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Gender Differences in Planned Retirement Age Among Medical Students: Are Changes on the Horizon?

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Abstract

Gender Differences in Planned Retirement Age Among Medical Student Pathways Participants: The View from One Regional Campus.

Purpose
Planned age of retirement has an important effect on the physician workforce. Earlier studies of practicing physicians have reported that the planned as well as actual retirement age was significantly younger for women. Also, previous reports had shown that rural physicians tended to retire earlier. This paper offers a view earlier in the physician pipeline and reports surveys of medical students and pre-medical college students concerning their retirement plans.

Methods
During 2015-2019, 70 college students and 41 medical students at a regional rural medical campus completed a career eulogy that included their planned retirement age.

Results
Combining both groups of students, women planned to retire at a mean age of 61.9 and men at 59.1, P=0.048. A longitudinal comparison of just medical students showed that prematriculation students just before starting medical school had the oldest planned age of 66.9, compared to college students (57.4 to 58.9) and medical students (64.0 to 64.6), P=0.049. There was no difference in planned retirement age in rural vs urban upbringing.

Conclusions
In this group of pathways students, women planned to retire almost 3 years later than men, which differs from earlier reports of physicians in practice. The men planned retirement almost 5 years earlier than in previous reports of planned retirement age. There was no difference in rural vs urban upbringing. Whether this is a generalizable finding will require similar studies in different student populations on other campuses, and our survey instrument is available for others to look deeper into the process of professional identity formation that may explain any differences in planned retirement age.

Introduction

The U. S. has significant health workforce shortages [1], and this disproportionately affects rural areas [2]. Medical educators focus on understanding the factors affecting future workforce among the pathways students in their programs as a potential harbinger of change. A significant factor in labor shortages is the age of retirement. The average actual retirement age of the general US (United States) workforce from a recent Gallup poll was 61years [3]. The overall nonretired population at that time planned to retire at an average age of 66, while those in the 18–29-year-old subset reported a predicted average age of

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64 [3]. The 2023 Retirement Confidence Survey found that those already retired on average retired at age 62, while current workers expect to retire at age 65 [4]. There may also be generational trends, as studies show both millennials (born between 1977 and 1995) and Gen Z (born between 1996 and 2015) reported a planned earlier retirement than the middle-aged population (born between 1965 and 1976) [3][5].

The published reports on physician retirement are often specialty specific and focused more on the reasons rather than projected age of retirement. As a result of COVID-19, many workers have chosen not to return to their earlier positions, and some have left the workforce completely [6]. Recently, COVID-19 has specifically affected physicians' plans for retirement. The Physician Retention Survey, which included 400 practicing physicians across the US, showed that 21% are considering early retirement post-COVID, with no breakdown by current age provided [7]. Physician burnout is a probable cause of early retirement, with reported reasons including loss of autonomy, workload, and constraining organizational structure [8]. We found no studies published in English about planned retirement age for college and medical students. A recent report from the Canadian Medical Association questionnaire with a response rate of 36% from physicians in practice found that the average planned age of retirement was 64 years. This report also showed that younger physicians planned to retire earlier than their older colleagues. Physicians under the age of 35 planned to retire at age 58, ages 45-54 planned for age 63, ages 55-64 planned for age 66, and physicians over age 65 planned to retire at age 72[9]. No further age breakdown of the younger physicians was provided. We found no study in English that correlated planned retirement age with later actual retirement age.

Our study sought specific plans for retirement as part of a project to address professional identity formation among college premedical students and medical students. Although many factors could intervene between planned retirement age and the ultimate decision, our study reports planned retirement age in students at a much earlier stage of medical training than previous reports.

Methods
As part of a professional identity formation research project, a "Career Eulogy" asked participants to "Imagine that you are ready to retire from medicine in the distant future. Write a short speech outlining what you would like to be said about you at the retirement ceremony. In about 50 words, write the speech below." And "at what age would you like to retire?" The content of these speeches was coded into clusters and published previously [10,11].

To address the planned age of retirement, two separate groups of students are reported here. The first group was undergraduate students at two regional state universities in western Kentucky. This was done in the Fall of 2015 at the beginning of a one-hour session of a pre-medical club meeting hosting the regional medical school dean for his annual presentation concerning the medical school admission process. The second group included medical students at the rural regional campus. Medical students completed their career eulogies during the summer prior to each academic year during 2015-2019.

