

Factors Shaping Academic Success: In-Depth Evaluation

Azizeh Sowan, PhD, RN, MSN, MSDA, MBA, FAAN

Background

Nursing Workforce Challenges:

- Shortage
- Lack of diversity

Nursing Education Challenges:

- Faculty shortage
- Scarcity of educational resources
- Low enrollment and graduation numbers
- Attrition
- Lack of diversity among students & faculty population
- Meeting standards of accrediting bodies

Critical Need

Academic success is multidimensional

Available studies:

- Focused on cognitive variables only
- Focused on demographic variables only
- Examined limited variables
- Inconsistent findings

Purpose

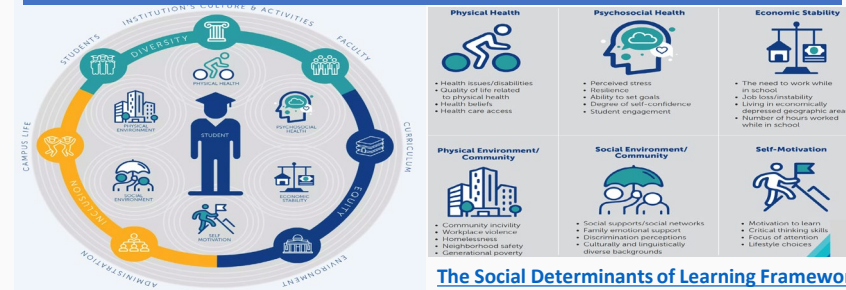
Examine the role of “all captured” cognitive and sociodemographic predictors on academic success and academic challenges.

Academic Success: Definition

No one definition. Different measures:

- Pre-nursing performance
- Early academic success
- Performance in courses (GPA)
- Timely completion of program
- Attrition
- Graduation

Framework



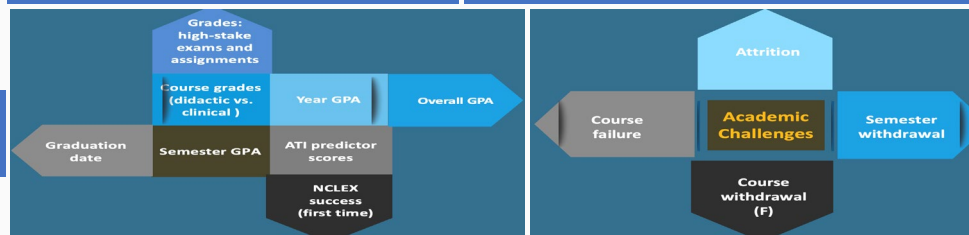
Methods

Design: QI, secondary data analysis
Setting: UT Health SA School of Nursing
Sample: 3 cohorts

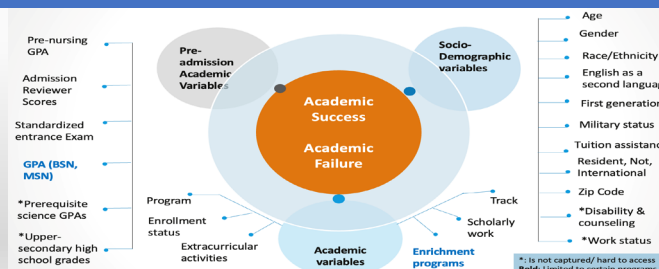
- 1 cohort pre COVID
- 1 cohort during COVID
- 1 cohort post COVID

Academic Success

Academic Challenges



Study Predictors



Systems

- Canvas
- Nursing CAS
- Starfish
- Kira Talent
- PeopleSoft
- ATI
- NCLEX RN Licensure System

Data Analysis Plan

- Prediction models and machine learning
- Predictors of academic success
- Predictors of academic challenges
- Considering interdependence/correlations among variables

Considerations

- Academic success is multifactorial
- No single predictor is sufficient to guide QI in education (recruitment, selection, admission, enrollment, graduation)
- GPA is not comparable across schools (variability in structures and operations)
- Multivariable prediction of academic success can help identify at risk group
- Prediction models are as good as the quality and comprehensiveness of input data
- Schools use different systems to gather student-related data that are not interoperable

Limitations

- The Social Determinants of Learning Framework provides a multidimensional “conceptual” insight into academic success, however, investigating the effect of the multidimensions on success may not be feasible in many settings
- Data gathering is time and labor intensive, and resources are scarce
- Self reported student data
- Outdated student data

References





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Biography

Azizeh K. Sowan is a tenured Professor at the University of Texas Health Science Center San Antonio School of Nursing. She holds a master's degree in Data Management and Analytics and a master's in Business Administration from the University of Texas at San Antonio, a master's degree in Nursing Education from the University of Jordan, and a PhD in nursing from the University of Maryland at Baltimore.

Dr. Sowan brings rich academic, research, and clinical expertise from the Middle East and the US.

Dr. Sowan is a national expert and consultant in informatics and patient care technology. She also serves as a research informatics consultant for a Magnet, level-1 trauma medical center in San Antonio for more than 10 years. Her research focuses on eliminating technology hazards within complex adaptive healthcare systems and improving quality and safety. She utilizes large datasets and log data from medical devices in her research. She has published many articles with a focus on technology hazards and national patient safety goals, has been awarded several research grants, and received several conferences, best publications, and research projects awards.

For over 20 years, Dr. Sowan has taught different courses in the undergraduate and graduate nursing programs such as informatics, theory, statistical methods, leadership, research, and policy and quality. She mentored many students in master theses and doctoral dissertations and capstone projects.

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