

Flexner's Exodus:
The effect of progressive era policy on women's participation in medical fields

Abstract

In 1910, Abraham Flexner and the Carnegie Foundation published a scathing report on the state of medical education in North America. Its influence was immediate and widespread. Many medical schools with low rankings merged with other colleges, while others, mainly woman's medical colleges, closed their doors entirely. Although the report is often praised for catalyzing standardization of medical education in the United States, it has been hypothesized that it also decreased the number of practitioners in the US. We will examine the consequences of the Flexner Report for women's participation in medicine and related fields using US census data via IPUMS-USA. Preliminary examination of labor force trends suggests that the Flexner Report may have stalled women's participation in professional medicine. We will further analyze the effect of the Flexner Report using difference-in-difference methods to estimate effects of the Flexner Report on women in medicine.

Background and Literature

In 1800, the United States had four medical colleges, each associated with an established college. Together, they graduated approximately 343 students between 1800 and 1810. By 1850, the growth of independent medical colleges increased the number of graduates to 17,213. (Starr, 1984). These new medical colleges were owned by the faculty and relied on tuition to pay operating costs and part-time faculty. In order to maximize profits and minimize operation costs, they used lecture-based teaching to train students; the curriculum contained no clinical components. Independent medical colleges typically had lax standards, granting admission and degrees to any student who could pay tuition, resulting in the proliferation of physicians with medical degrees that said little about their practical experience or clinical abilities.

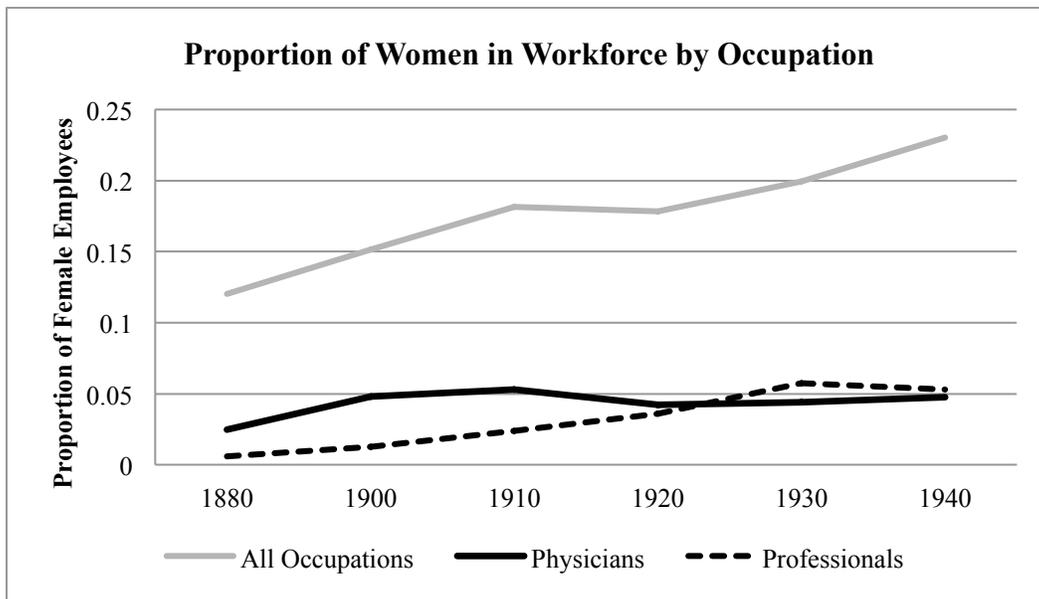
A glut of poorly trained physicians threatened the wellbeing of patients across the country and threatened the economic security and status of physicians. In response, the American Medical Association established a committee to assess the quality of American medical schools with the hope of improving the quality of medical training, and thereby medical practice. The AMA committee partnered with the Carnegie Foundation, which commissioned Abraham Flexner to produce a report on the status of medical education in 1910 and granted him the power to mandate reform. The Flexner Report (Flexner, 1910), as it came to be known, became the model for investigating other institutions in the following decades. Flexner assessed each medical school in the United States and Canada, ranking them into tiers, with the Johns Hopkins Medical School ranked first as the ideal medical training facility in North America. Flexner suggested that the lowest-ranked medical schools, mostly profit-driven independent medical colleges, should either reform or close. Many of these schools did close, as the cost of mandatory reform was prohibitive.

