

Chapter 2

Women Entering Pediatrics



Kheyandra D. Lewis and Teri L. Turner

Introduction: What Do You Want to Be When You Grow Up?

When I was young, I was often asked, 'What do you want to be when you grow up?' I would emphatically state, 'I want to be a doctor like my mommy!' Now that I am being inducted into the honor society Alpha Omega Alpha, I wish my mother would have had the same opportunities to be recognized as a medical student and eventual pediatrician, that I now have. We've come a long way in gender equity but we're not there yet. – Reflection by a Pediatric Trainee

Girls no longer all want to be princesses and ballerinas; a nationwide survey of 500 children between the ages of 1 and 10 years of age conducted in 2015 revealed the most popular profession for girls was the wish to be a doctor [28]. This same survey found more girls, 41%, want to go into science, technology, engineering, and math careers than boys, at 32% [28]. A longitudinal study by the Organisation for Economic Co-operation and Development found a shift from teachers to doctors in top occupation choice cited by girls from 2000 to 2018 [64]. The future is becoming brighter for women entering the field of medicine.

K. D. Lewis (✉)
Drexel University College of Medicine/St. Christopher's Hospital for Children,
Philadelphia, PA, USA
e-mail: KDL62@drexel.edu

T. L. Turner
Baylor College of Medicine/Texas Children's Hospital, Houston, TX, USA
e-mail: turner@bcm.edu

Setting the Landscape: Medical Student Journey

Four years – that’s the length of time it takes to graduate from medical school. By the end of a medical student’s third year, they embark on an individualized path to the type of physician they will be. Years before the acceptance letter is received, many know exactly what type of physician they will become. Several factors may redirect or affirm that decision: lifestyle, previous personal experience, or financial means. No matter the factors, the “fit” is often influenced by an individual or group of individuals in the desired role to which one aspires to attain.

It is not an easy journey. Each student can account for a myriad of challenges that may have had them reconsider the long hours at some point in their training. For women students in particular, the challenges are magnified with gender disparities and inequities. Women accounted for more than half of all medical students for the first time in history in 2019 and the number continues to increase [1, 7, 10, 11]. Despite the rising number, only 45.8% of residents and fellows in ACGME-accredited programs are women [11]. As the journey continues for women, representation dwindles. Despite the increasing number of physicians that are women, there are only approximately 36.3% women as practicing physicians [11]. It is imperative that these students have selected advisors and mentors to guide and impart recommendations on how to succeed. Unlike other medical specialties, pediatrics is uniquely positioned to influence the development of other women physicians as it is comprised of about 64.3% of women [11].

Influence: The Role of Mentoring

It is well known that women do not network as well as men and have more difficulty identifying career mentors and finding mentoring opportunities, thus ensuring significant disadvantage for academic advancement. ([90], p. 1003)

The landscape of networking looks very different for men and women across careers. The informal “old boys’ club” classic descriptor of networking emphasizes the opportunity to interchange business and friendship, accounting for larger social circles and the likelihood of greater opportunity toward career advancement for men [13]. Conversely, women often enter networking with a focus on “building long-term personal connections” [13] with a foundation of trust which inevitably creates a smaller pool of reliable confidants, and ultimately a limited reach. It has been detailed throughout the literature that women who have the guidance of a mentor are more likely to be promoted to professor than those who do not [90]. Universally, medical schools have established women in medicine committees and offices to support ongoing mentorship and address such topics as gender bias. [See Chap. 12 for more on mentorship.]

The Imposter Syndrome

In spite of their high achievement, women are more likely to experience imposter syndrome, “the internalized fear of being fraudulent despite evidence indicating success,” ([38], p. 1508) which additionally contributes to lack of feeling like one belongs. It only takes a few steps down the hallway of a typical medical school before the portraits that adorn the walls remind a woman that it was not all that long ago when she in fact did not belong [38]. Although this book is focused on women in pediatrics, the path to pediatrics requires that a student, no matter their gender, must demonstrate knowledge and skill within other fields of medicine. While rotations will vary from institution to institution and individual experience, it is far too common for a woman to question her position through the journey. Fellowship and camaraderie aid in the sense of belonging and value; and these relationships are cemented in commonalities. In a study by Babaria et al. [5], women students throughout their third-year clerkships were asked to discuss their experiences. Many detailed that while on rotations they were more likely to form relationships with ancillary staff or nurses that were also women while their counterparts formed relationships with attendings who were more often men. Those same women students recognized that the differences in these relationships placed them at a disadvantage. One such student stated: “I think the outcome of this is going to be that the relationships and bonds that I’ve formed in this year are going to be very much, ones of—where I feel like I’m supporting female interns and nurses, and that the males in my class are going to come out with a lot of powerful relationships with people who are going to write them recommendations for future powerful positions ... it’s kind of important ... And it’s really shown me, this past month, how easy it is to get ahead when you’re a man. It’s not that I didn’t know that already, it’s just made it more clear (Surgery)” ([5], p. 862).

