

Diversity of U.S. Medical School Students by Parental Education

Medical school admissions committees seek information about the socioeconomic status of their applicants, among other demographics, with the belief that including students from diverse social backgrounds enhances learning for all students.¹ Social scientists have long agreed that socioeconomic status background comprises three main elements – parental income, education, and occupation. Together, these elements shape a child’s access to valuable foundational experiences that, in turn, shape long-term educational success. A previous *Analysis in Brief (AIB)* by Jolly demonstrated a possible skewing in the medical student population toward children of upper-income families.² This *AIB* examines the diversity of students by parental education. We also examine differences by race and ethnicity. We compare these trends over time with an equivalent U.S. population from which the parents of medical students are drawn.

Methodology

For this report we examined data from the Matriculating Student Questionnaire (MSQ; 1992–2006) and the American Medical College Application Service (AMCAS; 2007–2008).³ To compare U.S. medical students with the U.S. population, we extracted a weighted sample of men and women aged between 40 and 65 from Integrated Public Use Microdata Services, Current Population Survey (IPUMS-CPS)⁴ data. For all three sets of data, we

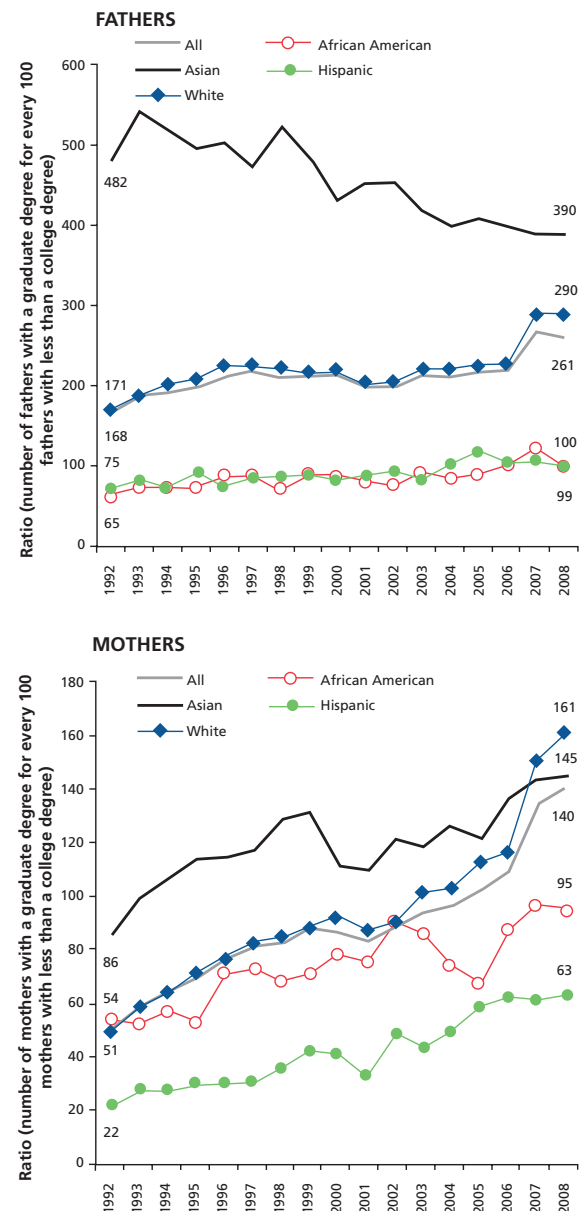
categorized parental education as either 1) no college degree, 2) bachelor’s degree, or 3) graduate degree, including those with professional degrees. Those parents with “some college education” were grouped with those who have no college degree.

Results

Most medical students are children of parents with high levels of education (see Table 1). For example, roughly one-half of medical students’ fathers have a graduate degree compared with 12 percent of the weighted sample of men in the U.S. population. Similarly, roughly one-third of medical students’ mothers have a graduate degree compared with roughly 10 percent of U.S. women.

