

## **RATIONALE/NEED**

Our goal was to increase the amount of research that incorporates medical students within the physiatry setting by holding two Research Resource Workshops (RRW) that give students information on how to find research, a timeline for how long they should expect research to take, and information on how to apply statistical testing. By holding these workshops, it not only piques their interest in physiatry research, but also boosts confidence that they can participate in research if they take the right steps.

Most successful applicants in PM&R residencies have two publications. Brody medical students are motivated to participate in research, but there's often a lack of awareness regarding the research process and finding research opportunities. The RRW aimed to fill in that gap.

## METHODS

The RRW's were designed to increase student interest and engagement in PM&R research. To make our efforts measurable, we created a pre/post survey for the workshops. Students were given the pre survey once they walked into the room, and filled it out while waiting for the presentation to start. At the workshop, students were given a short PowerPoint presentation at the beginning that included the following information:

- Recurring Research Meetings such as Research Lunch and Learns, Research Speed Dating, and CRG Lab (Figure 2)
- How to sign up for CITI Training
- Levels of IRB Review (Figure 4)
- A timeline of how long it takes to develop a research project (Figure 4)
- Types of Statistical Test (Figure 3)
- Examples of past Rehab Research

After the short presentation students were split up into teams to work on a worksheet with the questions shown in Figure 5. Students were given five minutes to work on each question in their group. During this time ECU staff, such as physicians & specialist from the Center for Research and Grants office, walked around to help with the process. At the end of the five minutes we spent a few minutes reviewing the question as a group and going over the resources they will need for the next question. For example, for the question about "what members of the ECU faculty could be your potential mentor/collaborator?", we showed them how to use the website https://vivo.ecu.edu to help them find mentors. Additionally, for the question about "What are three journals you might target for your work?" we showed them how to use the website <u>https://journalsuggester.springer.com/</u> to narrow down journals.

At the end of the worksheet, students and faculty continued to talk for a few minutes. Students then filled out a post survey before leaving.

# Physiatry Research Interest & Engagement: A Focus on Increasing **Research in the Physiatry Setting Across Brody Medical Students**

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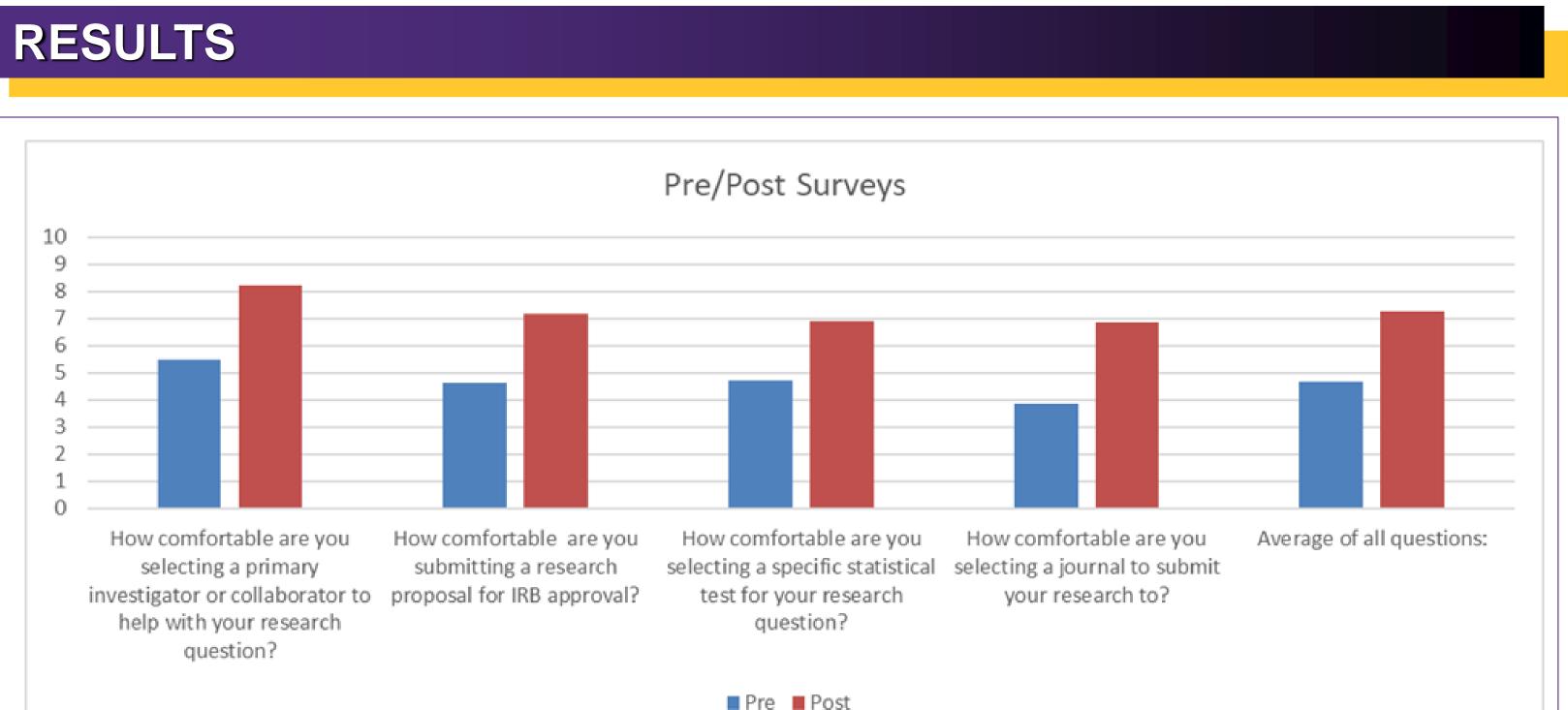


