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# Global Perceptions on Social Accountability and Outcomes: A Survey of Medical Schools

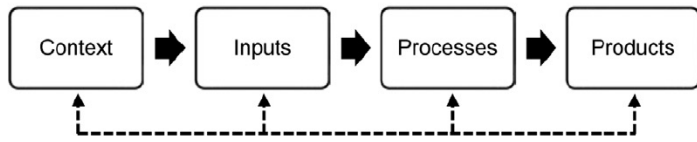
Cassandra Barber, PhD(c), Saad Chahine, PhD, Jimmie Leppink, PhD & Cees van der Vleuten, PhD

## Background

Social accountability (SA) has become a universal component in medical education. However, how these initiatives are implemented in practice remains elusive. This study explores institutional practices and administrative perceptions of social accountability in medical schools, globally.

## Methods

A 41-item online survey derived from previous literature and categorized using CIPP evaluation model as an organizational framework was distributed to a purposeful sample of academic deans of English-speaking undergraduate medical programs from 245 institutions in 14 countries.



*Analysis:* Exploratory Factor Analysis (EFA); McDonald's Omega; Analysis of variance (ANOVA) with post hoc analyses

### Response Rates:

- 80 medical schools (1,342 individual responses), from 14 countries
  - Medical School = 30%
  - Individual = 9.0%

### Demographics:

- Male = 55.3%  
Female = 44.7%
- MD = 77.2%  
•  $\bar{x}$  = 25.8 yrs ( $\pm 9.89$ )
- $\bar{x}$  = 12.6 yrs ( $\pm 8.50$ )

### Learning Opportunities:

- Primary Care Department
- Hospital & Clinic exposure
- General Practice
- Community Health
- Patient homes | Elderly retirement homes | Chronic Care Facilities

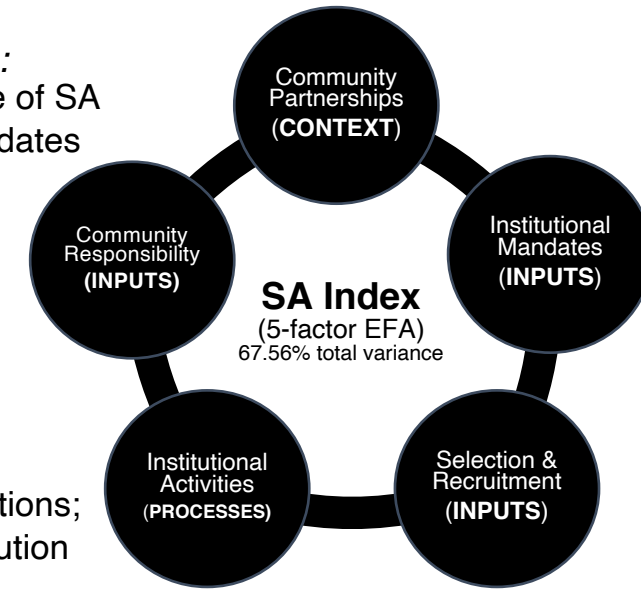
## Results

### Perceived Importance:

- High importance of SA
- Explicit SA mandates

### Institutional Practice:

- 28 Likert scale items ( $\omega = .947$ )  
(1 = strongly disagree, 5 = strong agree)
- item  $\bar{x}$  = 4.0-4.6
  - Institutions mission statement & community engagement
- item  $\bar{x}$  = 2.6-3.8
  - Partnerships with local organizations;
  - Specialty mix & graduate distribution
  - Impact on patient outcomes



## Discussion & Conclusion

This study is the first known international consensus of SA perceptions and institutional practice, linking theory to practice. Consistent with previous literature, several commonalities across medical schools were identified. However, institutional nuances were observed. SA practices captured in this study focused on the commitment to, and adaption of select policies and circular activities. However, the impacts these initiatives have on the community remain unknown and unevaluated. The lack of emphasis placed on community impacts suggests that perceived institutional practices are reflective of acts of responsibility or responsiveness, and not accountability.

