Reassessing Student Potential for Medical School Success: Distance Traveled, Grit, and Hardiness

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An admissions committee is choosing between two students for its final medical school slot. Mark, compared to Derek, comes from a more prestigious university and has a slightly higher grade point average (GPA), better medical college admission test (MCAT) scores, and more recommendations from scholars known for their research publications. Derek’s recommendation letters, however, mention that he possesses a set of soft skills acquired from a disadvantaged background. His recommenders state these soft skills are the reasons for his academic and professional success. All things considered, Mark would probably be offered the final slot. Yet, what if these soft skills (i.e., perseverance, commitment, and endurance) were found to be just as useful at predicting medical school success as GPA and MCAT scores? The committee might then think about ensuring that both Mark and Derek at least receive an interview. The current selection process of most medical schools, however, may normally lead the committee to overlook or dilute the significance of these important soft skills. Subsequently, the medical school may miss out on a promising student like Derek who may develop into a successful physician like Mark.

This essay establishes a framework for rethinking the medical and graduate school admissions process in favor of a more holistic perspective that more sufficiently accounts for the characteristics that predict student success. We suggest that 3 concepts—distance traveled, hardiness, and grit—can be used as factors in the admissions process to create a more diverse cohort of students along racial, class, and gender lines without compromising quality.

DISTANCE TRAVELED

In sociological terms, predicting success may be best viewed through the lens of status attainment and intergenerational mobility. Although we like to think that we live in a meritocratic society, socioeconomic background remains a key determinant of intergenerational mobility.\(^\text{1,2}\) In other words, students’ family backgrounds impact their education attainment, occupational status, income, and wealth capacity. Demographic factors (e.g., race, class, and gender) and family background converge with opportunity structure to differentially influence success. Consequently, when potential students apply to medical or graduate school, some students have traveled further from their social class origins than others. This implies that some individuals have potentially persevered more to reach the same life stage.

Status attainment and intergenerational mobility researchers take divergent approaches to understanding and explaining mobility. Early understandings of status attainment conceptualized status as occupational attainment and focused strictly on socialization as an explanation.\(^\text{3}\) In particular, Blau and Duncan showed that a father’s occupation related to how much education children attained and the occupations these children later secured as adults. As the saying goes, they found that “the apple does not fall too far from the tree.” In this case, the tree would be the father’s education and occupation, not necessarily childrearing or parenting skills. Status attainment models, however, were critiqued for not taking into account social factors that hinder the status attainment process of disadvantaged groups.\(^\text{4,5}\) While these models worked well for Whites, they did not adequately explain the mobility patterns of Blacks.\(^\text{6,7}\) Since Blau and Duncan’s original research program began, scholars now consider education and income, in addition to occupation, as important markers of success and worthy of inclusion in status attainment models.\(^\text{1,7–8}\)

In addition to these more traditional markers of success, current research stresses the importance of investigating parental resources, neighborhood contexts, culture, and cognitive factors as predictors of success.\(^\text{1,6,8–13}\) Nonetheless, regardless of whether occupation, income, or wealth are used to measure socioeconomic status, children are most likely to inherit their parents’ economic status.\(^\text{14}\) In other words, children born in poverty are less likely to achieve economic stability and success compared to their more advantaged counterparts. Meanwhile, it is highly likely that those from more affluent backgrounds will achieve what society generally considers success.