This had a significant impact on the future of minority medical colleges, especially women's medical colleges. By the end of 1910, nearly every woman's medical college had shuttered (Beck, 2004). Although medical and social historians have speculated what impact this had on the fate of women in medicine (More, 1999 and 2000), there has been little quantitative assessment of the population of women entering medicine in the decades preceding and following the Flexner Report. Our study examines women in medical professions to examine what impact the Flexner Report, and the subsequent closing of women's medical colleges, had on women's entry into medicine, other traditional medical fields (nursing, midwifery, etc.), and alternative medical fields (chiropractic, homeopathy, etc.) using United States Census data. Did the decrease in medical colleges drive women to alternative medical sects or alternative medical professions? And, how do trends in women's participation in medical fields relate to other educated professions during the same era?

Data and Preliminary Findings

Using United States Census data in the years leading to and following the Flexner Report, 1880 to 1940, via IPUMS-USA, we will assess trends in women's labor force participation in general, in medical professions, and in other professional occupations. The data is limited to individuals currently in the labor force with valid occupations between the ages of 21 and 66. We use occupations identified in the Census that have been integrated for comparison over time.

To estimate the effect of the Flexner Report on women in medicine, we start by looking at the proportion of women in all occupations, physicians and other professionals. Figure 1 shows the change in percentage of women by occupation from 1880-1940. The rise in women's share of the workplace is evident, as the percentage of women in all occupations increased from 12% in 1880 to 23% in 1940. However, the percent of female physicians rose slowly over the period, with the largest gain between 1880 and 1900. In 1900 and 1940, 4.8% of physicians were women; there was no growth in the field for women. The dashed line in the Figure 1 shows the rise in the proportion of women in other professions fields. These occupations include: architects, lawyers, veterinarians, university deans and professors, engineers, scientists and social scientists. We selected these occupations because they also require significant schooling and are professions dominated by male employees, similar to medical doctors. Figure 1 demonstrates that in 1880 less than 1% of employees in these occupations were women. However, by 1940, women made up 5.2% of these fields.



The trends in this preliminary analysis are consistent with the hypothesis that the Flexner Report decreased the number of women going into medicine as physicians. Over this same period we also see growth for women in nursing, but declines following 1910 of the proportion of women in the chiropractic, dental, and osteopathic occupations. The Flexner Report decreased total numbers of physicians and may have spillover effects in these other fields also limiting women's participation in advanced medical professions. In this paper, we will investigate the effect of the Flexner Report on women further by performing a difference-in-difference analysis comparing the change in women's participation in the medical fields to women in other professional occupations and to men over this period. We will also leverage regional variation in school closures following the Flexner Report in order to isolate the cause of these trends in labor force participation for women.

Conclusion

Few economic or medical historians have attempted to quantify the effects of the Flexner report and progressive era policy on women's labor force participation, especially in medical fields. This study aims to bridge the literature between economic and demographic history by quantifying otherwise qualitative assessments of women in medicine in the early 20th century. Examining early trends in women's labor force participation in the opening decades of the 20th century may inform contemporary studies of women in medicine. In 2012 women made up about 35% of all physicians nationwide. This is significantly less than the proportions of women in many other natural sciences, in particular a medically relevant field like chemistry and biology. Understanding the factors that limited female labor force participation in the early 20th century can therefore be used to provide context to similar issues in the early 21st.

Selected Bibliography

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