### References:

- Boelen C, Heck JE. Defining and Measuring the Social Accountability of Medical Schools. Geneva, Switzerland: World Health Organization. 1995.
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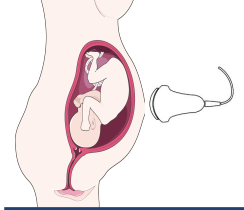
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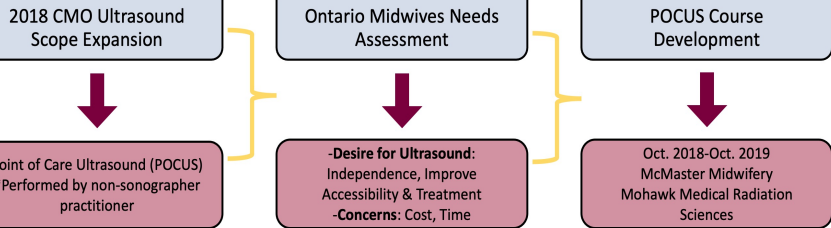
# Evaluation of POCUS Training for Midwives: *How Do Midwives Learn POCUS?*

Bronte Johnston BSc, MSc.(c)<sup>1,2</sup>, Liz Darling RM, PhD<sup>2</sup>, Anne Malott RM, PhD<sup>2</sup>, Carol Bernacci RDMS, CRGS<sup>3</sup>,  
Laura Thomas RDMS, CRGS<sup>3</sup>, Beth Murray-Davis RM, PhD<sup>2</sup>

<sup>1</sup>Health Sciences Education, McMaster <sup>2</sup> McMaster Midwifery Research Centre <sup>3</sup> Medical Radiation Sciences, Mohawk College

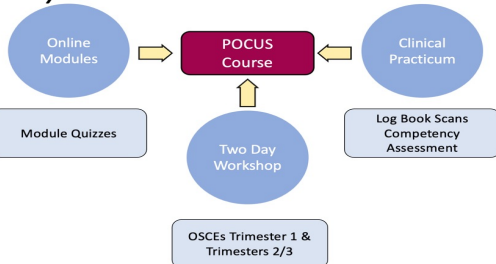


## Background

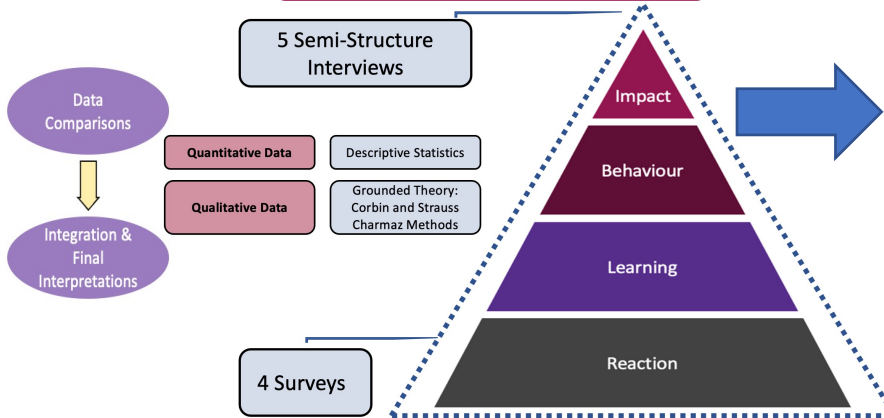


*For Ontario midwives, what are the educational impacts of the McMaster-Mohawk Point of Care Ultrasound course for Primary Maternity Care Providers?*

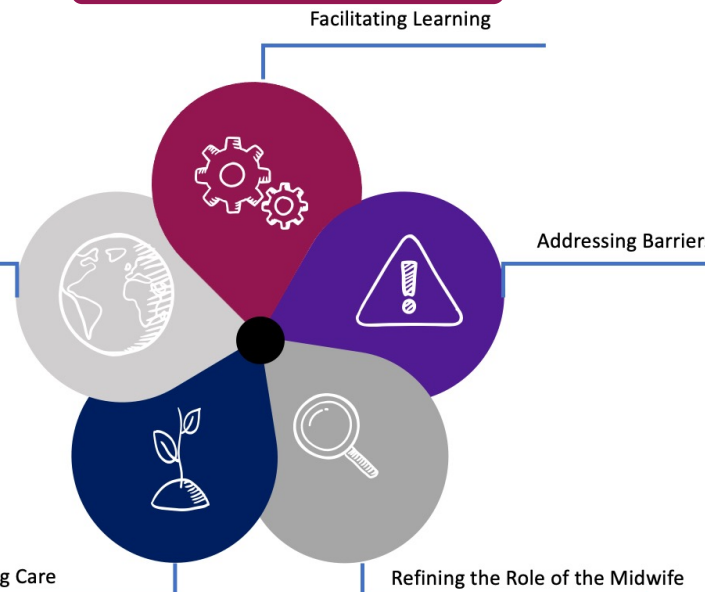
**Study Population:**  
18 Midwives  
1 Family Physician  
From Ontario



