

Assessing Mental Health Differences In Medical Students

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Background

- Medical school can be a stressful time
- Many schools continue to look at factors that impact the level of stress
- Schools often offer different models of curriculum for their students
- Rowan University School of Osteopathic Medicine (RowanSOM) has two distinct curriculum designs:
 - Problem-based Learning (PBL) - small group discussions with case based learning
 - Synergistic Guided Learning (SGL) - a traditional lecture based learning
- Goal: understand if there is a difference in the incidence of mood symptoms, anxiety, depression, and emotional exhaustion amongst students based on gender and curriculum

Methods



Population: Full-time Medical Students at Rowan University School of Osteopathic Medicine

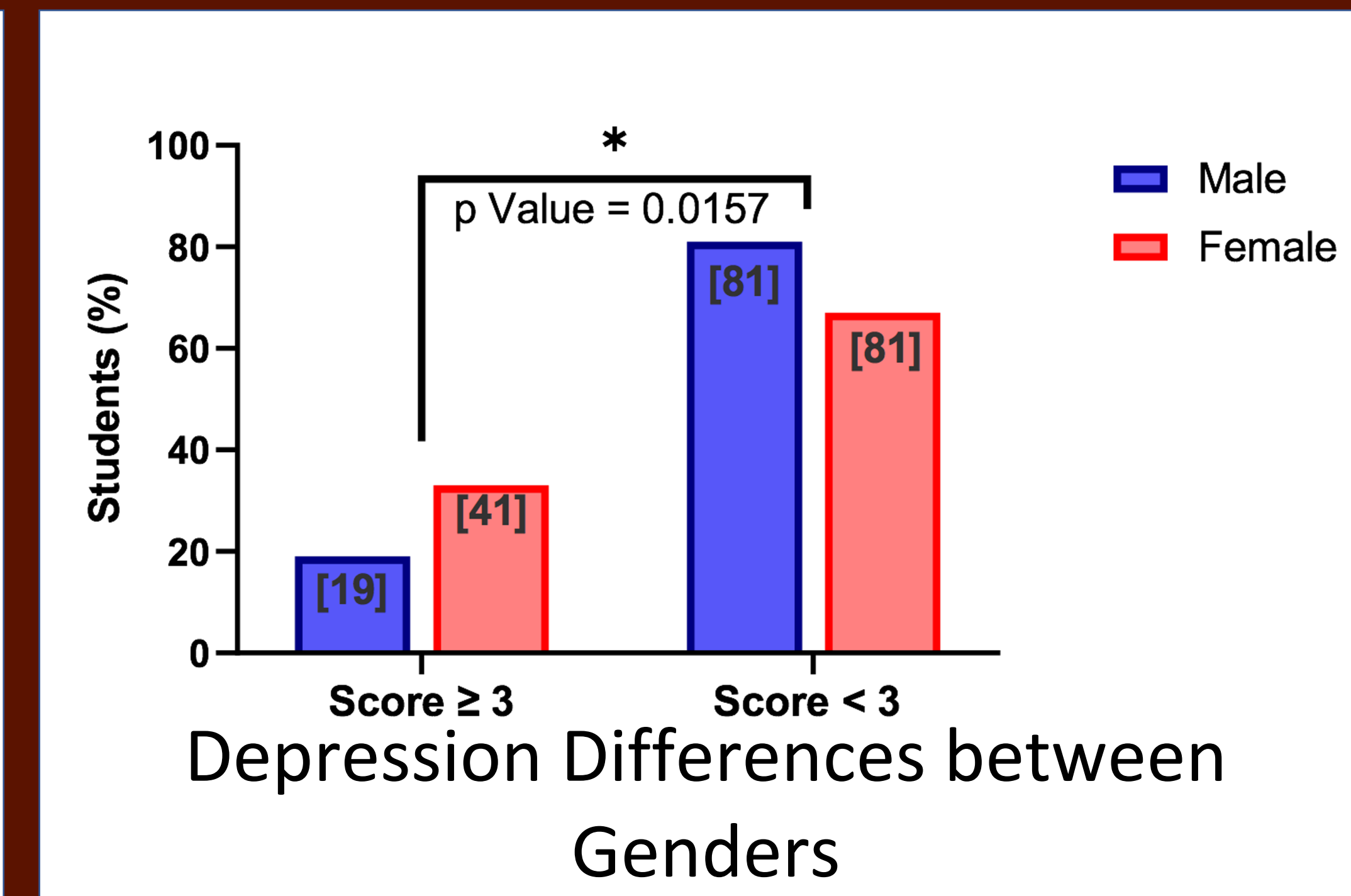
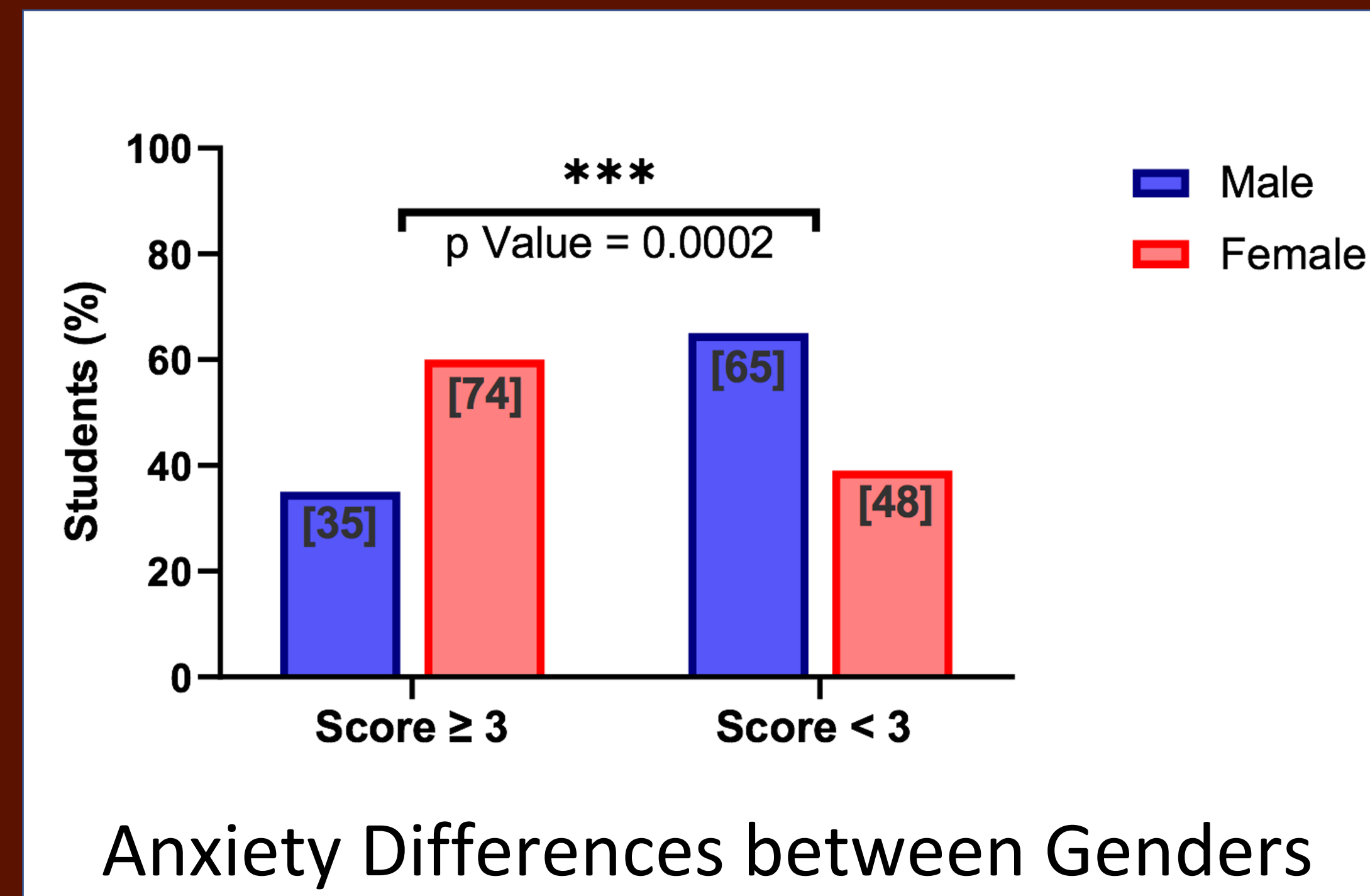
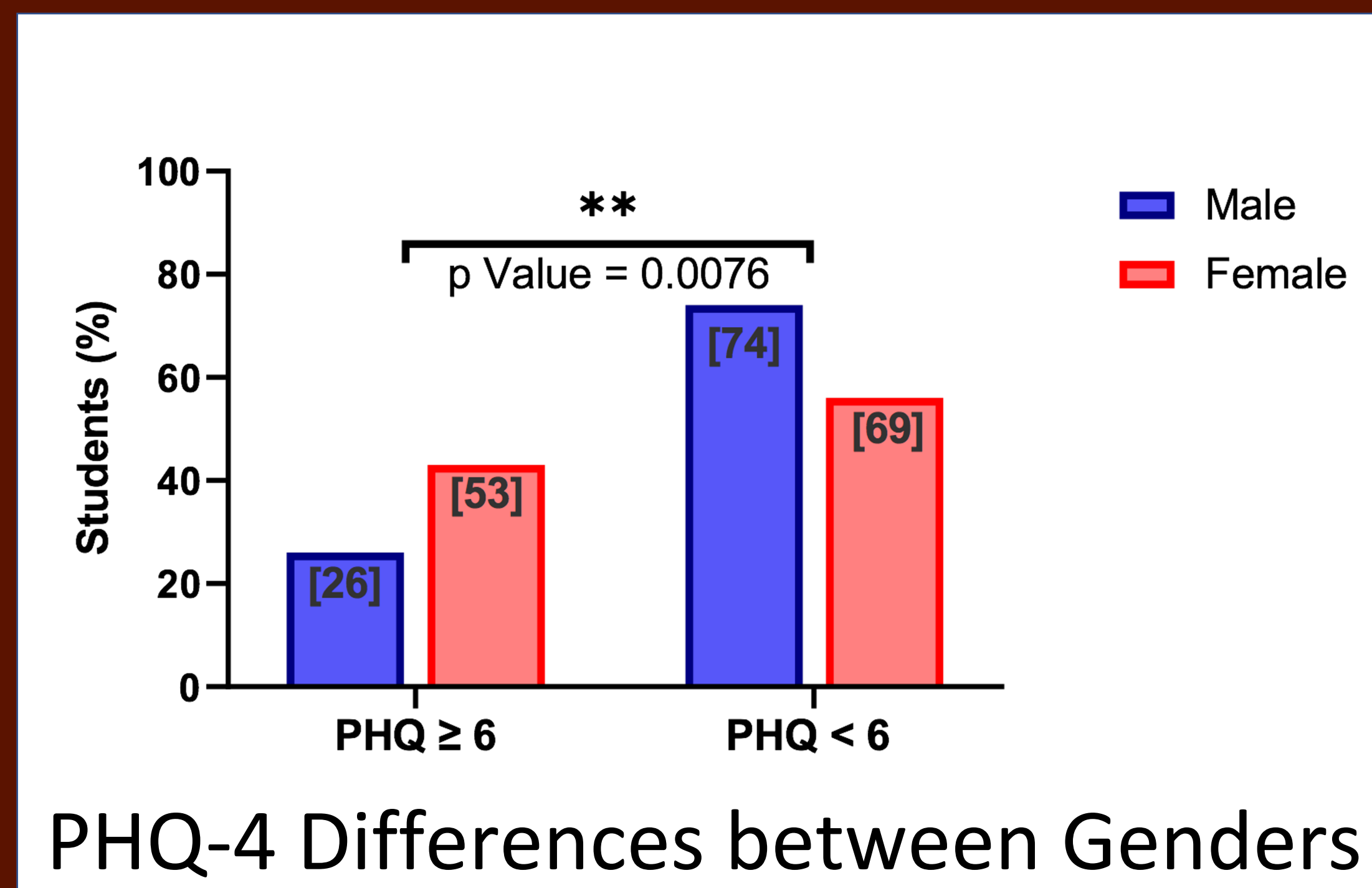
Survey: Online PHQ-4 Questionnaire and 3 emotional exhaustion prompts