To depict changes in parental education over time, Figure 1 presents the ratio of parents with graduate degrees to those with no college degree for medical students from 1992 to 2008. In 2008, there were 261 fathers with graduate degrees for every 100 fathers with no college degree, and there were 140 mothers with graduate degrees for every 100 mothers with no college degree. Within the U.S. population, on the other hand, there were 18 men with graduate degrees for every 100 men with no college degree, and there were 15 women with graduate degrees for every 100 women with no

Figure 1: Ratio of U.S. Medical Students’ Parents with Graduate Degrees to Those with No College Degree, by Race and Ethnicity, 1992 to 2008



1 Coleman A, Palmer SR, Winnick SY. Roadmap to Diversity: Key Legal and Educational Policy Foundations for Medical Schools. Washington, DC: Association of American Medical Colleges, 2008.
 2 Jolly P. Diversity of U.S. medical students by parental income. *Analysis in Brief*. 2008;8(1).
 3 We do not use AMCAS data prior to 2007 because the gender of a parent was not asked for until 2006. To account for possible non-response bias, an MSQ weight was created by taking the inverse of the predicted probability of a matriculant answering the MSQ, where the independent variables in the probability model included sex, age, race and ethnicity, and geographic region of medical school. However, because there were no significant differences we presented unweighted results.
 4 King M, Ruggles S, Alexander T, Leicach,D, Sobek M. Integrated Public Use Microdata Series, Current Population Survey: Version 2.0. [Machine-readable database]. Minneapolis, MN: Minnesota Population Center [producer and distributor], 2004. IPUMS-CPS integrates almost a half century of annual March Current Population Survey data, which is compatible with decennial census data.

Table 1: Comparison of Educational Profiles of Parents of U.S. Medical School Matriculants and a Weighted Sample of Men and Women in the U.S. General Population, 1992, 2000, and 2008

		Parents of Medical Students (%)						Men and Women in the US Population (%)					
		Fathers			Mothers			Men			Women		
		1992	2000	2008	1992	2000	2008	1992	2000	2008	1992	2000	2008
ALL	No college degree	29	24	20	45	35	25	73	71	69	81	75	70
	Bachelor's degree	23	26	28	31	35	41	16	17	19	12	16	19
	Graduate degree	48	51	52	23	30	35	12	12	12	7	9	10
African American	No college degree	50	42	37	51	42	34	87	83	82	87	82	79
	Bachelor's degree	17	21	26	22	25	33	8	11	12	8	11	14
	Graduate degree	33	36	37	27	33	33	5	6	6	4	7	6
Asian	No college degree	14	15	16	33	28	24	51	51	46	70	60	53
	Bachelor's degree	19	22	23	38	40	41	29	28	30	22	31	33
	Graduate degree	67	64	61	28	31	35	20	21	24	8	9	14
Hispanic	No college degree	47	42	37	63	51	42	89	85	86	93	87	86
	Bachelor's degree	17	23	25	23	28	32	7	8	10	5	8	10
	Graduate degree	35	35	37	14	21	26	4	6	5	3	4	4
White	No college degree	28	23	18	45	35	22	70	68	65	79	73	68
	Bachelor's degree	24	27	30	32	34	43	17	19	21	13	17	21
	Graduate degree	48	50	52	23	31	35	13	13	14	8	10	12

Note: Due to decimal rounding, some columns may not sum to 100.

college degree (not shown in Figure 1). While the ratio of those with graduate degrees to those with no college degree increased by 53 percent for fathers of medical students and 175 percent for mothers of medical students between 1992 and 2008, it increased by only 13 percent for U.S. men and 40 percent for U.S. women.

Moreover, differences exist among racial and ethnic groups. Table 1 and Figure 1 also show substantial differences in the distribution of the levels of parental education by race and ethnicity. By 2008, African American and Hispanic students were more likely to have parents with no college degree and less likely to have parents with a graduate degree compared with Asian and white students. In addition, the educational profiles of the fathers of African American and Hispanic/Latino students were almost identical; in particular, for every father with a graduate degree, there was one with no college degree.

Although Asian students were much more likely to have a father with a graduate degree compared with other groups, the percentage of Asian students with fathers who held a

graduate degree steadily decreased from 1992. By 2008, 61 percent reported having a father with a graduate degree, down 6 percentage points from 1992. Among racial and ethnic groups, the increasing disparity in the distribution of parents' levels of education was greatest for white students, among whom the ratio of graduate degrees to those with no college degree increased by 70 percent for fathers and more than 200 percent for mothers. By 2008, 52 percent reported having a father with a graduate degree and 35 percent reported having a mother with a graduate degree, while 18 percent reported having a father with no college degree and 22 percent reported having a mother with no college degree.

Discussion

Consistent with previous findings for parental income, our research demonstrates that parents of medical students are more likely to have graduate levels of education and less likely to have no college education.

There are notable differences in parental educational profiles by racial and ethnic groups; levels of parental education among African Americans and Hispanic/Latinos are significantly

lower than are those among Asians and whites. In addition, our findings suggest that the increase of medical students from families with higher socioeconomic backgrounds between 1992 and 2008 is most noticeable among white students.

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