## Methods



## Results



### Facilitating Learning

- Importance of Didactic (Modules) & Clinical (Workshop) Learning
- 44% of Participant were Competent in POCUS from Continued Practice
- 50% of Participants Were Comfortable with POCUS After Training

### Addressing Barriers

- Increase Learners' Opportunities to Complete the Clinical Practicum
- Improving Access to a Bedside Ultrasound Machine
- Minimize the Costs of Training & Owning a POCUS Device

### Refining the Role of the Midwife

- 60% of Participants Are Using POCUS
- Frequent Indications: Fetal Presentation (64%), Pregnancy Viability (55%), Dating (45%)
- 100% of Participants Understand the Limitations of POCUS

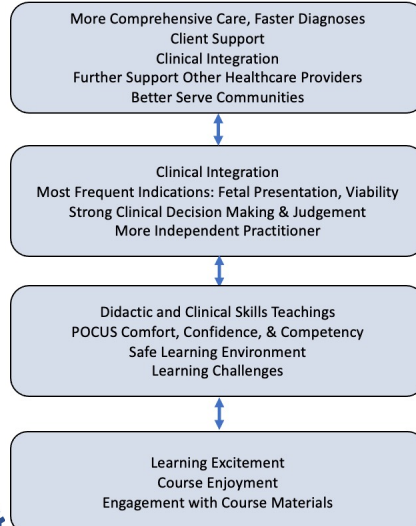
Serving Community

Addressing Barriers

Improving Care

Refining the Role of the Midwife

## Conclusions



- Midwives learned POCUS through the Online Modules & Workshop.
- Lots of Hands-On Practice Was Required for Learners to Feel Comfortable & Competent.
- POCUS Training Allows Midwives to Expand Their Current Roles to Better Serve Their Communities.



# OB Residents and Midwifery Students Learning, Understanding and Application of Shared Decision Making

Meagan Furnivall, MSc, RM  
McMaster Midwifery Research Center

## Study Purpose

This research intended to study the ways in which obstetrical residents and midwifery students engaged in the learning, understanding and application of shared decision making (SDM) with clients and patients.



## Introduction

It has been shown that shared decision making is beneficial for the health care patient.

Involving patients in their decision making has been shown to provide more positive childbirth outcomes.

There has yet to be an established standardized training method for the teaching or learning of shared decision making. There is much discussion, and many models presented outlining the essential competencies or elements that are required to provide SDM. Unfortunately, there is little published literature evaluating the models for teaching shared decision making to students. Shared decision making often overlaps with communication skills training.