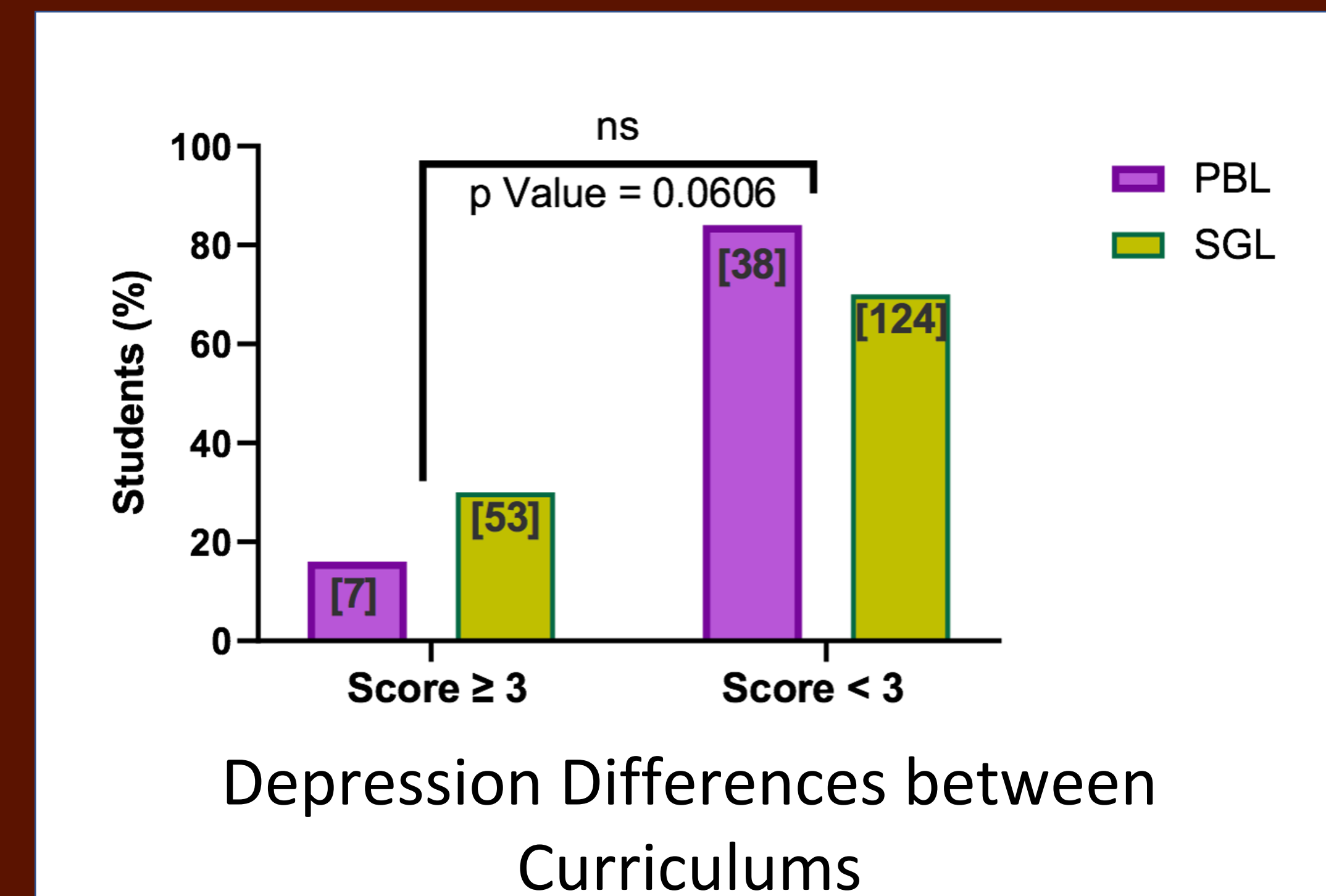
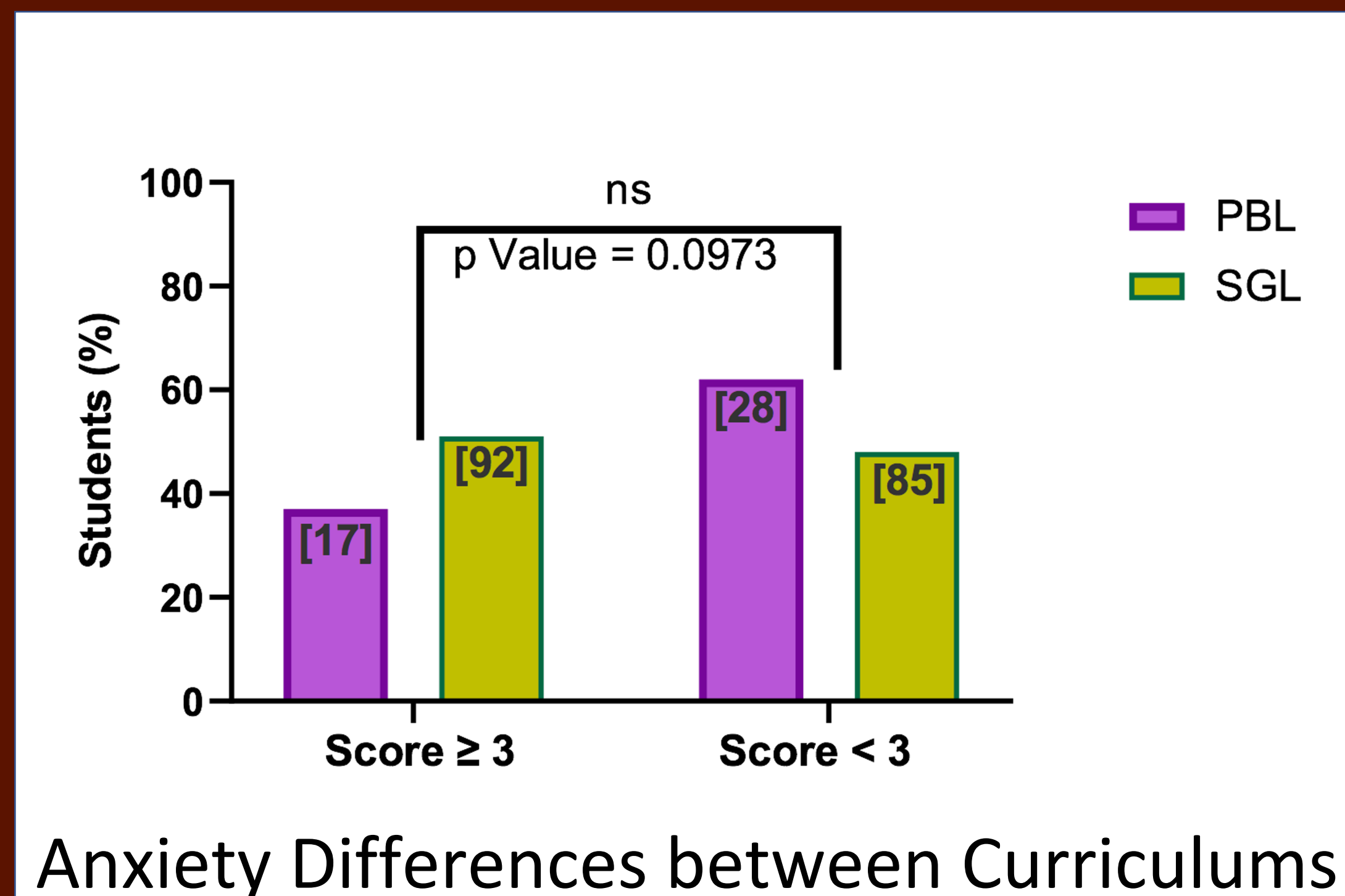
