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Dr Mom's Added Burden

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Abstract

Today's female physicians face a "triple whammy" of structural discrimination, rigid work expectations, and increasing educational debt. Coronavirus disease 2019 is disproportionately amplifying these forces on women. The burden of these forces on women, the likely long-term consequences, and some preliminary solutions are discussed.

Key Words: Gender discrimination, medical education, student debt

J Am Coll Radiol 2021;18:103-107. Copyright © 2020 American College of Radiology

INTRODUCTION

In her final essay for the *Wall Street Journal*, Sue Shellenbarger noted many improvements for working women over the past 30 years but expressed continuing concern about personal finances, childcare costs, and increasing burden of student loan debt [1]. These issues are particularly salient for women in radiology, especially mothers. Dr Moms face a "triple whammy": structural discrimination, rigid work expectations, and high debt. This situation is unsustainable; the disproportionate impact of coronavirus disease 2019 (COVID-19) disruptions on working mothers has become the latest example [2,3].

The thrust of our article is that female physicians are saddled by debt that constrains their familial choices and may scare talented students away from medical school. Such an argument should be pertinent to gay, straight, bisexual, and transgender women, and we have tried to be as inclusive as possible in our discussion.

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The authors state that they have no conflict of interest related to the material discussed in this article. Dr Hardy, Dr McGillen, and Dr Hausman are academic employees at Penn State.

SCHOOL LOAN DEBT

Student loan debt is rising rapidly, approximately 275% more than mortgage and credit card debt [4]. In 2016, total student debt was up 350% since 2005 [5]. Student debt today totals $1.3 trillion compared with current mortgage debt of $8.4 trillion, and it only grows. Monetization of student loan debt and federal subsidies fuel these trends while enabling rising costs of education [6].

In 2016, the average physician debt at graduation was $251,600, roughly compounding to $526,434 to $696,654 at payback [7,8]. Because approximately 20% of students had no debt on graduation, this means that many students borrow substantially more than the average. Taking risk on indebtedness is positively correlated with being young, male, white, and married [9]. As a result, rising costs of medical education are likely to contribute to increasing financial gender and class biases within the educational system [10]. In other words, having to borrow high sums of money might dissuade potential female medical students (as well as students from other groups underrepresented in medicine) from applying. If they do matriculate, other problems emerge when repayment starts.

During repayment, female physicians face significant pay gaps when compared with male peers, which compounds their financial burden. Accounting for variables such as specialty, work-life balance, work hours, and call duty, there is still a 39% unexplained difference in salaries between male and female doctors [11]. Physician mothers thus have less income than male peers, at a time when they have increased expenses because of child care and may want to purchase a home [12]. Thus, it is not a surprise that, from an economic perspective, women may be financially better off becoming physician assistants instead of primary care physicians, unlike their male counterparts [13].

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1546-1440/20/$36.00 ■ https://doi.org/10.1016/j.jacr.2020.09.024

Highly indebted physician mothers are burdened in additional ways. Debt also compromises individual choice of specialization and workload. Students with high debt may choose higher compensated specialties, such as radiology, while sacrificing love of another specialty and intrinsic motivation. Also, debt may have a disparate impact on the reproductive goals of female physicians from all economic backgrounds but particularly those from lower socioeconomic groups who are more likely to have more debt. Maternity leaves are often not compensated. The demands of debt repayment may force doctor moms to opt for work positions that strain work-family balance, and even well remunerated work may still leave challenges in affording help at home for chores most commonly falling to mothers: supervising children's homework, childcare, and domestic chores [4].

WORK EXPECTATIONS

There is an ample literature concerning work expectations in medicine [14-17]. However, training and early career demands of physicians affect women, especially mothers, disproportionately.

The race to establish a successful academic career, in the context of a growing family, brings on burnout [18]. Radiology residency is still traditionally taught within the apprenticeship model, requiring a full 10+-hour day of clinical work and then home study [19]. Residents learn the most from reading cases. Gaps in knowledge get filled in through lectures and study, infringing on personal time. New attending physicians must manage a caseload and meet practice-defined metrics. There are hours lost to learning a new health care system, electronic medical records, and referral patterns. This typical homework load for residents disproportionately affects physician mothers [20]. In addition, physician mothers have the added burdens of workplace discrimination and gender bias, which can affect downstream career opportunities [21]. Maternity leave is inconsistent or nonexistent, and lactation support varies. Overall, there is a lack of concrete support for physician mothers, including residents, to succeed in career and family contexts.