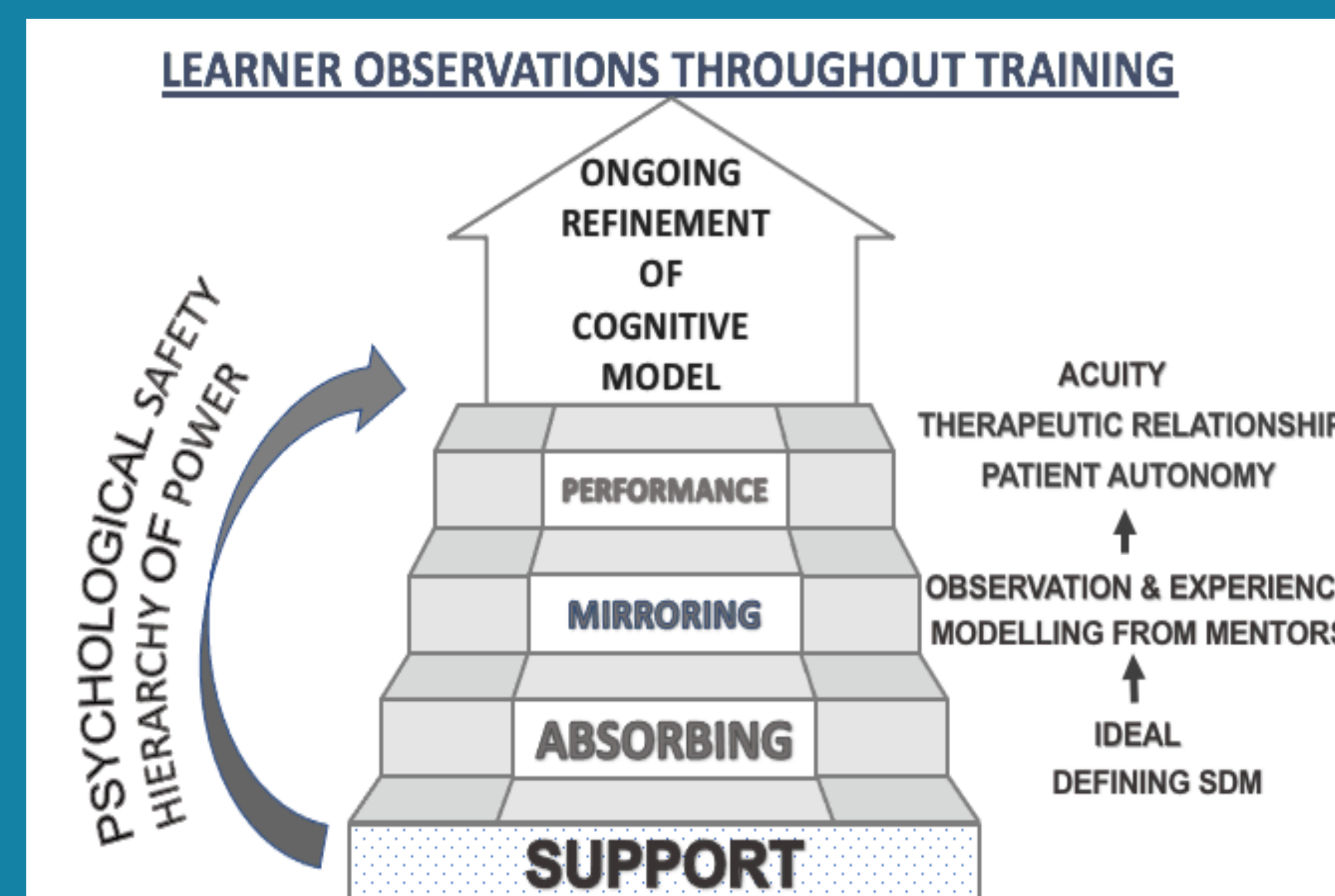
## Methodology

- Constructivist grounded theory (CGT) was used as part of the primary author's master's thesis requirements.
- Convenience, purposeful, and theoretical sampling were used from July 2019 to September 2019.
- Five obstetrical residents (post-graduate level 4 and 5) and five senior midwifery students in their final year of study were invited to participate.
- Interviews were semi-structured, ranging from 30-90 minutes in length.
- NVivo 12 was used for organization of codes.
- Open, focused and theoretical codes were used and constant comparative analysis.

## Results

### Four Themes

Absorbing, Mirroring, Performing and Supporting



## Conclusion

*Bandura's Social Cognitive Theory*  
Reciprocal Determinism- learning through an interaction between cognition, environment and behaviour.