Figure 1: Y-axis is on a 1 to 10 scale (with 1 being not comfortable, and 10 being very comfortable), X-axis is the survey question

Pre and post surveys were compared after the workshop. Each question on the survey was on a scale from 1-10, with 1 being not comfortable, and 10 being very comfortable. The results are above in Figure 1.

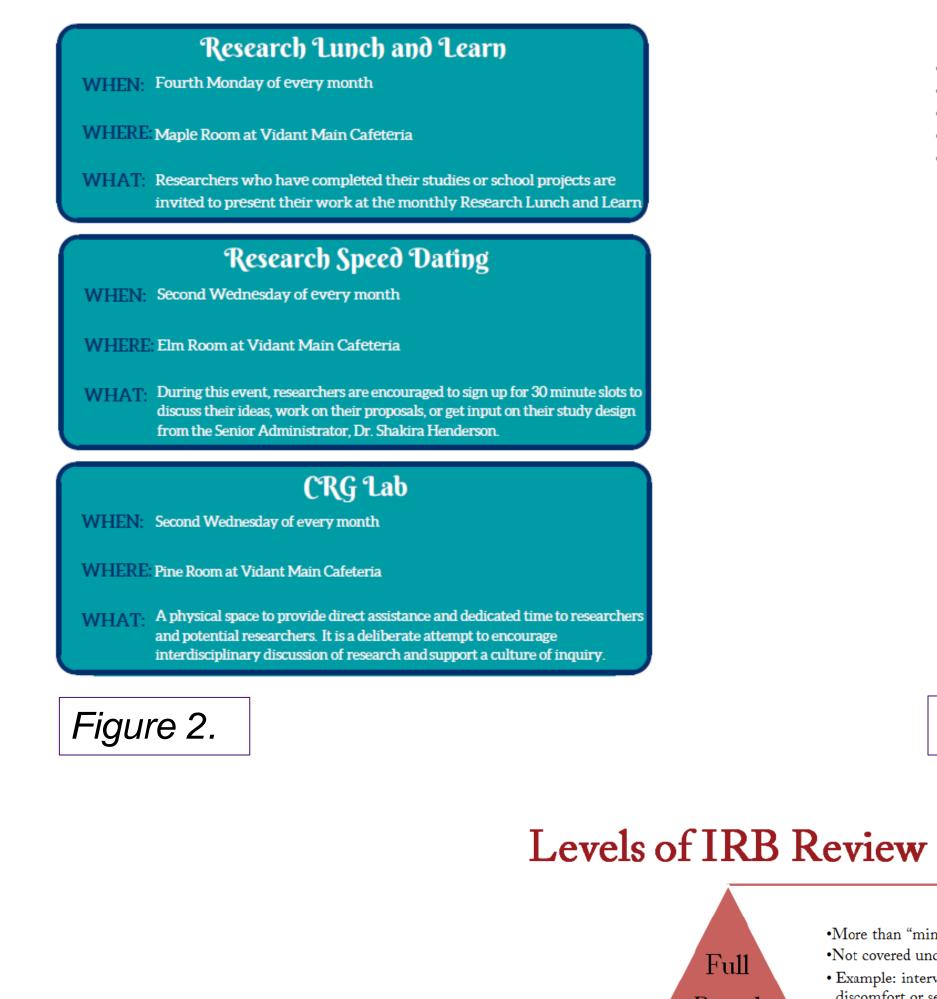
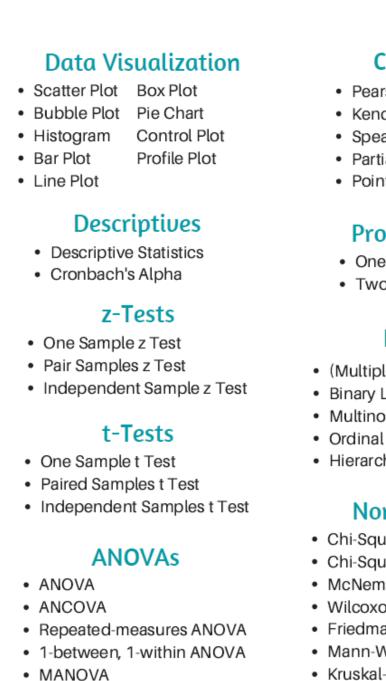