Academic practice presents specific problems. It takes extra hours to create lectures and teaching content, as well as prepare for tenure and promotion. Stereotypes often affect women's roles as having "soft skills" such as teachers versus "hard skills" of researchers and clinical affairs, nudging women into time-intensive teaching and mentoring responsibilities that eat away at research time [22]. Because experience with research and clinical operations are perceived to be essential for appointment to senior leadership positions, these stereotypes can create additional barriers to female physicians becoming institutional leaders [22]. Physician mothers may miss out on important off-hours professional interactions that can impact career trajectories. In addition, the extra work of academic practice is a challenge to even the most organized physicians to achieve within normal work hours. For most, work life inevitably spills into home life. These work expectations motivate some young physicians to scale back career plans, work part time, or not have children. They disproportionately affect physician mothers, who, as already noted and like most mothers, carry the primary load of family work and child-rearing [21,23].

One effect of the COVID-19 pandemic is renewed attention to the intersection of women's, and especially mothers', domestic and professional work, particularly childcare. Unequal domestic burdens are structured into the economy and the family in ways that perpetuate gender inequality. Early data have revealed a dramatic drop in scholarly work among women during the pandemic, exacerbating existing patterns. This gender gap has been present across medical research, but the radiology specialty has been among the worst [22,24]. Although Andersen et al warn against assigning causality, "the difference in women's participation before and after the pandemic is most striking for first authorships. This finding is consistent with the idea that restricted access to child-care and increased work-related service demands might take the greatest toll on early-career women" [24].

Leadership commitments within academic medicine are subject to the same structural forces, explaining why the "pipeline theory" of increasing the number of female medical graduates has not led to greater female participation in leadership roles [25]. Women in the early stages of their careers who already experience financial and familial pressures will not have the capacity to engage in extracurricular leadership activities and climb leadership ranks. Research has shown that having children significantly obstructs women's career progress in academia [26]. This situation is particularly problematic for academic radiology departments, which have already been recognized as having some of the smallest percentages of women within medicine [22].

STRUCTURAL DISCRIMINATION

Working mothers do not simply choose to lessen work commitments for family because they are women. Social and economic structures make those "choices" default options as young female physicians manage work-life balance, demonstrated by the fact that their male colleagues who are fathers are promoted at higher rates [22,27].

Built-in economic structures force many women to marginalize their careers in favor of male partners, especially

after having children [28]. The workplace demands "ideal workers" with no familial responsibilities; couples thus benefit when one partner takes on most familial labor. Given wage inequality, that person is usually the mother. Yet because of high student debt, physician mothers may not be able to go part time. Female same-sex physician couples are at an even greater disadvantage economically than heterosexual couples because of lower overall wages for women in medicine. Given the stresses of raising children in the 21st century—with heightened expectations of intensive parental attention, increases in organized activities necessitating parental engagement, and increasingly expensive expectations for sports and other activities [29]—the lack of flexible work options may lead to more negative outcomes for future physicians: more burnout, higher divorce rates, and so on. This outcome may be especially true for Dr Moms, who often bear the extra emotional cost when choosing between prioritizing work or family, but it affects all families in that a lack of society-wide supports requires individualized solutions to shared problems. COVID-19 has intensified this issue.

Having children in the United States is often the first experience in which women nowadays encounter the full force of sexism. Although young women may experience interpersonal and structural forms of discrimination, the lack of paid maternity or family leave, subsidized childcare, and universal preschool make sexism overt. Although physician mothers are arguably among the more privileged women to face these structural impediments, they still are significantly impacted by them. Indeed, for physicians who have been able to persist through the rigors of academic curricula and resident training, the shock of the lack of structural supports for motherhood adds to the burden of coping.

As noted previously, the pandemic has accelerated existing discriminatory trends. A cascade of news reporting in summer 2020 details the distinct career costs of the pandemic on mothers. For example, as Cohen and Hsu report in the *New York Times*, "Family responsibilities as well as lower wages have always pushed women in and out of the workforce." Because of COVID-19, "the inequities that existed before are now 'on steroids,' said Claudia Goldin, an economics professor at Harvard University" [30]. Kitchener reports in the *Washington Post* that women may be "edged out of the workforce" as a result of COVID-19 [31].