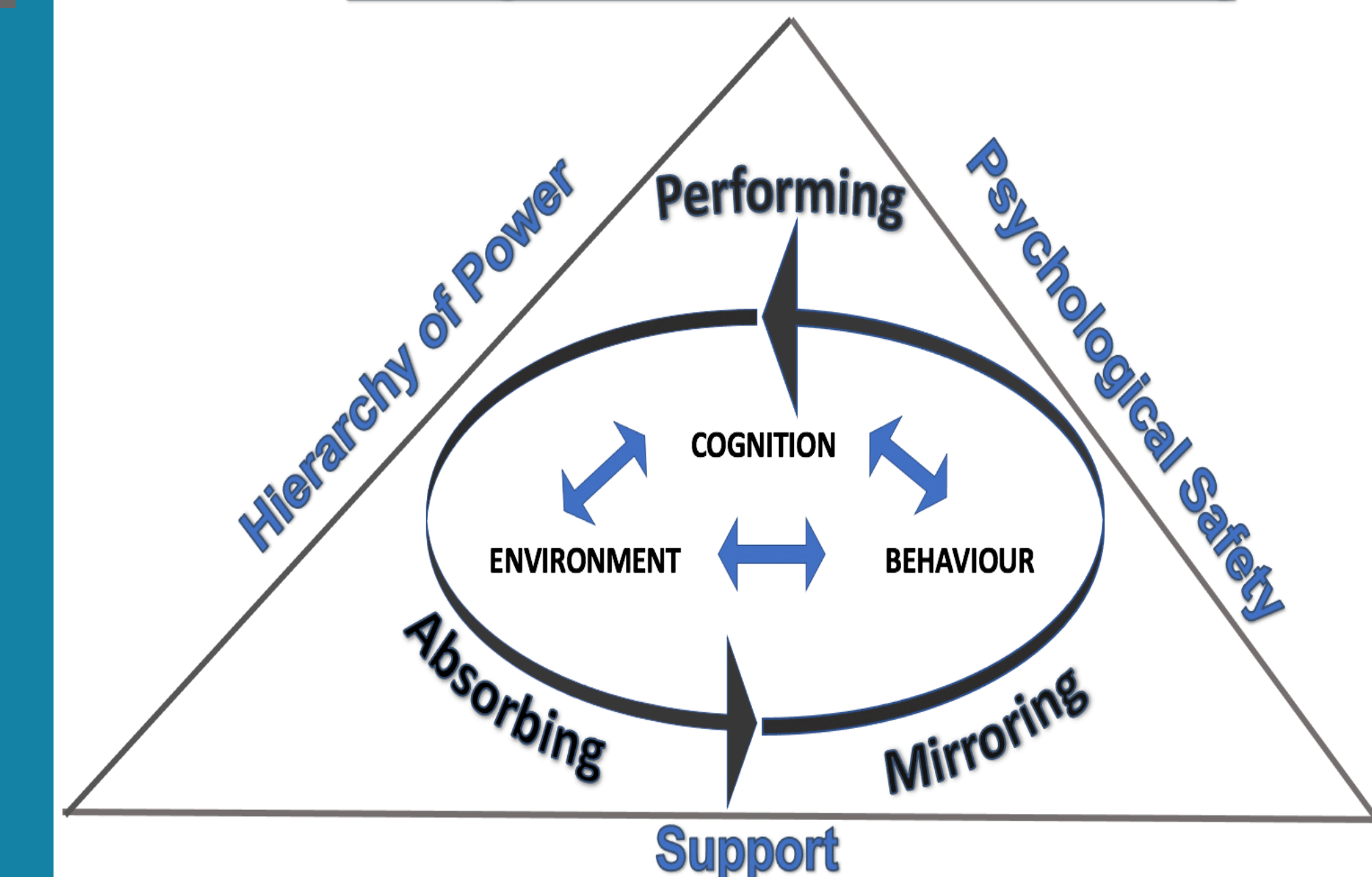
*Kolb's Experiential Learning Theory*  
"Learning Spiral"

- Learning SDM is not systematic, it is "through osmosis"
- Absence of SDM Models in teaching and learning
- Observation, Experience and Deliberate Practice- vicarious positive and negative reinforcement
- Co-resident mentorship and support
- Need formal training for mentors and preceptors on modelling SDM for learners
- Hierarchy as beneficial and problematic
- Shared Rational Deliberative Patient Choice Approach- *Charles et al (1999)*
- Learning SDM is heavily influenced by the hierarchy of power and the level of psychological safety encountered in their clinical training.

## Recommendations

- Model SDM for residents and midwifery students
- Help learners obtain a foundation of knowledge (knows how) for the discussions prior to expecting them to engage in important decision making with patients (shows how).

## Learning Process for Shared Decision Making



- Opportunities for reflection and reflexivity
- Provide resources for teachers, preceptors and mentors
- Consider using standardized patients, and role playing alongside didactic learning
- Minimize hierarchy and increase psychological safety in front of obstetrical patients and midwifery clients
- Teach through active discussion, exemplars and scripts

## Acknowledgements

Thankful to the participants of this study and my thesis committee Dr. Liz Darling PhD, Dr. Beth Murray Davis PhD, Dr. Sandra Monteiro PhD and Dr. Val Mueller MD, for their tremendous support.



