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## ***Predictors of Success on the Board of Certification Exam***

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### **CONTEXT**

When the CAATE implemented a 70% first time pass rate on the BOC exam, many AT programs became non-compliant and many wondered about the future of their program. Due to this uncertainty, it is vitally important to comprehensively investigate a myriad of variables that may impact success on the BOC exam.

### **OBJECTIVE**

To provide an exploratory analysis of predictors of success on the BOC examination.

### **DESIGN**

A cross-sectional study using web-based survey, which asked participants to identify personal and educational factors which may have influenced the outcome on their BOC exam.

### **SETTING**

NATA Athletic Training members.

### **PARTICIPANTS**

A total of 302 participants (30.2% response rate) completed any part of the survey with 113 (11.5%) participants completing the survey in its entirety.

### **INTERVENTIONS**

Participants were asked various survey questions. The questions within the survey asked the individual's demographic information and various educational questions related to educational attributes of the institution from which they became

eligible to sit for the BOC exam.

### **MAIN OUTCOME MEASURES**

Success on the BOC Exam was identified as the dependent variable. Independent variables included; Personal (e.g. gender, ethnicity, level of parent/guardian education, when BOC was taken, GPA), and educational (e.g. degree earned, Carnegie classification, immersive clinical experience, affiliation with a medical school). Pearson Chi-Square, Independent T-Tests and Omnibus Test of Model Coefficients were calculated to determine which variables influenced success on the BOC.

### **RESULTS**

The only association among assessed categorical predictors that neared significant with 1<sup>st</sup> time pass rate was when the participant sat for certification ( $\chi^2 = 4.9$ ,  $p = 0.08$ ), with the majority of those who did pass sitting in the last semester of coursework. An independent t-test revealed those who passed on their 1<sup>st</sup> attempt had significantly higher overall GPA ( $3.6 \pm 0.3$  vs.  $3.3 \pm 0.4$ ;  $p < 0.01$ ) as well as major GPA ( $3.7 \pm 0.2$  vs.  $3.4 \pm 0.3$ ;  $p < 0.01$ ). Finally, a logistic regression was performed in order to produce a prediction equation for probability of 1<sup>st</sup> time pass rate on the BOC exam from overall and major GPA data.

Results from that analysis resulted in a significant model ( $p < 0.05$ ) with a final prediction equation of

$$P_{\text{GPA}}(\text{pass}) = 1 / 1 + e^{-(8.572 + (0.084 * \text{Overall GPA}) + (2.771 * \text{Major GPA}))}$$

### **CONCLUSIONS**

The results of this study indicate that students and AT program directors (PD) should be aware that GPA (both major and

overall) may significantly impact BOC first-time pass rate, and PD should take this into consideration during program admittance. Additionally, PDs should strongly encourage students to sit for the exam during their last semester in their program. Although the results from this study support the idea of GPA monitoring, continued research should focus on identifying variables impacting success on the BOC exam.

**KEY WORDS:** *prediction variables, GPA, BOC exam, pass rate*