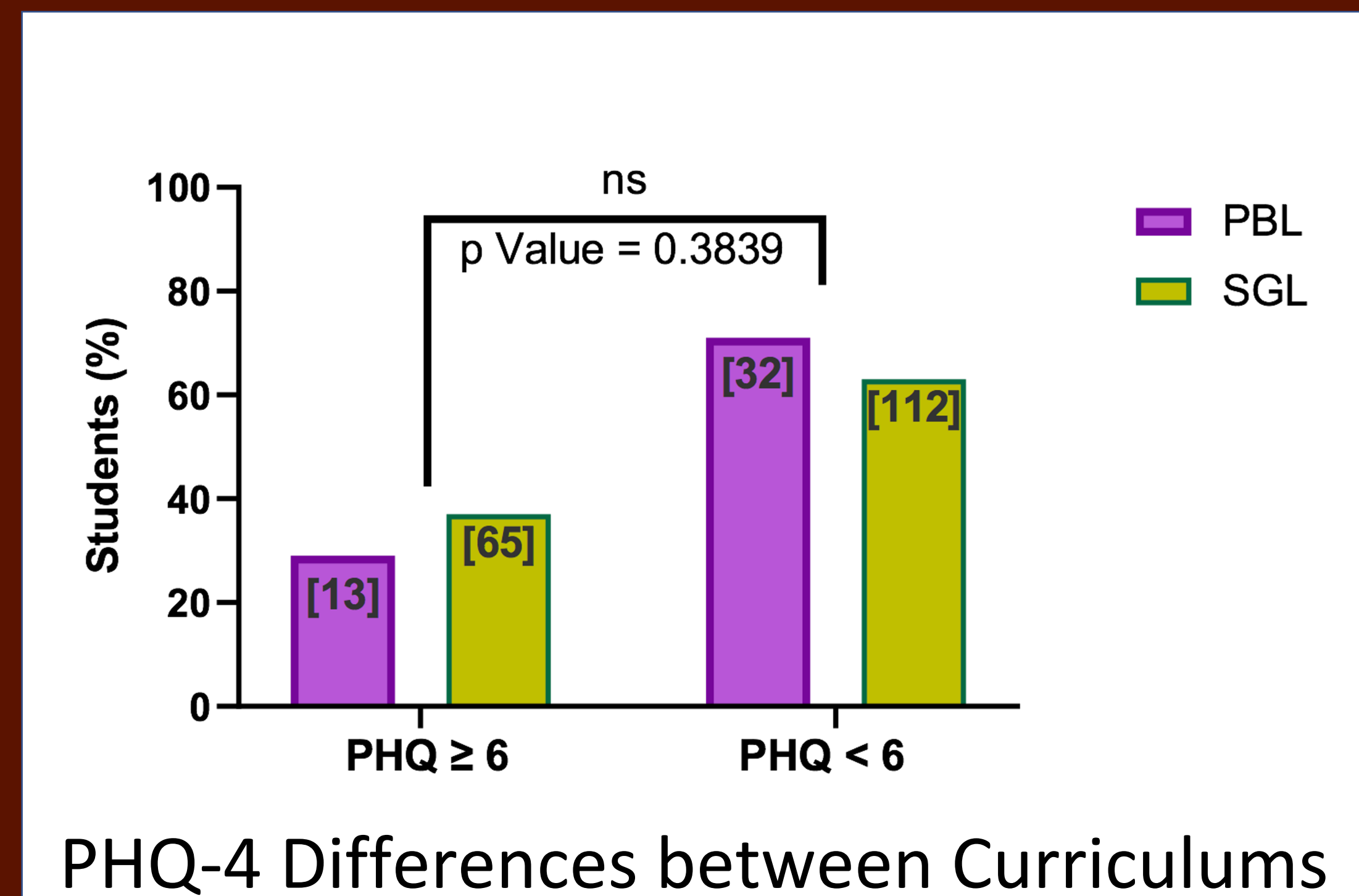
Analysis: Chi-square and ANOVA test evaluated at a 0.05 significance level