# Factors influencing readiness for interprofessional education in health sciences students

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## BACKGROUND

- Interprofessional education (IPE) improves health practitioners' collaboration, reduces clinical errors and increases patient satisfaction.<sup>1</sup>
- IPE is only effective if students are willing and ready to engage in cooperative learning with others.<sup>2</sup>
- Factors influencing readiness are unknown, which limits opportunities to target IPE experiences for the most appropriate audience.

## AIM

To explore if age, gender, level of learner (graduate vs. undergraduate), previous IPE experience, and cohort year (i.e., 2019 vs. 2020) significantly affected IPE readiness.

## METHODS

**Design:** Cross-sectional study

**Recruitment:** Two consecutive cohorts of first-year students (table 1) from the Faculty of Health Sciences (n=2069) were invited to complete the Readiness for Interprofessional Learning Scale (RIPLS)

Table 1. Graduate and undergraduate programs at Faculty of Health Sciences

Graduate	Undergraduate
Physiotherapy (PT)	Medicine (MD)
Occupational Therapy (OT)	Nursing (RN)
Child Life (CL)	Midwifery (MW)
Speech Language Pathology (SLP)	Physician's Assistant (PA)
---	Social Work (SW)
---	Bachelor of Health Science (BHSc)

**Data collection:**

- **Sociodemographic:** age, gender, level of learner and cohort year
- **IPE-Related Variables:** previous IPE experience
- **Readiness for Interprofessional Learning Scale:** 19 item scale
  - total score ranging from 19 (low readiness) to 95 (high).
  - 4 subscales (Teamwork & Collaboration, Negative & Positive Professional Identity and Roles & Responsibilities).

**Analysis**

- Multiple linear regressions with stepwise model were
  - Dependent variable: RIPLS score.
  - Independent variables: Age, gender, level of learner, previous IPE experience and cohort year



Older, graduate-level students from the 2019 cohort typically expressed a greater readiness for IPE Learning.



Poster Design by: Sabrina Dasouki

## RESULTS



Participants  
n= 885; 531 ♀



Age  
21.7 ± 4.7yrs



IPE experience  
56 (6%)



Response Rate  
43%

Age, graduate level and cohort explained **less than 30%** of the variance observed in the RIPLS total score and subscales (table 2).

Table 1. Multiple linear regression analysis for the RIPLS total score and subscales as dependent variables

Score	Factors	B	SE	Beta	p	r <sup>2</sup>
Total	Graduate level	4.612	0.808	0.174	<0.001	<b>0.208</b>
	Cohort	-9.938	0.769	-0.394	<0.001	
Positive professional identity	Graduate level	0.789	0.027	0.088	0.004	<b>0.229</b>
	Cohort	-3.896	0.257	-0.456	<0.001	
Negative professional identity	Graduate level	0.357	0.114	0.106	0.002	<b>0.027</b>
	Cohort	0.538	0.120	0.152	<0.001	
Teamwork & Collaboration	Graduate level	2.764	0.531	0.163	<0.001	<b>0.252</b>
	Cohort	-7.199	0.481	-0.447	<0.001	
	Age	-0.13	0.051	-0.079	0.011	
Roles & Responsibilities	Graduate level	0.775	0.119	0.218	<0.001	<b>0.147</b>
	Cohort	0.878	0.108	0.259	<0.001	
	Age	0.055	0.011	0.159	<0.001	

Gender and previous IPE experience did not account for variability in the total RIPLS score and subscales (p>0.05).

## CONCLUSIONS

- Older and graduate-level students from the 2019 cohort expressed a greater readiness for IPE learning.
- It is unclear how online learning (specific to the 2020 cohort) may have affected IPE readiness.
- The variability explained by the factors in the model was less than 30% and thus, other factors not accounted for (e.g., prior healthcare/health sciences degrees or experience) may also influence IPE readiness and should be further explored.

**References**

1. Bosch B, Mansell H. Canadian pharmacists journal. 2015;148(4):176-179. doi:10.1177/1715163515588106.
2. Aziz Z, Teck LC, Yen PY. Procedia - Social and Behavioral Sciences. 2011;29:639-645. doi:https://doi.org/10.1016/j.sbspro.2011.11.287.

