SIMULATION & CLINICAL JUDGMENT

ANNE NEZ
INTRODUCTION

• SOLUTION FOR LIMITED CLINICAL SITES
• INCREASES STUDENT MEDICATION & SKILLS PRACTICE
• CAN BE USED FOR FOCUSED LEARNING
• ACCESS TO ELECTRONIC RECORDS
PROBLEM STATEMENT

• NURSING FACULTY ARE RELUCTANT TO IMPLEMENT SIMULATION AS AN EDUCATIONAL STRATEGY
BACKGROUND

- IMPLEMENTED AS A LEARNING ENVIRONMENT
- LABS ARE THOUSANDS OF DOLLARS BUT ARE UNDER UTILIZED
- FACULTY VIEWS
PURPOSE

• CENTRAL WYOMING COLLEGE (CWC)
• SIMULATION AS INSTRUCTIONAL TECHNIQUE
• NOT USED WITH FRESHMAN STUDENTS (COHORT 1)
• UNTIL FALL 2014 (COHORT 2)
• EXAMINE THE EFFECT OF CLINICAL JUDGMENT FROM SIMULATION
• RN 2010 FUNDAMENTALS ATI EXAM- CLINICAL JUDGMENT SUBCATEGORY
SIGNIFICANCE

• FACULTY RELUCTANCE TO CHANGE OR IMPLEMENT SIMULATION

• CLINICAL JUDGMENT NEEDED IN THE JOB SETTING AS AN RN= SIGNIFICANCE

• SIMULATION LAB UNDERUTILIZED

• TRADITIONAL CLINICAL PERCEIVED BY FACULTY AS “EASIER”
RESEARCH QUESTION & HYPOTHESES

• QUESTION: WHAT IMPACT DOES THE USE OF SIMULATION HAVE ON THE CLINICAL JUDGMENT OF ASSOCIATE DEGREE NURSING STUDENTS?

• HYPOTHESIS: SIMULATION INCREASES CLINICAL JUDGMENT OF ASSOCIATE DEGREE NURSING STUDENTS.

• NULL HYPOTHESIS: SIMULATION DOES NOT INCREASE THE CLINICAL JUDGMENT OF ASSOCIATE DEGREE NURSING STUDENTS.
SCOPE & LIMITATIONS

• A CONVENIENCE SAMPLE - NOT RANDOMIZED
• CENTRAL WYOMING COLLEGE (CWC)
• ATI RN FUNDAMENTAL 2010 TOOL
LITERATURE REVIEW

• SIMULATION TEACHING STRATEGY IN NURSING

• CRITICAL THINKING, CLINICAL JUDGMENT, SELF-CONFIDENCE, EFFICACY, NURSING KNOWLEDGE

• CLINICAL JUDGMENT & MEASUREMENT IN SIMULATION

• LASSITER CLINICAL JUDGEMENT RUBRIC (LCJR)
PROJECT DESIGN & INSTRUMENT

- PROJECT DESIGN-QUASI-EXPERIMENTAL QUANTITATIVE RETROSPECTIVE DESIGN

- TOOL- FUNDAMENTALS ATI 2010 ASSESSMENT EXAM

- RELIABILITY & VALIDITY
DATA COLLECTION, ANALYSIS, & MANAGEMENT

• AFTER IRB APPROVAL- RESULTS COLLECTED FROM THE PASSWORD PROTECTED ATI WEBSITE BY NURSING PROGRAM DIRECTOR

• APPROVAL GAINED FROM CWC & ATI

• STATISTICAL ANALYSIS NON-PAIRED T-TEST

• PER REQUEST OF CWC, DATA COLLECTED WITHOUT STUDENT NAMES AND DESTROYED AFTER 5 YEARS

• DATA MAINTAINED ON PASSWORD PROTECTED COMPUTER
ETHICAL CONSIDERATIONS

• CONVENIENCE RETROSPECTIVE SAMPLE- PROJECT WILL HAVE NO EFFECT ON THE STUDENTS

• NO DEMOGRAPHIC DATA COLLECTED, NO EFFECT ON STUDENT LEARNING OR EFFECT ON GRADE

• SAMPLE SIZE- ASSOCIATE DEGREE NURSING STUDENT, 1ST SEMESTER, 69 STUDENTS
RESULTS

- **SAMPLE-** COHORT 1 - N=33  COHORT 2 - N=36

*Summary Statistics of RN Fundamentals Outcome Scores*

<table>
<thead>
<tr>
<th>Cohort</th>
<th>N Obs</th>
<th>Outcome</th>
<th>Minimum</th>
<th>Median</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Dev</th>
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<tbody>
<tr>
<td>1</td>
<td>33</td>
<td>Clinical Judgment</td>
<td>53.6</td>
<td>67.9</td>
<td>89.3</td>
<td>68.29</td>
<td>8.69</td>
</tr>
<tr>
<td>2</td>
<td>36</td>
<td>Clinical Judgment</td>
<td>53.6</td>
<td>75.0</td>
<td>92.9</td>
<td>74.70</td>
<td>8.80</td>
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</table>
**RESULTS- T-TEST**

Table 2
*Results of Two-Sample t-Tests for Total Score*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Difference (cohort 2 – cohort 1)</th>
<th>Standard Error</th>
<th>DF</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Judgment</td>
<td>6.41</td>
<td>2.11</td>
<td>67</td>
<td>3.04</td>
<td>0.0034</td>
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</tbody>
</table>
MEANING OF THE RESULTS

• COHORT 2 HAD A HIGHER CLINICAL JUDGMENT SCORE THAN COHORT 1
• STUDENTS THAT HAD SIMULATION A STATISTICALLY SIGNIFICANT DIFFERENCE IN CLINICAL JUDGMENT SCORES
SIGNIFICANCE OF THE RESULTS TO THE NURSING PROFESSION

• CAPSTONE RESULTS…..
• SIMULATION IS A GUIDED CLINICAL EXPERIENCE
• DEFENDS THE COST OF SIMULATION- ESPECIALLY DURING BUDGET DEVELOPMENT
• SIMULATION IS NOT HARMFUL
RECOMMENDATIONS FOR FUTURE WORK

• EVALUATION OF SIMULATION AND THE EFFECT ON EACH OF THE SUB-CATEGORIES OF ATI
• LITERATURE IDENTIFIES BASIC CARE & COMFORT, PSYCHOLOGICAL INTEGRITY
• INCORPORATION OF SIMULATION EARLIER IN THE STUDENT CAREER
• EVALUATION OF SIMULATION OBSTACLES AND IMPROVING THE WORK LOAD FOR FACULTY
SUMMARY

• QUESTION: DOES SIMULATION INCREASE CLINICAL JUDGMENT IN ASSOCIATE DEGREE NURSING STUDENTS?
• CONVENIENCE SAMPLE OF TWO DIFFERENT COHORTS
• QUASI-EXPERIMENTAL QUANTITATIVE RETROSPECTIVE DESIGN
• FUNDAMENTAL 2010 ATI EXAM USED AS THE TOOL
• COHORT EXPOSED TO SIMULATION HAD HIGHER CLINICAL JUDGMENT SCORES
QUESTIONS?
REFERENCES


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