Results

- PHQ-4:
 - 27% survey response (222/817)
 - Females: 55% (122/222), Males: 45% (100/222)
 - PBL: 20% (45/222), SGL: 80% (177/222)
- Emotional exhaustion:
 - 29% (234/817)
 - Females: 56% (131/234), Males: 44% (103/234)
 - PBL: 20% (47/234), SGL: 80% (187/234)



Females have a greater propensity towards depression and anxiety compared to their male counterparts.



PROMPT		Gender		Curriculum	
		Male	Female	PBL	SGL
I feel emotionally drained by my studies.	Average	3.2	3.7	3.1	3.6
	p-value	0.00016		0.0042	
I feel used up at the end of a day in medical school.	Average	3.3	3.9	3.2	3.7
	p-value	0.00037		0.0045	
I feel burned out from my studies.	Average	3.2	3.7	3	3.6
	p-value	0.00025		0.00470	

PBL curriculum & males students demonstrated lower levels of emotional exhaustion when compared to the SGL and female peers.

Results con't

- PHQ-4:
 - ≥6: severe and moderate mood symptoms
 - <6: mild and normal mood symptoms
- PHQ Anxiety: ≥3 positive for anxiety
 - Gender Differences: p-value = 0.0002
 - Curriculum Differences: p-value = 0.0973
- PHQ Depression: ≥3 positive for depression
 - Gender Differences: p-value = 0.0157
 - Curriculum Differences: p-value = 0.0606
- Emotional exhaustion:
 - 3 prompts scored on a likert scale: 1 - never to 5 - always
 - Females reported a higher average on each prompt
 - SGL students demonstrated feeling more emotionally drained, used up, and burnt out from studies than their PBL counterparts

Discussion

- Gender differences in PHQ-4 and emotional exhaustion illustrate a greater burden medical school may have on females
 - More must be done to encourage women and create a healthy culture for all students in the medical field
- Our data found no statistically significant difference between the two curriculums in regard to anxiety or depression
 - Demonstrates the toll that a medical school education may take on a student regardless of their curriculum
- Additional research is required to identify the other factors of the PBL curriculum and learning approach that may contribute to a lower burnout rate among its students

References

Clance PR, Imes SA. The impostor phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, Research & Practice*. 1978;15(3):241-247. doi:10.1037/h0086006