Distinct Qualities and Personality Traits of a Pediatrician

There is a common belief that women’s nature makes them inherently more suitable for certain work regardless of their demonstratable skills or experience [Webb, 1997]. ([68], p. 484)

Women are three times more likely than men to choose pediatrics as a specialty [83]. In 2020, almost 4000 women medical students applied to pediatric residency [1]. Characteristically, most people would say that pediatricians are nice. In fact, a qualitative study in England interviewed women who identified that they chose the field of pediatrics because of the “nicer” work environment with colleagues, both men and women, viewed as “more supportive and approachable” [68]. The field of pediatrics innately cultivates a nurturing environment, as the role of a pediatrician is

to care for not only the patient but also the patient's family. The partnership that develops between a pediatrician and a patient's caregiver is unlike any other within the medical field: a simultaneous challenge and privilege to share in the experience of the family as a whole. This team approach in care often requires longer conversations and understanding of caregiver goals. Various studies have discussed skills and characteristics of women as compared to men, such as expression of empathy, inquiry and listening style, and teamwork dynamics that impact the way in which they may select a career [47]. This alignment of values found in pediatrics and the attributes commonly portrayed by women may enhance overall career satisfaction.

There are certainly commonalities with personality types and attributes of those within the field of medicine as many choose this career to help and heal others. Women, being described as nurturing, are not unique to medicine, nor are stereotypical designations that imply a soft or docile demeanor. Unfortunately, such stereotypical descriptors are often utilized in the evaluation of women students as their standout quality and less emphasis is placed on describing their competence or knowledge.

In a study by Axelson et al. [3], women medical students were more likely to be described as "sensitive," "enthusiastic," and "compassionate" as compared to men who were more often to be described with regard to their intellect as a "quick learner" [3]. No matter the adjectives or descriptors used, we've seen in numerous studies that women often excel in care delivery. It has been shown that women physicians universally "provide preventative care more often, utilize more patient-centered communication, and provide more psychosocial counseling" to their patients than men [85].

Work-Life Integration: Impact of Societal Expectations on Women Entering Pediatrics

"I bet you would have been a much better trainee if you would have taken more time off to stay at home with your new baby than coming back after 6 weeks." – Statement made by a man to a woman colleague when she overheard him at the residency rank meeting state that a woman medical student should be ranked lower because she just had a baby. (Anonymous, 2017)

In 2020, 100 years after the 19th amendment was ratified and women got the right to vote, the Pew Research Center conducted a survey of 3143 US adults to understand Americans' views of the current state of gender equality [49]. Of those who said the USA had not gone far enough in giving women equal rights to men, differing societal expectations and family responsibilities were two of the top five obstacles noted. The American College of Obstetricians and Gynecologists states: "A woman's peak reproductive years are between the late teens and late 20s. By age 30, fertility (the ability to get pregnant) starts to decline" [41]. This is also the same timeline that women physicians are going to college, finishing medical school, and then entering 3 years of pediatric residency training. Taking time off for maternal

leave during any portion of this continuum can delay graduation from one stage to the next in our time rigid training environment. Not only can it delay graduation but women who do have children during training face demanding work hours, limited options for parental leave and child support, and potential stigmatization by peers and supervisors [21]. Although overt discrimination toward physician mothers has decreased, implicit bias toward physicians who are women with children remains [29]. Chapter 7, “Childbearing, Adoption, Motherhood, and Eldercare by Women in Pediatrics,” discusses motherhood and childbearing more in detail.