We calculated frequencies and percentages for the demographics. We performed four separate statistical comparisons. The first two comparisons combined college student data with medical student data just before they entered the medical school rural campus prematriculation program and then contrasted the planned age of retirement by rural upbringing (defined as having a hometown population of less than 30,000) and gender. Welch corrected independent sample t-tests were used for these two comparisons. The third comparison contrasted college students (freshmen/sophomores, juniors/seniors and prematriculation medical students) on their planned retirement age. A one-way analysis of variance (ANOVA) and test of linear trend of means was used for this analysis. The fourth analysis assessed only medical school data where planned age of retirement was recorded across medical school year (prematriculation, post-M-1 after the first year of medical school, post-M2 after the second year of medical school and post-M3 after the third year of medical school). We had complete paired data for only 26 medical students that could be used to evaluate if planned retirement age changed among

medical students over time. A repeated measures ANOVA and paired sample t-tests were performed for this analysis. The significance level for all analyses was set by convention at P<0.05. Data were analyzed using SPSS version 26 (IBM Corp. Released 2019. IBM SPSS Statistics for Windows, Version 28.0. Armonk, NY: IBM Corp), R 4.0 (version 4.0, R Core Team, 2020). Figures were created using the R package ggplot2.

The demographics of the study population are shown in Table 1, including 70 college students and 41 medical students at prematriculation.

Table 1: Demographics of study population given complete data for planned retirement age used in the analyses.

College		Medical school[a]	
Gender	Freq (%)	Gender	Freq (%)
Female	36 (54%)	Female	14 (34%)
Male	31 (46%)	Male	27 (66%)
No response	3	No response	0
Hometown		Hometown	
Rural	40 (57%)	Rural	32 (78%)
Non-Rural	30 (43%)	Non-rural	9 (22%)

[a]Demographics are based on 41 medical students who had recorded planned retirement age at prematriculation.

Results
Figure 1 shows a breakdown of the four comparisons. Figure 1 A and B combine the college students and students just before they enter the rural campus medical school prematriculation program and represent all 111 students in the sample. Figure 1 A shows no difference was found in planned retirement age by rural upbringing, P=0.774. Figure 1 B shows a significant gender difference, as women planned to retire later than men [Figure 1- B: women: mean 61.9 (SD=7.4); men: 59.1 (SD=7.1), P=0.049]. Figure 1- C shows how the plans of college students compared to the plans of recently graduated students just about to begin medical school (prematriculation). The results show a significant linear trend on planned retirement age, P<0.001. Planned retirement age significantly increased from their freshman/sophomore years [mean=57.4 (SD=6.5)] to the prematriculation medical school year [mean=65.9 (SD=6.2)]. Figure 1- D shows only the medical students for whom we had paired complete responses across medical school years

(N=26) and is a smaller group than the total prematriculation students (N=41) shown in Figure 1-C. A repeated measure ANOVA showed no overall significant differences in planned retirement age based on medical school year but was close to significance at P=0.062. However, pair sample t-test across medical school years were performed and showed prematriculation medical students' planned retirement age [mean=66.9 (SD=6.2)] was significantly greater than post-M1 students [mean=64.0, (SD=6.0)], P=0.045, and post-M3 students [mean=64.5, (SD=5.6)], P=0.049.
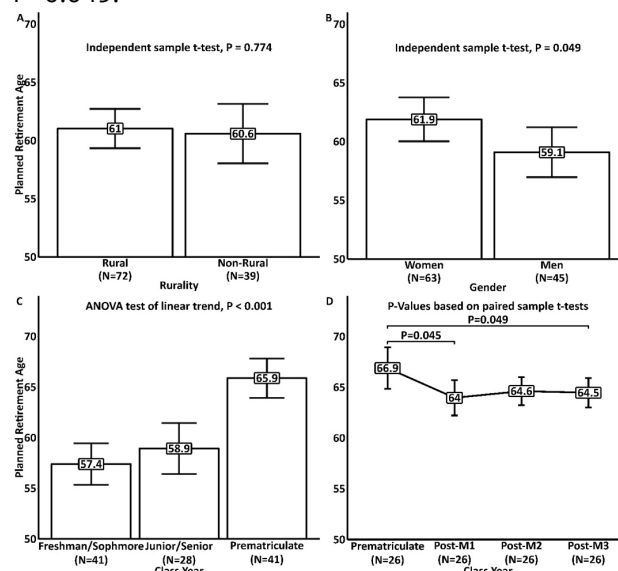

Figure 1: Comparison of college students (and rural campus medical school prematriculation program students) planned retirement age by rural upbringing, gender, and the year of college (A, B, and C). D compares medical students across years of medical school (rural campus medical school prematriculation program students, post-M1, post-M2, and post-M3 years).

Error bars reflect 95% confidence intervals.