Figure 4.



## Figure 3.

Expedited

Exempt

•More than "minimal risk" to subjects •Not covered under other review categories • Example: interventions involving physical or emotional discomfort or sensitive data

- Not greater than minimal risk • Fits one of the 9 Expedited Review
- Examples: Collection of biospecimens by noninvasive means, Research with existing locuments/record collected for non-research purposes in which subjects are identifiable
  - Less than "minimal risk" • Fits one of the 6 Exempt
  - Categories\* • Example: Research with deidentified records, anonymous surveys

\*Defined by federal regulation (45 CFR 46)

### Correlations

- Pearson Correlation Kendall Correlation
- Spearman Correlation Partial Correlation
- Point Biserial Correlation

### **Proportion Tests** One Proportion z Test Two Proportions z Test

### Regressions

- (Multiple) Linear Regression Binary Logistic Regression
- Multinomial Logistic Regression
- Ordinal Logistic Regression Hierarchical Linear Regression

### Nonparametrics

- Chi-Square Test of Indepedence Chi-Square Goodness of Fit Test
- McNemar's Test
- Wilcoxon Signed Rank Test Friedman's Test
- Mann-Whitney U Test Kruskal-Wallis Test

Rehabilitation Research Process Worksheet What is your research question? (1-3 sentence description) What members of the ECU faculty could be your potential mentor/collaborators What type of IRB approval would you need for this question? What statistical test might you use? What are three journals you might target for your work? Figure 5.

## **IMPACT/LESSONS LEARNED**

As shown in the data, the RRW has increased medical student comfortability by an average of 2.6 for each question. An increase in comfortability is likely to lead to increased exploration in opportunities. Therefore, these students are more likely to seek out research within the PM&R field. Since they attended the workshop they will also be able to navigate the research process more efficiently, increasing their chances of successfully participating in research in the future.

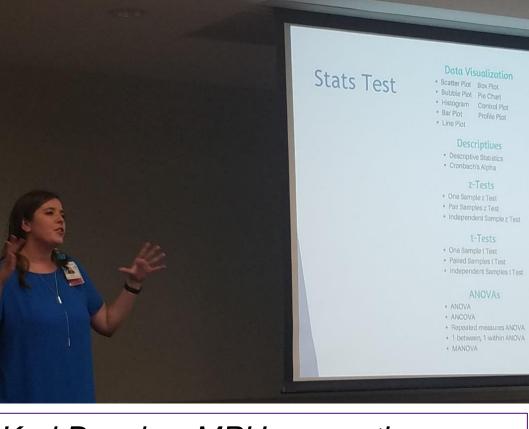
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Students working on the RRW worksheets.



Kari Beasley, MPH presenting on the usage of statistical testing.