Education, however, is an important factor in facilitating success and helping to level the playing field for disadvantaged groups. Although the power of education is to be applauded, there is still cause for hesitation. Education may decrease the effect of socioeconomic background, but it does not completely erase racial, gender, and social class disparities.\(^\text{1,2,6,5}\) As U.S. Surgeon General Regina Benjamin often states in her talks, the percentage of Black physicians (about 4%) has stayed roughly the same for a century. The percentage of Hispanic physicians is similar at roughly 5%. So, while the percentage of female physicians who are under forty (about 40%) is increasing compared to the percentage of female physicians overall (less than 30%), the percentage of under-represented minorities (e.g., Blacks, Latinos, and Native Americans) is not increasing at a similar rate.\(^\text{15–17}\)
Social scientists and education researchers assert that under-represented minorities face structural and cultural barriers that create a more difficult climb to success. On one hand, these groups deal with intellectual isolation, marginalization, and benign neglect from being one of the only members of their groups in predominately White professional settings. 18,19 On the other hand, they may experience strained interactions with family members and friends who are not upwardly mobile and feel a form of social indebtedness to help the communities that uplifted them. 20,21 Cultural and cognitive factors such as social support, expectations, aspirations, and values (e.g., strong work ethic and racial uplift) are important determinants of success for minorities and individuals from less affluent backgrounds. 10,21–25 Because minorities feel the need to give back to their local communities, individuals from disadvantaged backgrounds may be more likely to return close to where they were raised to assist with providing quality care to and changing the educational and economic trajectories of local residents. 3 In this case, minorities and those from less affluent backgrounds may supply an essential health need in underserved areas. Returning to our analogy in the introduction, a person like Derek becomes essential to include in the professional pipeline.

RETHINKING SUCCESS: THE IMPORTANCE OF HARDINESS AND GRIT

We must move beyond a cognitive-only model when trying to predict academic success in students because these models are less attentive to how social factors differentially influence individual’s pathways to success. Those who have traveled further socioeconomic distances, as a function of background disadvantages, may possess a unique set of characteristics or soft skills that have helped them persevere and endure to be in their current position. Yet, these characteristics must be developed and combined with opportunities to enhance successful outcomes. The first step to realize those characteristics begins with reconceptualizing the factors and tools we use to predict success in higher education.

Achievement tests are a primary means of gaining entry into prestigious universities and medical and graduate programs. However, these tests are lacking when it comes to important factors other than intelligence that are predictive of success. 24–26 For instance, McClelland 26 concludes that motivation is an important facilitator of self-directed action, even more so than values or education alone. Recent research supports the importance of soft skills, or individual-level characteristics like perseverance, in predicting academic and real-world success. 27–30 Perseverance and planning converge to increase the likelihood of completing an action and facilitating positive academic performance. 27,28,31 For example, Zhang found that undergraduate students with detailed plans for completing short-term personal academic goals were more likely to do so if they showed higher levels of perseverance. Additionally, the ability to overcome traumatic experiences helps build a high level of resiliency that benefits individuals in their pursuits of success. 32 Among high schoolers, students who exemplified courage—perseverance despite fear and trouble of understanding the material—performed better academically and were more engaged. 28 Finally, the role of commitment cannot be overstated. 30 Collectively, this body of research suggests the need to seriously consider soft skills when trying to predict student success, especially in situations when performance is based primarily on interactions outside of the classroom like in the military or medical school.

Grit and hardiness are two soft skills noted for being important for military leadership and academic success. 30,33 Grit is defined as “perseverance and passion for long term goals.” 25(p1087) In many ways, grit measures endurance and the ability to persevere. Duckworth and Quinn 34 recently developed a grit scale composed of eight items measuring perseverance of effort and sustained interest that shows high reliability and validity. While they note that a limitation is that grit may be context-specific, they find that the scale accurately predicts higher GPAs, cadet retention, watching television less, and the likelihood of reaching the final round of a national spelling bee. We assert this scale becomes a complement to affirm the potential of students, or add value to a students’ portfolio who may be on the admission “bubble.” While applicants could simply take a grit survey, an informant-reported version of the grit scale provides an alternative to self-reports. 34

Psychological hardiness represents a combination of commitment, maintaining control, and being open to challenges. 30 Embodying hardiness is pertinent when having to work in stressful situations. Hardiness is measured using 15 items to measure control, commitment, and amenability to grow from challenges. 30 Using a sample of graduates from West Point, Bartone et al. 30 found that hardiness and grit were better predictors of leader performance and adaptability than standardized tests. Altogether, grit and hardiness can be assessed using roughly a 23-item survey. 30 This survey would include measures of individual-level characteristics that enhance our ability to predict medical and graduate school success. Grit and hardiness would also help increase diversity among incoming students by determining the extent to which challenging backgrounds instill skills that predict success. Enacting holistic admissions policies and recruiting from historically Black colleges and universities as well as predominantly Hispanic-serving institutions are 2 ways to increase the diversity of incoming cohorts.