**Acknowledgements:** We would like to thank all the IPE leads and students who collaborate with reviewing or answering the questionnaires.



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## INTRODUCTION

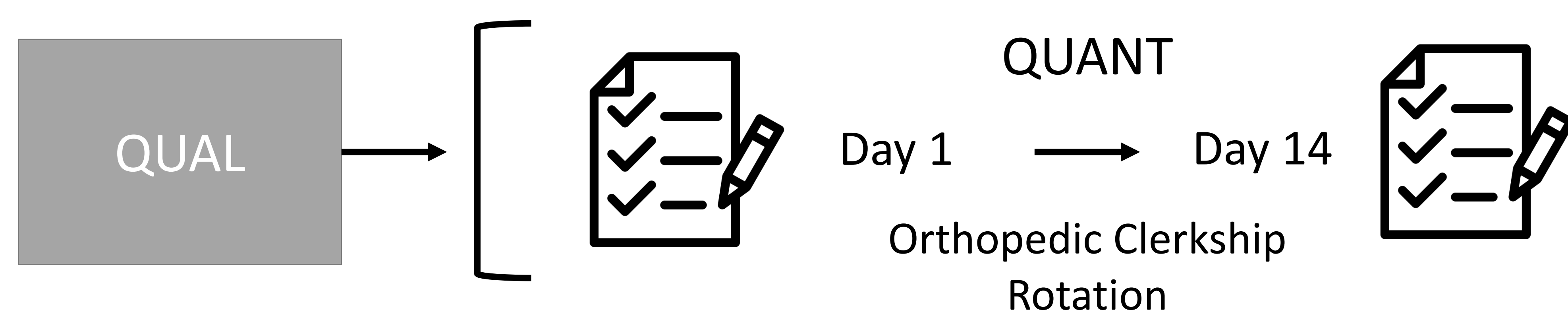
- MSK instruction has been identified as inadequate in UGME around the world<sup>1-3</sup>
- Barriers to comprehensive instruction include: limited clinical opportunities and foundational instruction; a lack of time and resources dedicated to the subject<sup>1,3</sup>
- Previous qualitative work conducted at the DeGroot School of Medicine elucidated similar weaknesses in the MSK curriculum; limited examples of MSK knowledge assessments published in Canadian settings

## PURPOSE

- To assess orthopedic clerks' MSK knowledge at the beginning and end of their rotation in order to determine whether clinical exposure to MSK conditions impact student MSK knowledge, and to validate previous qualitative findings

## METHODS

- This study is part of the quantitative (pre-test post-test design) strand of a broader sequential exploratory mixed methods approach



- Orthopedic clerks (n=53) were tested using 2 MSK knowledge assessments created from validated examinations<sup>4,5</sup> (pre- and post-rotation) from January to March 2021
- A score of 71.3% was deemed as being basic competency based on previous studies<sup>4</sup>
- Paired t-test and McNemar's test used to examine the significance of test scores between time points

## REFERENCES

1. Al Maini M, Al Weshahi Y, Foster HE, Chehade MJ, Gabriel SE, Saleh JA, et al. A global perspective on the challenges and opportunities in learning about rheumatic and musculoskeletal diseases in undergraduate medical education. *Clinical Rheumatology*. 2019.
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4. Freedman KB, Bernstein J. The Adequacy of Medical School Education in Musculoskeletal Medicine\*. *JBSJ*. 1998;80(10):1421-7.
5. Cummings DL, Smith M, Merrigan B, Leggit J. MSK30: a validated tool to assess clinical musculoskeletal knowledge. *BMJ Open Sport Exerc Med*. 2019;5(1):e000495.