Career choice is influenced by personal needs and family circumstances. Often there is a challenge to meeting the responsibilities of family and the demands of career. Women hold a societal role as mother and organizer of the household and as caregiver for an elderly parent, child, spouse, or other relative [90]. Although men are capable of and fill similar roles, the default is for women to sacrifice working productivity to tend to household duties, also known as the “second shift” [45]. Unfortunately, women continue to face work-family conflict more so than their male counterparts [46]. The number of couples – two physician partners – entering the Match has tripled from 347 in 1987 to 1224 in 2021 [63]. Having both individuals in a household going through residency training at the same time places an additional burden on both these individuals due to the limited time to assist in day-to-day actions necessary to maintain a household and/or to tend to childcare duties.

About 1890, Sir William Osler is reputed to have written to a young (male) doctor about to marry: ‘A doctor needs a woman who will look after his house and rear his children: a Martha whose care will be for the home.’

In 1971, a McGill medical student aptly expressed her sentiments about this issue: ‘I doubt if there would be as many really successful women doctors as men-unless, that is, women, as well as men, were entitled to that key of male success, a wife. By a wife, I mean someone who will wash floors, vacuum, prepare meals, wash socks, and look after our babies, all without demanding a penny in wages, someone who will take calls from our patients and type and proofread our important journal articles, and books, and someone who will invest all his or her energies in giving us the emotional sustenance we need to keep going through a full day of teaching, rounds, patients and evening committee meetings. Only when the institution of wifehood in its present form is either abolished or made available to doctors of both sexes will women physicians be able to do as much as their male colleagues’. ([66], p. 340)

Applying to Pediatrics: What Makes a “Good” Pediatric Trainee

Student Doctor X is caring and compassionate in her interactions with her patients, is a hard worker and is a wonderful teacher to her peers. – Wording in a Letter of Recommendation for a woman medical student applying for pediatric residency

Each year, pediatric residency training programs seek to find the best medical students to fulfill the program’s mission. Students applying to pediatric programs submit an application packet which includes letters of recommendation (LORs), the

Medical Student Performance Evaluation (MSPE), US Medical Licensing Exam (USMLE) scores, a personal statement, and a curriculum vitae outlining experiences in medical school and college. Programs select candidates to interview who they feel will be successful in their program based on the information in the application packet. Gender differences of both the applicant and the reviewer can impact the outcomes of this selection process.

Letters of Recommendations (LORs)

Research has demonstrated gender biases in letters of recommendation in several medical specialties [30, 36, 48, 59, 60, 84, 86]. Although data is lacking in pediatrics, LORs written for applicants who are men were determined to be more “authentic” and contained significantly more references to drive, power, and work constructs compared to letters written about a woman applicant [30, 60]. Women tend to be described using grindstone characteristics such as “committed,” “tireless,” and “hardworking” [84] and with words emphasizing communal characteristics of teamwork, helpfulness, and compassion [59]. LORs often provide a narrative description of applicants’ noncognitive traits. It is not the traits themselves that are either good or bad, but instead it is the perceptions of the individual making the assessment of whether or not these traits make a ‘good physician.’

Medical Student Performance Evaluations (MSPEs)

Based on societal gender norms, women are expected to use “communal” language and engage in collaborative behaviors, avoid self-promotion, and not use aggressive/assertive language. Linguistic gender norms have also been noted in MSPEs [75]. Women medical students in this study were statistically more often described using the words “bright,” “organized,” “caring,” “empathetic,” and “compassionate” compared to their counterparts who were men [75]. However, there were no significant differences in standout words (i.e., exceptional, outstanding, excellent) [75]. The authors suggest by incorporating holistic, narrative descriptions of applicants that possible implicit biases may undermine the Deans’ objectivity.

Clerkship performance is another area within the MSPE where gender may impact the chances of a women matching in pediatrics. Gender has not been found to be an independent predictor of core clerkship grades [14]. However, other studies have demonstrated that women scored higher than men on various domains of clinical performance or on examinations, yet despite these higher scores in clinical or assessment performance, there was no difference in the final grade [18, 27]. There were also gender-based linguistic differences in clerkship narrative comments as we have discussed with LORs [27].