Discussion
Studying these students' planned age at retirement offers some insight into future workforce issues and provides a glimpse earlier in the physician pipeline than provided in previous studies. Women in our study planned retirement almost 3 years older than men, which contrasts with reports such as the Canadian Medical Association report, which only included women's plans if older than age 24 at the time of the survey. This Canadian study found that

women planned to retire four years earlier than men, at planned ages 60 and 64 respectively [9]. Comparing gender differences in actual age of retirement, our gender results also differed from the University of Michigan's Intern Health Study that found that almost 40% of women physicians leave the profession or switch to part time early on in their practice, compared to about 5% of men [12]. Our gender results of planned retirement age also differ from a review of actual retirement age of all workers in the U.S., where even though the overall average age of retirement is rising, women are still retiring three years earlier than their male counterparts (age 62 vs age 65)[13]. A population -based retrospective cohort study done among physicians in British Columbia, Canada, showed the average actual retirement age was 65. Women retired 4 years earlier and those working in rural areas retired 2 years earlier [14].

The men in our sample planned to retire earlier than those previous reports of planned age of retirement, and our women reported almost the same planned age as in previous reports of actual retirement age. A possible explanation for women physicians planning retirement at an older age was shown in a national Australian survey that found that among younger women, 64% viewed medicine as a calling. Only 50% of younger men viewed medicine this way, a statistically significant difference [15]. A review of 29 publications found that female primary care physicians show significantly more active patient partnership behaviors, more patient centered communication overall, and their visits are 10% longer [16]. Finding more meaning in work may result in delayed retirement.

Surprising to us, rural versus urban upbringing did not have a significant difference in planned retirement in our population. A study from the AMA Masterfile on primary care physicians found comparable results, with no differences in actual age of retirement between rural and urban physicians [17]. However, a population -based retrospective cohort study done among physicians in British Columbia, Canada, found that physicians working in a rural area retired 2.3 years earlier than their urban counterparts. This was explained by higher levels of burnout among rural physicians [14]. A plausible reason for this lack of rural difference in planned

retirement age in our population could be that many of the rural students plan to return to their hometowns to practice. This aspiration to serve their own community and return to family and friends could facilitate finding meaning in work. Due to the shortage of physicians in rural areas, later retirement would be especially impactful to those communities.

The level in school and planned age of retirement showed a significant difference, with prematriculation medical students planning an average of 7-8 years older than college students. Potential reasons for this finding are the excitement of students entering the M1 year or their concern with the debt required as they planned their medical school budget.

Within our population of medical students, the planned age of retirement over a 3-year period showed a significant drop between prematriculation and post-M1 that was maintained through post-M2 and post M3, with prematriculation students planning almost 3 years older than students during medical school. Like the undergraduate results, a potential reason could be that pre-matriculation students are excited and anticipating the start of their medical career, while students currently in medical school spend more time with practicing physicians who may share the stressors of practice or discuss early retirement. Like physicians, medical students also experience burnout and that could be a reason for this decrease. Medical students encounter stressors including workload, financial problems, and performance pressure [18].

Limitations
This study is limited by including only a population of one regional campus and small sample size. The finding that combining the college and prematriculation groups allowed us to find a significant difference when we could not reach significance using either group alone implies that we were working at the edge of needed sample size. Combining these two groups allowed us to reach significance but does pose the limitation that the pre-med group may be different enough from those admitted to medical school to affect validity. Because our intent is to include such pre-med groups in this study of attitudes about retirement in pathways students at every level, we accept this limitation. As

with all single-site studies, our findings can only be generalized to similar populations. Larger studies with more diverse populations at other campuses including more urban students would provide a needed perspective for our results. Studies including non-binary medical students are also needed. There is no published basis to believe that the planned retirement age correlates with the actual age of retirement, but our study gives insight into a younger population's retirement plans, something lacking in current published literature. Our speculation on the reasons for our findings is based on our experiences as college and medical students at this campus and would not be expected to apply in other situations.

Conclusion

In our population, women planned to retire 3 years later than men. The men planned retirement almost 5 years earlier than in previous reports. Current retirement plans of future physicians of the two binary genders may result in different actual retirement age than the past, where women both planned to and left the profession much earlier than their male counterparts. This plan for early retirement may have significant effects on the physician workforce and may prompt medical educators to consider addressing this issue in programs before and during medical school. This preliminary study raises important questions, and the study instrument (the career eulogy) is available to anyone seeking to learn more about professional identity formation [10,11]. This could include study of planned retirement age as well as individual components of medical student professional identity formation that may provide insight into the reasons for any differences.

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