## RESULTS

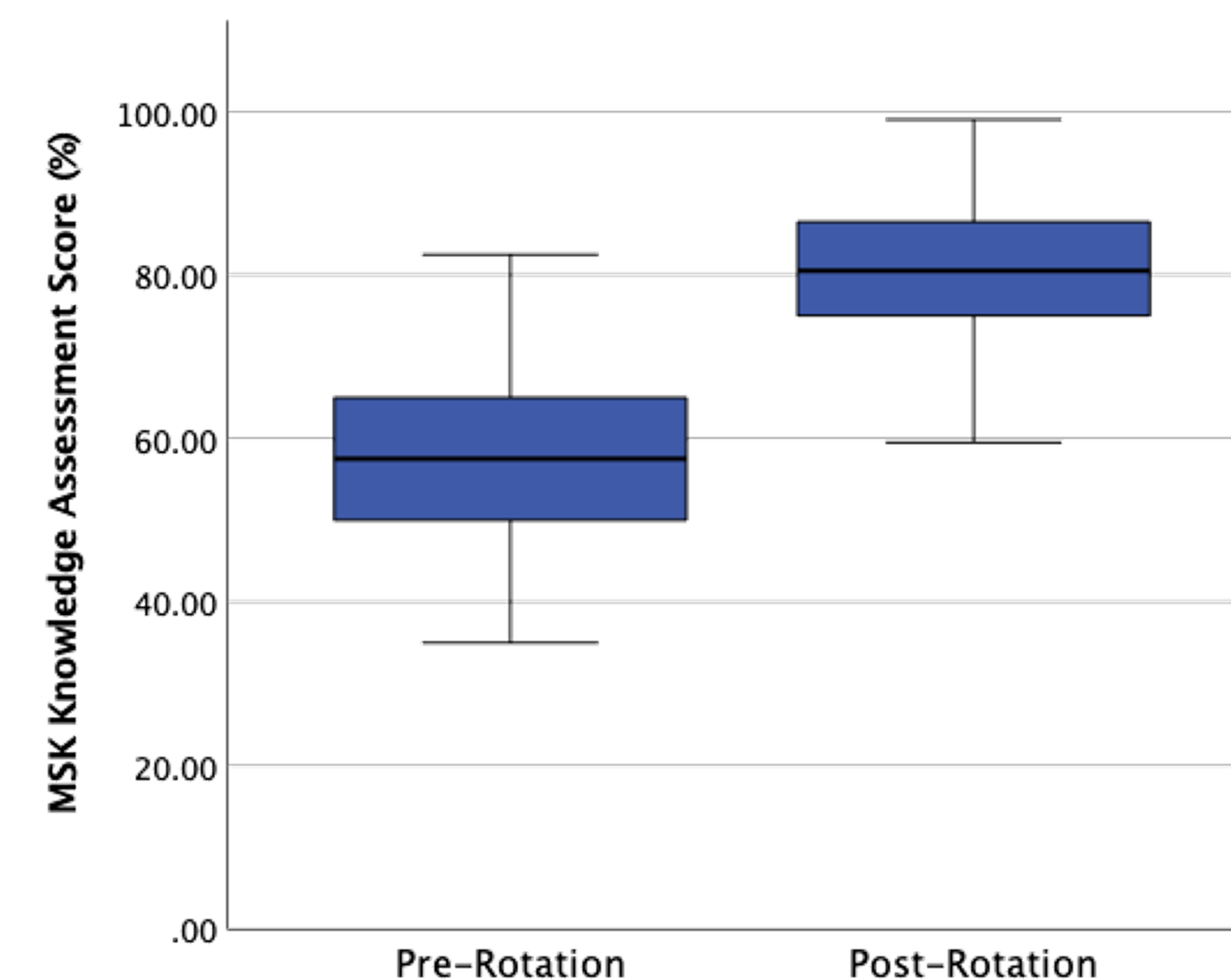
### Pre-test

- The average pre-test score was 57.6% (95% Confidence Interval [CI], 54.8% to 60.5%)
- Of the 53 clerks, 48 (90.6%) fell below the basic competency score of 71.3%, and 5 (9.4%) scored above the benchmark of 71.3%

### Post-test

- The average post-test score was 80.5% (95% CI, 78.1% to 82.9%)
- Of the 53 clerks, only 6 (11.3%) fell below the basic competency score and 47 (88.7%) scored above this benchmark

	Pre-Test	Post-Test
Pass	5	47
Fail	48	6



- The mean difference between the pre- and post-test scores was 22.9% (95% CI, 19.6 to 26.2%),  $p < 0.001$  based on the paired samples t-test
- McNemar's test determined that there was a significant difference in the proportion of students who met the basic competency score pre- and post- rotation,  $p < 0.001$

## CONCLUSION

- MSK pre-test scores reveal substantive gaps in medical student MSK knowledge and confirm the findings of previous qualitative work
- The orthopedic rotation positively impacts clerk MSK knowledge and affirms the importance of clinical exposure to MSK conditions