Personal Statements

Studies have demonstrated that when women fail to adhere to gender stereotypes, they are penalized [25, 42, 43, 69, 78]. Researchers demonstrated when women trainees behaved counter to the gender-based norm, they felt they needed to apologize for being authoritative [55]. But what about the women-dominated field of pediatrics? Do gender norms remain the same when students write their own personal statement for applying to the field? Both women and men used communal language equally, but men did use agentic language of reward significantly more than their women counterparts [4]. These researchers suggest residency applicants may be subjected to dual pressures of demonstrating they belong (i.e., “fit”) in the field, while at the same time uphold linguistic gender norms. Indeed, previous research from the men-dominated medical fields demonstrated that women tended to stay within the confines of social norms by writing more often about communal and social themes compared to men, although both equally used self-promoting language [23, 72, 73]. Women applicants also had more references to women in their personal statements which suggests the importance of women mentoring and role modeling in men-dominated fields [23].

Experiences in Medical School

The research is mixed when reviewing other aspects of the medical school application packet. Despite the real-life conversation above, there was no statistical difference noted in the likelihood of being inducted into AOA between men and women medical students with the same clerkship grades [89]. Women as a whole, however, were statistically more likely to be inducted into the Gold Humanism Honor Society which the authors postulated is due to the society’s stated criteria of selected individuals who demonstrate empathy and patient-centered care (compassion and communal words). In a separate study, differences among the genders were also noted on the US Licensing Exam. Men outperformed women on Step 1, but this was reversed on Step 2 and there were no differences on Step 3 [77]. Gender-specific data is lacking on women specifically going into pediatrics. Personal correspondence from one of the largest pediatric training programs which receives over 1600 applications annually (approximately one-third of all 4000 annual applications) revealed gender differences in some areas which are opposite to the research data if all women regardless of specialty were included (M. A. Ward, MD, personal communication, April 15, 2021). The average number of publications was greater for men than women (6.6 vs. 5.7, $p = 0.04$), men had fewer volunteer experiences compared to women (8.8 vs. 10.5, $p < 0.01$), and men scored slightly lower in this sample than women on USMLE Step 1 (227 vs. 229, $p = 0.04$). There were no statistical gender differences in the number of students who were inducted into Alpha

Omega Alpha or the Gold Humanism Honor Society, nor in work or research experiences.

Gender differences were also noted in the literature for who volunteered to become small group leaders during the first year of medical school [88]. Both men and women view men as being more capable leaders [24, 44, 76, 79]. Medical students who were men were more likely to volunteer for emergent leadership positions by being a small group leader than women [88]. However, this gap was eliminated when the genders were equally divided among the groups (compared to self-selection of groups) and when additional instructions to bolster “belonging” were included. Therefore, how a task is described may help overcome stereotype threat.

Clinical Learning Environment: Experiences of Trainees

“I had a woman colleague in medical school who reported one of her supervising physicians for unwanted sexual advancements. She was forever labeled as a ‘troublemaker’ and I decided thereafter that there were only negative consequences for reporting. And the person she reported didn’t even get into any trouble. So why should I report?” (author’s (TLT) experience)

Mistreatment of Women Along the Continuum of Medical Education

Bullying, discrimination, and sexual harassment of women trainees are far too common in the clinical learning environment [16, 17, 32, 39, 57]. A survey of senior students from 14 different US medical schools found that 69% of women had experienced gender discrimination and sexual harassment (GD/SH), twice as frequently as men [71]. Most of these experiences occurred in the clinical versus the preclinical environment, and the clinical supervising physician was the most frequent source of the behavior [32]. Women perceived GD/SH significantly more in specialties with higher numbers of men [71].

Despite efforts to eradicate mistreatment, women medical students experienced greater sexual harassment over time and not less [35], and these experiences continue as they transition to residency [37, 40, 50, 52]. The vast majority of bullying and GD/SH go unreported [19, 20, 40, 51, 58, 61]. Trainees in the GME environment rarely reported mistreatment and statistically less often than the medical students [40]. The three most common reasons for not reporting were a perception that the incident was not important enough, nothing would be done about it, and fear of reprisal. These negative experiences have significant short- and long-term consequences including decreased ability to learn, feelings of helplessness, increased

cynicism, higher burnout rates, inhibition of academic advancement, feelings of isolation, depression, and higher dropout rates. [6, 15, 34, 56, 81, 92].

