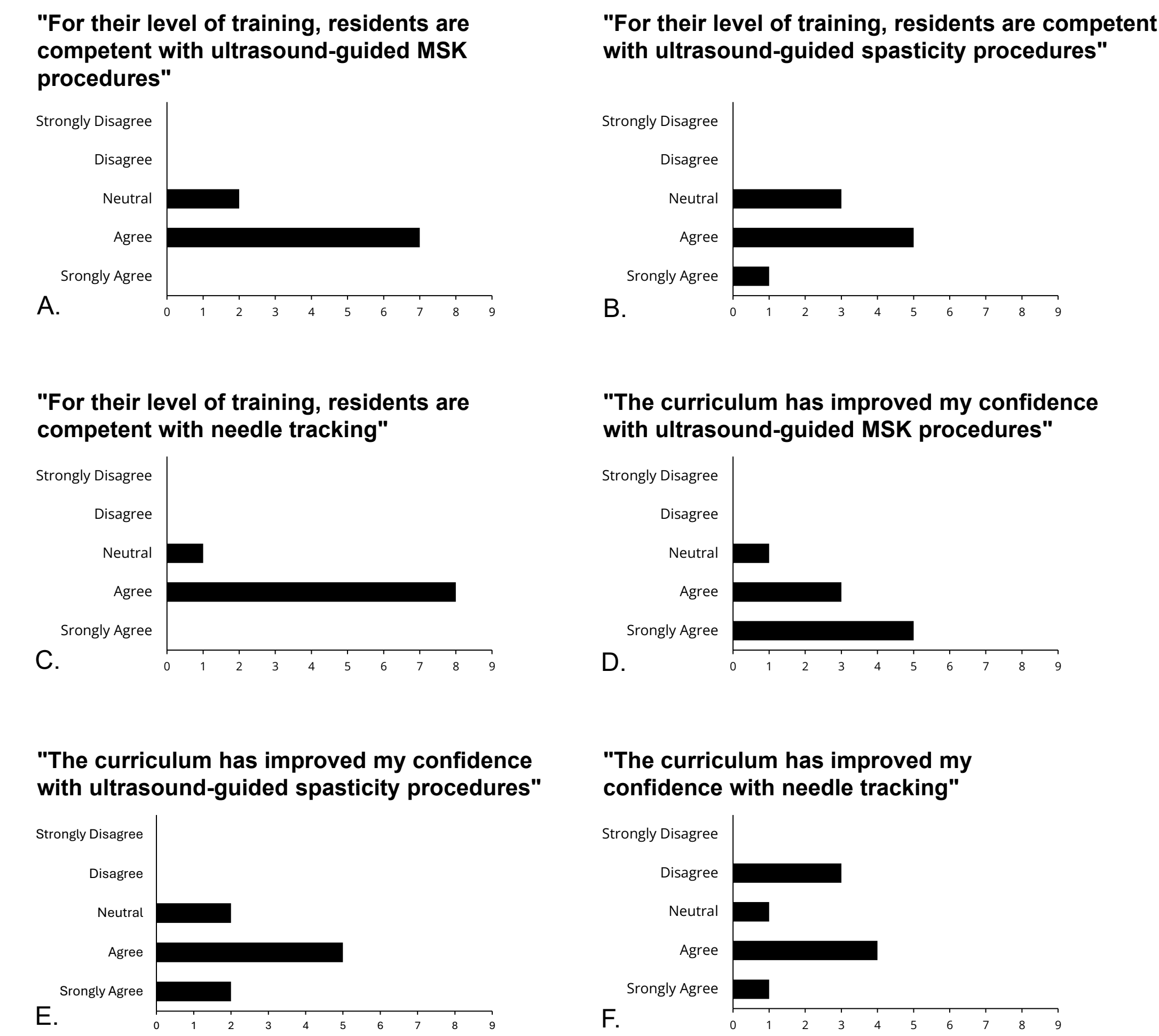


Figure 3. Survey responses pertaining to resident competence (A-C) and improvements in resident confidence (D-F).

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