Evaluating Interprofessional Educational Intervention: Design and Analysis Plan for a Four-Year Advanced Nursing Education Project

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**Background**

- To promote healthcare collaboration among students of various disciplines, an interprofessional (IP) education project was developed and implemented in southwest Indiana in spring 2017.
- Interprofessional healthcare teams consisted of students in Psychiatric Mental Health Nurse Practitioner, Family Nurse Practitioner, Adult Gerontology Primary Care Nurse Practitioner, and Social Work specialties.
- The IP teams collaborated to develop preventive healthcare interventions for patients at multiple clinical sites.
- Main outcomes for evaluation:
  - Students’ IP competencies
  - IP team’s intervention impact on patient physical and mental outcomes.

**Objective**

- Describe the design and analysis plan outlined to evaluate the implementation effect of a practice-based clinical education project focused on improving students’ IP healthcare competencies and patients’ health outcomes

**Methodology**

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<tr>
<th>Participants Recruitment</th>
<th>Study Design</th>
<th>Statistical Analysis</th>
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<td><strong>Participants Recruitment</strong></td>
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<tr>
<td><strong>Student Evaluation</strong></td>
<td><strong>Pre vs. Post: paired t-test</strong></td>
<td><strong>Study vs. Comparison (adjusting baseline difference, sociodemographic characteristics, specialty and previous clinical experience): propensity score matching</strong>¹</td>
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<td><strong>Voluntarily Joined</strong></td>
<td><strong>Practice-based IP Healthcare Education Project</strong></td>
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<td><strong>Comparison Group</strong></td>
<td><strong>Regular Curriculum</strong></td>
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<td><strong>C-Pre</strong></td>
<td><strong>C-Post</strong></td>
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<td><strong>Baseline Data Collection Point</strong></td>
<td><strong>Time</strong></td>
<td><strong>Post Assessment Data Collection Point</strong></td>
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**Patient Evaluation**

<table>
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<th>Patients with primary and/or mental health problems voluntarily enrolled and met with the IP teams on a regular basis</th>
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<td>V1</td>
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**Evaluation of patterns of patient physical and mental health indexes change over time: Joinpoint Trend Analysis**²

- Identify factors influencing intervention effect:
  - Stratified trend analysis
  - Regression models for longitudinal data

**Notes:**

- Patients Receive Preventive Intervention Healthcare from the IP teams
- Time
- V1, V2, V3,...,Vn: Patient health data collection at initial visit (V1), second visit (V2), third visit (V3),...and last visit (Vn)

**References**


**Current Data Collection and Findings**

- As of Spring 2019, a total of 22 IP teams involving 54 students have served 91 patient participants.
- Patient volume has gradually improved since implementing some patient recruitment strategies during the second project year. However, the majority of the patients (58%) only met with the IP teams two times or less. Continuous patient follow-up is expected for more robust intervention assessment on patient health outcomes.
- Fifty-four and 72 students have participated in the study group and comparison group, respectively. Propensity score matching test results indicated that after adjusting for baseline difference, the study group scored significantly better in interprofessional competency and self-efficacy for all four domains (communication, team/teamwork, roles/responsibilities and ethics/value).

**Conclusion**

- This presentation provides a sample framework about study design and statistical analysis for similar practice-based clinical education projects.
- The presentation also emphasizes the importance of considering potential confounding and modification effects at both study design and statistical analysis phases.

**Acknowledgement**

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