Assessment and Feedback

Research has found stricter standards exist for women than for men when both perform at the same level and that personality characteristics can activate different standards [33]. When attending physicians gave residents feedback regarding the trainee's performance that needed work, men received consistent feedback, whereas women residents received inconsistent feedback particularly related to autonomy and leadership [70]. There are no studies currently which have examined Milestones, a developmental framework for trainee assessment, attainment based on gender in pediatrics; however, other fields have found differences [22].

Psychological Impact of Clinical Training

During medical school, men report more worry than women [67]. However, as medical school progresses, women are noted to have both an increase in anxiety levels and an increase in reported depression all contributing to decreased psychological well-being [74, 87]. Marriage seems to serve as a social support system for men but not women during medical school [67]. Binge drinking, alcohol consumption, and marijuana and tobacco use are reported more often by men during medical school [65]. Data during pediatric training is limited but does suggest slightly higher levels of burnout among women compared to men (55% vs. 52%) [53].

Research Opportunities

Gender differences exist during both medical school and residency related to research opportunities. Although women authored a little over half of all theses in a 13-year study period, women earned only 30.9% of highest honors awards for their work [54]. Men were statistically more likely than women to work with a mentor with a history of three or more thesis honorees, undertake a fifth year of research study, secure competitive funding for their research, enroll in an MD-Master of Health Science dual degree program, and conduct bench research. Even after correcting for all these factors, women were still only half as likely to receive highest honors. In 2016, women matriculants made up only 38% of the total enrollment in Medical Scientist Training Programs, and they disproportionately apply to lower ranking research programs [2, 9]. Similar gender differences exist in research grant applications and funding among pediatric residents. Although more women than

men applied (61% vs. 39%), men were more likely than women to not only obtain grant funding but also to receive more money [26]. Men tended to apply more often during their first or second year of training, propose more basic science projects, and were more likely to have an advanced research degree.

Professionalization and Professional Identity Formation

Are you sure you want to be a doctor? That's not what women typically do. Wouldn't you rather be a teacher or a nurse? – Stated by multiple family members of a woman interested in going to medical school

Recent studies have hypothesized that women students are involved in a “gendered apprenticeship” where over time gender bias is internalized as the norm [12, 80]. Social norms create gendered expectations, for example, women are more likely to assume educational roles within medical schools, and these roles are often perceived as subordinate to management roles which men hold in higher numbers [29]. This gender imbalance in roles has been likened to what occurs in most households and has been labeled “institutional housekeeping” [8].

Women trainees not only walk a gender identity tightrope, but they face a double standard. Women trainees who do not conform to traditional gendered expectations risk being marginalized. Women also may be more likely to doubt their competence owing to training environments that favor more masculine behaviors [45]. When trainees live and work in an environment where images do not look like them, they also perceive that the institution does not value them [31].

Gendered experiences have a significant influence on trainees’ professional identity development [12]. Women are more influenced by their ability to see themselves fitting into the specialty field (connectedness) when making career decisions [82]. Poor representation of women in some subspecialties, a paucity of role models in certain jobs, and the perception that a women’s career advancement is fraught with difficulty may dissuade trainees from pursuing the same career path [12]. The proportion of first-year fellows seeking subspecialty pediatric training has increased from 50% in 2001 to almost 68% in 2018 [62]. Only two subspecialty fields, cardiology and critical care medicine, continue to have more men than women entering fellowship. There is also a positive trend of more women seeing themselves as subspecialists versus general pediatricians. In 2018, 41% of women chose to pursue pediatric fellowship, up from 34% in 2001 [62].

A lot has changed since Dr. Elizabeth Blackwell broke the mold; however, challenges still remain, and progress is ongoing. Continued dedicated efforts to remove barriers that limit women in ascending at an equivalent trajectory to men are needed and must begin at the start of the pipeline with our students. As our visibility increases, so should our voice. The contributions of women in medicine are great and their influence on the path of those women who follow is profound.

Medicine is a natural field for women. ... But if we don't have and don't utilize the capabilities of women, which are different in many ways from men, we're throwing away 50 percent, actually 51 percent, of the intellect and creativity in this country or in the world. That's wrong! – Dr. Catherine DeAngelis, M.D., M.P.H., FAAP [91]

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