

Rowan University

Rowan Digital Works

Stratford Campus Research Day

27th Annual Research Day


May 4th, 12:00 AM

Assessing Correlation between Manual Dexterity, Specialty Choice and Desire to Practice OMT in Newly Admitted Osteopathic Medical Students

Valerie Rome
Rowan University

Nils Brolis
Rowan University

Follow this and additional works at: https://rdw.rowan.edu/stratford_research_day

 Part of the [Alternative and Complementary Medicine Commons](#), [Behavior and Behavior Mechanisms Commons](#), and the [Medical Education Commons](#)

Let us know how access to this document benefits you - share your thoughts on our [feedback form](#).

Rome, Valerie and Brolis, Nils, "Assessing Correlation between Manual Dexterity, Specialty Choice and Desire to Practice OMT in Newly Admitted Osteopathic Medical Students" (2023). *Stratford Campus Research Day*. 59.

https://rdw.rowan.edu/stratford_research_day/2023/may4/59

This Poster is brought to you for free and open access by the Conferences, Events, and Symposia at Rowan Digital Works. It has been accepted for inclusion in Stratford Campus Research Day by an authorized administrator of Rowan Digital Works.

Assessing Correlation between Manual Dexterity, Specialty Choice and Desire to Practice OMT in Newly Admitted Osteopathic Medical Students

Valerie Rome B.S, Nils Brolis D.O
Department of Family Medicine

Introduction

Is there any relationship between manual dexterity, specialty choice, and the use of osteopathic manipulative treatment (OMT) in newly-admitted osteopathic medical students? Hand dexterity has previously been associated with surgical skill development in medical residents. There is currently a gap in the scientific literature in regards to the use of one's hands and the career choice they ultimately pursue, in addition to interest in performing OMT in their respective fields. To help elucidate the answer this question, this SMRF project aimed to evaluate the relationship between manual dexterity, specialty choice, and use of osteopathic manipulative treatment (OMT) in newly admitted osteopathic medical students.

Methods

30 newly admitted RowanSOM students were assessed on their ability to "use one's hands," as measured by hand dexterity, with a timed-Purdue pegboard assessment. Time taken to complete the dexterity test was recorded, with shorter times correlating to better scores. These students then took a survey to gauge their specialty interest and desire to perform OMT as future physicians. For the surveys, the "desire to practice OMT" and "the desire to pursue a surgical specialty" were quantified via a score on a scale from -2 to 2. The relationship between specialty/OMT interest and hand testing was thus explored. Furthermore, this project explored whether inherent hand dexterity has any influence on medical career path or incorporation of osteopathic skills.

Statistical analysis of the data collected was conducted under the guidance of Dr. Steer using SPSS software.

Results

The data collected qualified for analysis via non-parametric statistics. The sample size consisted of 30 newly admitted RowanSOM Prematric students. 17 of the subjects were women and 13 were men. The average age of the subjects was 24.37 ± 2.798 years old. Hand dexterity was measured via time to complete the Purdue Pegboard exercise. Interest in a surgical specialty and interest in OMT were measured with a scored survey on a scale from -2 to 2. The following key was used:

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
-2	-1	0	1	2

Dominant hand proficiency in the assembly task was positively correlated with an interest in performing OMT. This was evidenced by a positive Pearson correlation between better scores on the assembly task and being interested in OMT.

Analysis

		Average Right Hand
I am interested in OMT "Osteopathic Medical Treatment"	Pearson Correlation	.371*
	Sig. (2-tailed)	0.044
	N	30

*. Correlation is significant at the 0.05 level (2-tailed).

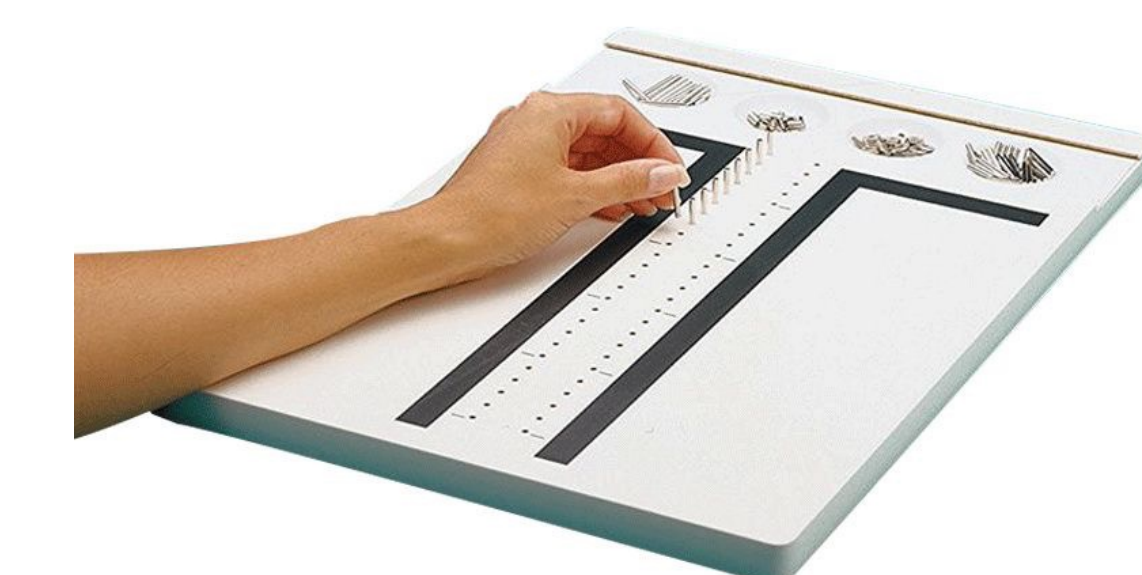
Summary and Conclusion

- ❖ A statistically significant correlation was found between better times to complete the Purdue Pegboard hand dexterity test and interest in OMT.
- ❖ The collected data supports the claim that there is a positive correlation between hand dexterity and interest in performing OMT.

Significance

This project explored whether inherent hand dexterity has any influence on medical career path or incorporation of osteopathic skills. This project can be repeated on a larger scale to see if these results are reproducible. If this correlation is supported by subsequent trials, this has the potential to influence the type of candidate medical school's hope to recruit and the skills which are developed in both undergraduate pipeline programs and in the preclinical years.

Purdue Pegboard



Funding and Support

Internally funded through the Rowan Family Medicine Department and SMRF program.