Does the Behavioral Immune System Differ Based on Clinical Training and Major in Undergraduate Students?

Tyler Driscoll, MSN; Natalie Shook, Ph.D.
University of Connecticut School of Nursing

Introduction

Behavioral Immune System (BIS) - psychological system that promotes affective and cognitive responses (e.g., disgust sensitivity, germ aversion) to reduce pathogen exposure

Individual differences in BIS sensitivity and BIS more reactive when pathogen threat is salient.

Student Nurses:

- Choose a major and future career with known likelihood of exposure to pathogens
- Interact with pathogen sources during clinical training

Research Questions

1) Does BIS differ between nursing students and their non-nursing student peers?

Hypothesis: Nursing students will score higher on BIS measures than non-nursing students

2) Is clinical training associated with increased BIS reactivity?

Hypothesis: Nursing students in clinical will score higher on BIS measures than nursing students not in clinical

Method

Undergraduate students completed an online survey

Sample

n=184 nursing majors
n=104 pre-clinical (years 1 and 2)
n=65 in clinical (years 3 and 4)
n= 94 non-nursing major

Measures

- Three Domains of Disgust Scale (Olatunji et al., 2012)
- Perceived Vulnerability to Disease: Subscales Germ Aversion and Perceived Infectability (Duncan et al., 2009)

Question 1 Analysis: One-Way MANOVA Assessing Differences in BIS Sensitivity Between Nursing Students and Non-nursing Students

	Nursing Students	Non-nursing students
Pathogen Disgust	M=35.02 SD=6.47	M=35.80 SD=6.57
Germ Aversion	M=34.33 SD=6.70	M=34.93 SD=8.32
Perceived Infectability	M=26.54 SD=8.25	M=27.24 SD=8.75

Question 2 Analysis: One-Way MANOVA Assessing Differences in BIS Sensitivity Between Nursing Students by Year in School

	Years 1-2	Years 3-4
Pathogen Disgust	M=35.31 SD=6.06	M=34.73 SD=6.55
Germ Aversion	M=34.83 SD=6.39	M=33.75 SD=5.90
Perceived Infectability	M=25.4 SD=6.61	M=25.18 SD=6.74

Results

No statistically significant differences were found between nursing students and non-nursing students, nor between nursing students engaged in clinicals and nursing students not engaged in clinicals.

Conclusion

- The null findings invite interpretation as to why BIS sensitivity is similar across groups despite presumed difference in pathogen exposure. Nursing school clinical experiences may not be sufficient sources of pathogen threat salience.
- Further analysis controlling for known confounding variables, such as gender, will clarify these results.
- Future research should explore other factors, such as knowledge of germ theory, self-efficacy in infection management, or self-reports that differentiate pathogen exposure vs. pathogen threat and their impact on BIS sensitivity.