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Tiffany K. Ho

Virginia Commonwealth University

Divya Krishna

Virginia Commonwealth University

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Risk Factors Associated with First-Year College Dropout



Tiffany Ho^{1,3} & Divya Krishna^{2,3}, Danielle Dick, PhD^{4,5,6}, Amy Adkins, PhD⁴, & Peter Barr, PhD^{4,5}

¹Department of Biology, College of Humanities and Sciences
²Department of Biomedical Engineering, School of Engineering
³Honors College
⁴Department of Psychology, College of Humanities and Sciences
⁵Department of African American Studies, College of Humanities and Sciences
⁶Department of Human and Molecular Genetics

Introduction

College attrition in the United States is a pervasive issue among young adults. Among those 25 year or older, 19.5% of those who attempted college failed to obtain a degree (U.S. Census Bureau, 2006). Dropout is problematic for a number of reasons. Students who dropout of college earn less than college graduates, and are still responsible for paying back student loans (Horn, Berger, & Carroll, 2004). Not only is college attrition financially harmful on an individual level, it also has broader social implications by affecting economic growth and national development (Martinez, Sher, & Wood, 2008).

Previous research has shown that a variety of factors can impact college student's academic performance, including healthy nutrition, physical activity, substance use, smoking, early sexual activity, bullying, excessive television watching, internet use, and playing video games (Busch, Luyen, Lodder, & Schrijvers, 2014). Heavy alcohol use is the most notable risk factor for attrition and poor academic performance because it is prevalent among college-aged individuals. Heavy alcohol use is also linked to increased likelihood of injury, assault, property damage, and mortality (Johnston, O'Malley, Bachman, and Schulenberg, 2005) and may be indirectly linked to academic performance (Conway & Diplacido, 2015). **The purpose of the current study was to explore possible predictors of dropout in students after their first year of college.**

Methods

- Spit for Science 2011 – 2013 cohorts
- Students who participated in fall of freshman year (N=6,105)
- Logistic regression models for factors associated with dropout after freshman year using the *logit* command in Stata14.
- Linear regression models for different risk factors associated with GPA.
- Measures used included:
 - Binary indicator for dropout after freshmen at VCU
 - Students' GPAs at the end of the semester
 - The Big Five Inventory of personality traits
- Risk factors included:
 - Stressful/traumatic events before coming to VCU
 - Familial, mental/behavioral risk factors
- Demographic: age, sex, race, cohort, & parental education level

Results

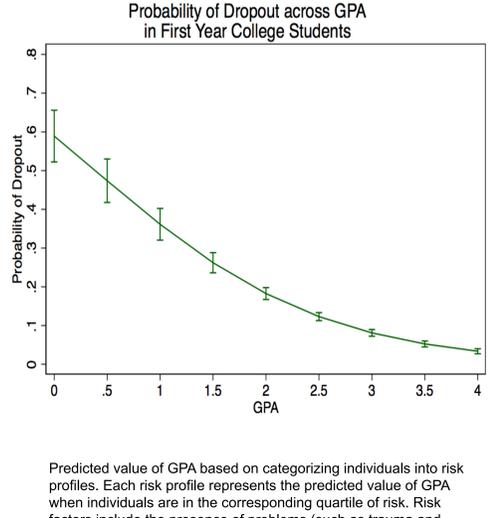
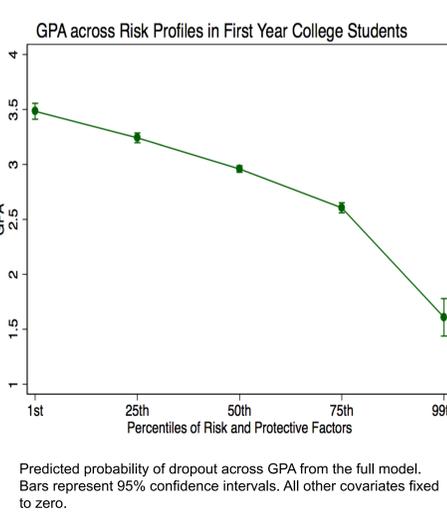
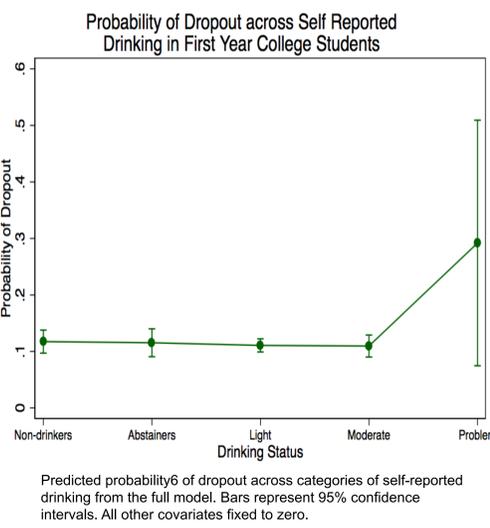
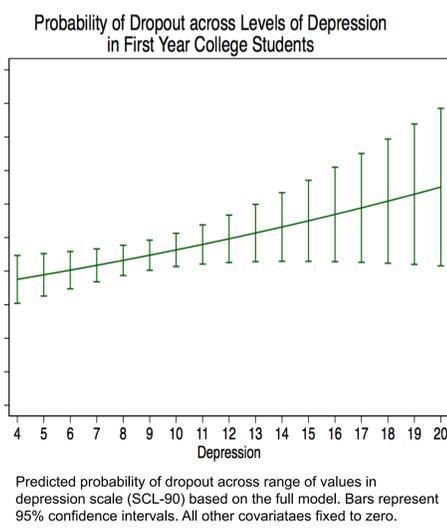
- Negatively Associated with Dropout Rates
 - Greater parental education (OR = 0.908, $p < 0.01$)
- Positively Associated with Dropout Rates
 - Greater levels of depression (OR = 1.068, $p < 0.01$)
 - High school peer deviance (OR = 1.024, $p < 0.05$)
 - Heavy drinking (OR = 3.8, $p < 0.05$)
 - Stressful life events (OR = 1.078, $p < 0.05$)
- Personality & familial risk factors not significantly associated with dropouts
- After GPA (OR = 0.395, $p < 0.001$) was included as covariate
 - Depression (OR = 1.04, $p < 0.05$) = only risk factor significantly associated with dropout
 - Parental education, depression, high school peer deviance, heavy drinking, stressful situations p -values > 0.05

Discussion

Our research question focused on the risk factors that may influence college dropout after student's first year, including health outcomes, family, stress/trauma, and personality. Multiple risk factors, including depression, high school deviance, heavy drinking, and stressful life events, were positively and significantly associated with dropout. Only parental education was negatively correlated with dropout. However, almost all these previously significant associations disappeared when GPA was included in the statistical analysis. GPA was the strongest predictor of dropout. Supplementary analyses revealed that many of the factors that were found to be significantly associated with dropout rates were significantly related to GPA, suggesting that these risk factors may influence dropout through their effect on GPA.

Despite our significant findings, there were several limitations. The study was constricted to individuals in the first three cohorts who answered the survey during fall of their freshmen year. Our measures were limited to self-reported items via online surveys, and are subject to reporting bias. Additionally, the dropout variable was unclear because transfer students were also included in the dropout group. The study only focused on factors that might promote dropout. Because not every risk factor was included, further studies could include protective factors that affect GPA. Future directions include formally testing the mediation model between risk factors and dropout.

Data and Graphs



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