Do admissions metrics predict PhD completion directly, or indirectly through graduate GPA? MIKE VEROSTEK, University of Rochester, BEN ZWICKL, CASEY MILLER, Rochester Institute of Technology — Graduate admissions committees are slowly ending the use of GRE scores due to concerns that they restrict access to underrepresented groups but have limited predictive utility. Similar to previous analyses of PhD completion (Miller et al 2019), this study uses common admissions metrics such as undergraduate GPA (UGPA) and GRE scores to predict PhD completion. Now, a counterfactual mediation framework is used to determine whether these metrics directly predict PhD completion or indirectly predict completion via an intermediate variable (graduate GPA). Consistent with prior work, results show that UGPA is a stronger predictor of completion than Physics GRE scores. However, the analysis reveals that these effects are fully mediated by graduate GPA, suggesting that admissions metrics are not directly measuring characteristics needed to complete a PhD. Rather, they are measuring traits linked to graduate course performance that in turn affect graduate attrition. Poor course performance may negatively influence personal factors (e.g., self-efficacy, identity), limit access to research opportunities (e.g., repeating classes, ease of finding a research lab), or may indicate a lack of preparation for research, all of which could hinder PhD completion; however, more research is needed.

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