For physician mothers with significant student loan debt, not working or working less may not be an option. This lack of options is caused by an educational system that disadvantages them. The result is the triple whammy: loan debt, structural inequality, and work expectations for physicians come together to limit physician mothers' options, in terms of family and in terms of career. COVID-19 has only made those limitations more salient and deeply felt.

IMPLICATIONS

Women's work output is undervalued in medicine generally. Women are paid less, and they do more family work. Familial work and caregiving are inherently less valued than paid work, and this marginal difference increases with higher professional salaries such as radiology and radiation oncology. Work expectations are based on decades-old, male-centered norms. As we seek to attract more women into radiology, it is time to recognize that rising student debt compounds the strain on physician mothers and exacerbates difficult work expectations and structural sexism.

If the forces behind the triple whammy do not change, radiology and radiation oncology departments will suffer. Physician mothers are assets to our specialty; the system invests in them and should support their success. As young women choose to enter radiology and radiation oncology pipelines, we must recognize these challenges to improve their experiences and career outcomes.

Radiology and radiation oncology must have a diverse *and* intrinsically motivated workforce to thrive [32]. Furthermore, we need smart people in medicine generally to help solve financial problems that plague the profession, especially the current unsustainable costs of medical care. Chen and Chevalier suggest that women interested in primary care should simply become physician assistants to avoid the high debt of medical education in comparison to work hours and other work stressors [13]. We think that discouraging financially savvy women from becoming physicians is a poor response to this problem. Addressing debt and the gendered structure of work is a better, more equitable, and forward-thinking solution.

Some medical schools are doing away with tuition. Time will tell if their female graduates make freer choices concerning reproduction and work-life balance. In the meantime, we advocate for increased attention to how student debt affects gender equity in the medical workforce.

A recent commentary by Asch et al in *New England Journal of Medicine* cautions against paying attention to price and debt without attending to cost [33]. There are significant expenses that could be trimmed by colleges, including colleges of medicine. The current COVID-19 epidemic is forcing discussion of many changes that would help decrease the operational cost of an education such as slashing administration and unnecessary buildings [34]. Moving classes online is another trend, which may or may not help reduce expenses. Accelerated 3-year medical school (3+ pathway) that guarantees a matched spot within a chosen residency at the same institution is an uncommon but increasing option at schools around the country. It would potentially cut one-quarter of students' debt, which is significant particularly for those entering primary care with its lower compensation. We favor further research into the

financial impacts of medical education on future physicians, with an eye toward improving equity for physician mothers and reducing debt for all students.

During residency, education about salary disparities would enhance informed career choices afterward [11]. As part of residents' nonclinical skills curriculum, training programs should assemble databases of starting salaries of their graduates to foster this transparency. Transparency, as well as increased awareness of the role of debt in gender disparities, could create more equitable workforces.

The inflexibility of medicine is because of not only to the demands of the profession and the expectations of tradition, although both are influential. The need to borrow significant funds to become a doctor places specific kinds of stress on physician mothers as they try to balance work and family. The economic fall-out of COVID-19 will probably include a number of physician mothers who find they can no longer continue careers in medicine, or whose contributions will be compromised by new demands of family life. The inflexibility that predated the COVID-19 pandemic will likely outlive it, unless we pay attention to the lessons it offers. We need to offer greater professional flexibility for physician mothers within our departments. Radiology and radiation oncology can set the tone for future debate by acknowledging the problem squarely and committing to steps that improve the circumstances for mothers in medicine.

TAKE-HOME POINTS

- Female physicians face a triple whammy of structural discrimination, rigid work expectations, and high debt.
- COVID-19 is having a disproportionate impact on women, especially mothers. The effects on our workforce may linger long after the virus is gone.
- Our future depends on a diverse workforce. Financially savvy women should not be discouraged from entering medicine by the cost of education and high levels of debt.
- Addressing the costs of medical education (and thus reducing debt) and transparency regarding future salaries during residency are two solutions that can decrease the additional burden women face.
- We need to provide physician mothers greater professional flexibility to meet professional and departmental operational goals.

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