CREATING A MORE HOLISTIC ADMISSIONS PROCESS

Because individuals travel varying socioeconomic distances, and disadvantaged group members draw upon unique characteristics influenced by their backgrounds to achieve success, we need to consider a more holistic admissions process that adequately reflects the potential of student applicants. McGaghie and Kreiter 35 argue against holistic admissions in
favor of actuarial tests on the grounds of fairness based on statistical superiority in comparison to human error. This argument, however, neglects current research highlighting the flaws of strictly adhering to cognitive testing as well as the problems of actuarial tests. For instance, Donnon et al. performed a meta-analysis of empirical research on the MCAT’s ability to predict performance in medical school and on board licensing examinations, but they only found a modest correlation (see Heckman and Katz for a more general critique of achievement tests). The inclusion of grit and hardiness, which are important individual-level characteristics for success not captured by current achievement tests, is quantitative in nature and adds to our ability to predict student success. Further, they take the strengths and experiences of those who come from disadvantaged backgrounds into consideration. In addition to the survey items to measure grit and hardiness, these characteristics may surface during an interview. Trained interviewers can ask certain questions similar to the survey items to evaluate whether applicants exhibit these characteristics. Correspondingly, letters of recommendation may express whether applicants possess hardiness and grit.

Diversity in higher education benefits students and institutions and should occupy a central focus for administrators. Hurtado et al. emphasize that increasing racial and ethnic diversity results in a multiplicity of viewpoints, contributes to critical thinking and problem-solving, and assists in facilitating harmonious relations among different groups. Accordingly, it is important to facilitate a welcoming campus environment as the racial composition of students expands. Creating such environments begins by making racial diversity essential to institutional missions to recruit, retain, and matriculate students from diverse backgrounds.

Increasingly, medical schools have observed the importance of diversity and some have responded by supporting a variety of students from different backgrounds. This response has produced positive student outcomes and benefits to the medical community. In particular, the American Dental Education Association (ADEA) and the University of California at San Francisco (UCSF) dental school serve as models to be followed. The ADEA convened successful workshops with admissions committees to stress the importance of racial diversity and presented strategies for increasing diversity including creating mission statements that reflect an ideal institution, having diverse admissions committees to better assess a more diverse applicant pool, and including the concepts highlighted in this article to create a more holistic admissions process. Additionally, UCSF established a program in 1998 to provide support for reapplicants from low socioeconomic backgrounds to increase diversity. Since that time, their program has yielded higher admission rates, more diverse cohorts, a perfect board licensing rate, and the spread of dental care to diverse communities. Currently, methods are being developed to help maintain validity in holistic admissions processes. Collectively, holistic admissions do not alter much of the current approach to the application process but offer a viable means of increasing diversity with substantial benefits.

**CONCLUSION**

Diversity is beneficial to individuals, institutions, and the overall society. Increasing diversity in higher education forces us to realize that success may initially appear differently across race, class, and gender lines. Because of the continued effects of socioeconomic background, we must remember that some students travel further distances to achieve the same level of success as others. Students from disadvantaged backgrounds who actually achieve a college degree may possess and employ characteristics such as grit and hardiness that make them prime candidates for medical and graduate school. Revisiting our initial analogy, we now see why Derek may be as prepared to succeed in medical school as Mark. Accordingly, distance traveled, grit, and hardiness as selection criteria must be augmented by policies and legislation that reduce discriminatory or de facto gateways as disadvantaged students transition from high school to college to professional school. Some of these policies might reduce how affluence translates into social capital to continue to reproduce social inequality. To achieve diversity and true equality, we must rethink our definition of success and the “ideal student.”

**REFERENCES**


