"WHAT HAPPENED ON THE EXAM?" A Metacognitive Strategy to Improve Performance

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<section-header> Objectives Participants will: Explore the use of a metacognitive exam wrapper tool for guided exam review. Consider evidence to support the use of exam wrappers in nursing education. Discuss potential benefits to students and faculty.

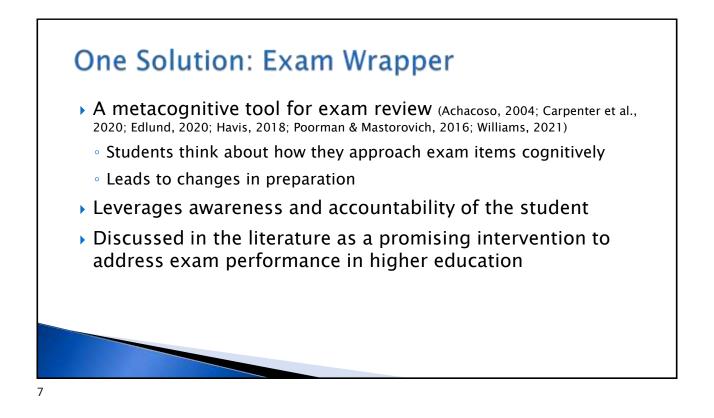
The Problem

- > Student diversity is increasing in nursing
- > Exam performance is an area of concern
- Nursing students often struggle with test-taking skills
 - Particularly if they are part of an underrepresented group (Brown, et al., 2014; Harding, 2012; Jeffreys, 2015)
- High achievers struggle too
- Demonstrated lack of metacognitive skills

What is metacognition?

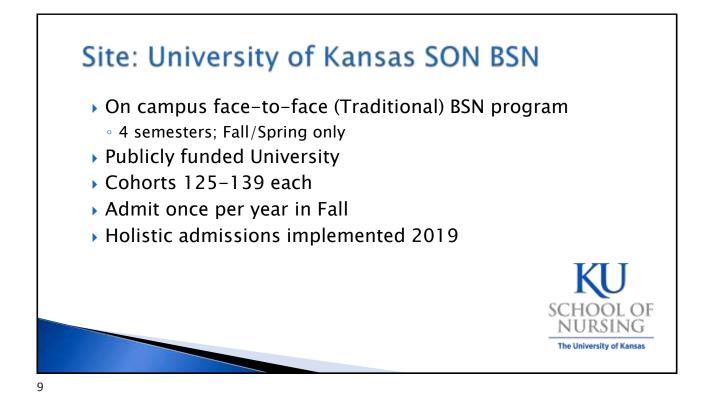
- Metacognition: a person's "awareness and understanding of one's own thought processes" (Oxford University Press, 2022, entry 1)
- Metacognitive skills can provide learners with
 - Insight about what strategies are likely to be effective (Flavell, 1979)
 - The foundation for an effective strategy for exam performance (Williams, 2021)
 - When used to assess thinking and behavior patterns during exams
 - A growth mindset and possibility for change (Muñiz et al., 2022)

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Exam Wrappers in the Literature

- Various models: before/after, students complete independently (Carpenter et al., 2020; Edlund, 2020; Swalve et al., 2021; Williams, 2021)
 - Not done one-on-one with a faculty
 - Subjective vs. objective
- Student perception studied but not faculty perception
- Rarely studied in nursing education



Exam Wrappers for Exam Review

- One-on-one meeting with individual student and faculty
- Use the exam wrapper tool to review missed questions and examine thinking (metacognition) when answering
- Assess findings for patterns
- Make recommendations to address individual needs
 - Study strategies, Test-taking strategies
 - Referrals: Educational Support/Learning Specialists, Counseling Center, ADA Office

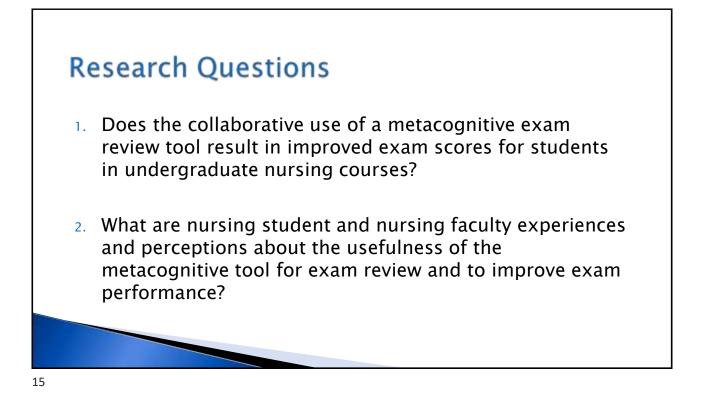
Question #	l changed my answer	l added a "what if scenario" to the test question	l misread the question	l misunderstood the question (what it was asking)	l did not know or understand all the words in the question (vocabulary)	l did not know the content

Exam Wrapper Tool

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8	Х					
11						х
29						х
33						х
34			Х			
36			Х			
46	Х					
51					x	
62			Х			



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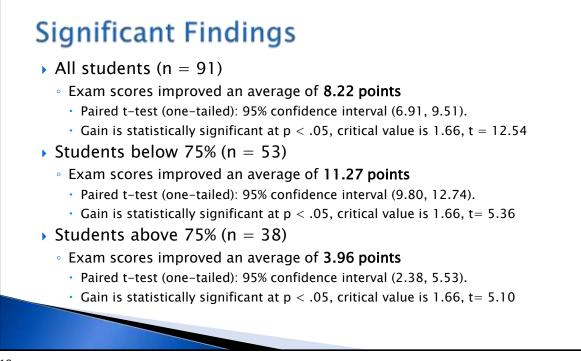
Sampling and Procedures:

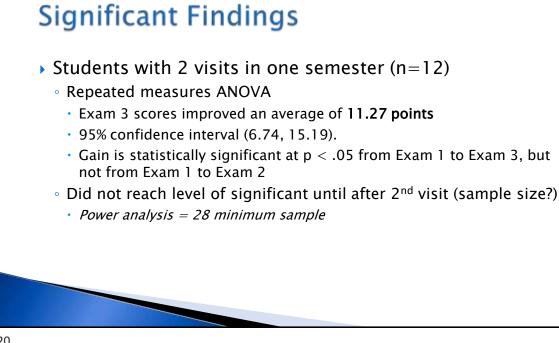
- > Two junior level undergraduate nursing courses examined
 - First two semesters in professional program
- Faculty modified and used a metacognitive tool from literature (Williams, 2021) for exam review in one-on-one meetings with students
- Fall 2021, Spring 2022, Fall 2022, and Spring 2023

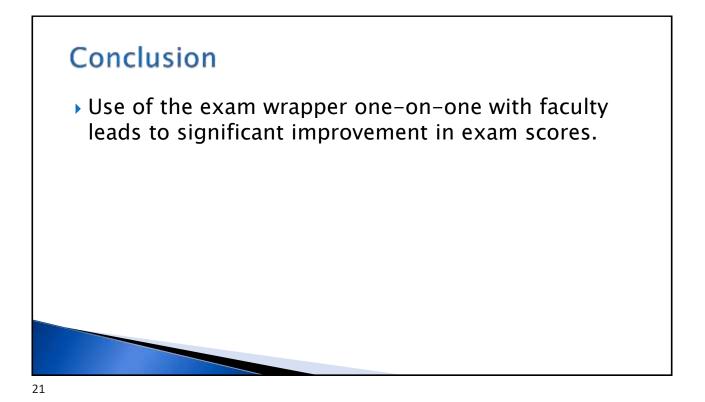
Quantitative Data Analysis and Results

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Qualitative Data Analysis and Results

Qualitative: Qualitative Descriptive Design

Faculty (N=3)

Semi-structured interviews

Students (N=8)

- Open-ended REDCap survey
- Collected demographics
- Used student-created pseudonyms for privacy

Comparative analysis of data for consistent themes

▶ Language usage of participants --> 6 Themes Identified

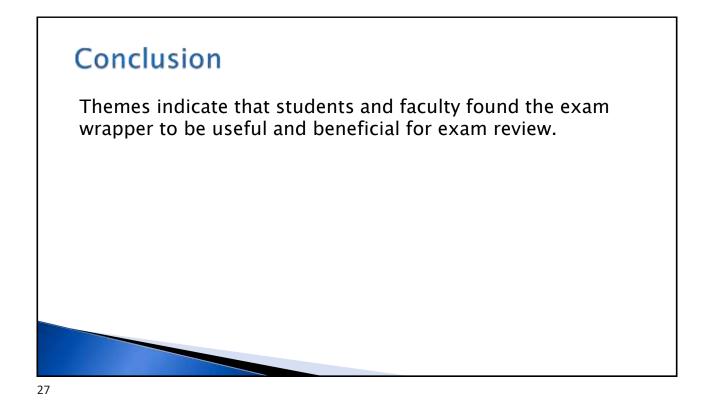
Themes

- Helpful: Both faculty and student cases agree; all participants affirmative
- Builds confidence: Students understand true cause of problem rather than guessing or assuming
- Diagnostic: Identifies the reason(s) for poor exam performance; Allows for plan to address including appropriate referrals
- Promotes ownership: Accountability/responsibility of students; Behavior change required to improve; individualized
- Provides framework: Guides faculty-student interaction; Problemsolving tone; collaborative effort
- Time-intensive: Positive and negative aspects; Faculty burden (1 hour each student meeting); Worthwhile investment

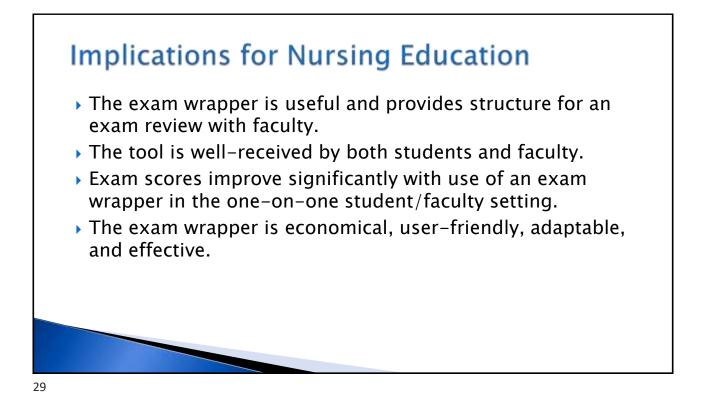
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Supporting Quotes from Faculty

- "I really liked the fact that it [using the tool] makes it puts the responsibility back on the student, as an adult learner. Then it feels like they can take some ownership."
- But then we go that step further as to what were you thinking that made you choose that other answer, you know? I think that's been the beneficial part."
- "It [the tool] helps us give them better instruction on how to take a test and what to do in that area."



What happens next? Implications and Future Research



Future Research

- More research is needed
 - Multiple implementation models
 - Larger sample size
 - More diverse sample
 - Students
 - Institutions and program types



References

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