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Effects of the COVID-19 Pandemic on the Professional Career of Women in Oral and Maxillofacial Surgery

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KEYWORDS

• COVID-19 pandemic • Women in oral and maxillofacial surgery (OMS) • Implicit bias • Pay disparity • Gender inequity • Physician burnout • Virtual education format

KEY POINTS

- The devastating effects of the COVID-19 pandemic have affected people worldwide. Women in the workforce have been inordinately impacted by the pandemic. Female oral and maxillofacial surgeons (OMS) faced evident barriers and biases before the pandemic that are now exacerbated. The COVID-19 pandemic has revealed these disparities.
- Quarantine and stay-at-home orders played a significant role in the hardships that women OMS faced because of increased burden of domestic and childcare obligations.
- Established salary inequality for women physicians becomes more evident during a pandemic and ultimately impacts the potential academic promotion and financial success of women OMS.
- The COVID-19 pandemic has worsened burnout globally, and women physicians are disproportionately bearing the burden.
- Lack of in-person symposiums, interviews, and externship opportunities limits the potential for women to intermingle, provide mentorship, and foster an environment for equality.
- Due to the preexisting inequities within the OMS specialty and the likely exacerbation of these inequities by the COVID-19 pandemic, there is an invitation for OMS programs across the United States to provide transparency during policy implementation and incorporate women into leadership positions whereby policies are created that ultimately influence future lives and careers of women in OMS.

THE COVID-19 PANDEMIC

Coronavirus disease 2019 (COVID-19) is the infection that results from contracting the novel coronavirus (severe acute respiratory syndrome coronavirus 2 or SARS-CoV-2).[1] As of June 2021, 169 million people worldwide have contracted the virus, and there have been a staggering 3.5 million deaths.[2] COVID-19 has become the third leading cause of death in the United States, following heart disease and cancer. The lives of individuals around the world were altered by the devastating effects of the COVID-19 pandemic. In order to reduce transmission of the coronavirus, nonessential workers

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Oral Maxillofacial Surg Clin N Am 33 (2021) 475–480
https://doi.org/10.1016/j.coms.2021.06.002

were quarantined, followed stay-at-home orders, and travel restrictions flourished.[3] Health care professionals were considered "essential" workers, and stay-at-home orders excluded them. Lack of personal protective equipment (PPE), exposure to the coronavirus, and risk of infection altered life on a fundamental level.

Many of the US workforce have at least 1 child, and many without institutional childcare were forced to leave the workforce to provide for children at home.[4] As a result, the coronavirus uniquely affected the female workforce and, in particular, women in medicine. A prevention article published in "Innovations and Provocations" highlights that the reproductive age of women overlaps with their early academic careers, expanding the loss of women through the "academic pipeline."[5] This finding was also noted in an opinion piece by D. M. Laskin published in 2015 wherein Laskin stated that the "desire of women to eventually raise a family" often precludes them from the academic setting and funnels women into the private practice sector.[6] The barriers for women and the scarcity of instrumental policies that should be created to support women in academic medicine who also have children must be considered, as many women during the pandemic have been forced to carry the burden of domiciliary obligations. These factors are an essential consideration when studying the effects of the pandemic on female medical professionals.

The COVID-19 pandemic has affected physicians across the globe, specifically oral and maxillofacial surgeons (OMS). Surgeries involving the head and neck region increase the risk of virus transmission. This worldwide health crisis shifted the health care system's priorities from treatment of all medical ailments to only emergent and urgent conditions. This transformation affected both attending physicians and residents. In a survey published in the *Journal of Oral and Maxillofacial Surgery*, it was found that OMS residents were concerned about meeting graduation requirements due to cancelled elective cases, programs shifted to virtual only education, and residents had limited access to adequate PPE resources, including N95 respirators.[7] PPE and respirators are known to have specific fit issues for the female gender, further increasing the risk of contracting coronavirus for women surgeons. The above concerns combined with women comprising a greater majority of junior clinical appointments compared with men increases exposure of women to COVID-19.[8] OMS conferences across the United States were canceled, and virtual symposiums became the norm. Although the virtual platform could increase global educational opportunities for many,[9] special interest groups suffered, specifically those geared toward women, such as the women's special interest group at the American Association of Oral and Maxillofacial Surgeons (AAOMS) annual meeting. In addition, an article submitted to "Academic Medicine" discussed gender equity issues stating that women may be spoken over in virtual formats and even interrupted more often. The lack of in person events and its consequences stifle professional opportunities and recognition for minorities such as women.[10] Furthermore, virtual formats for symposiums limit the informal networking opportunities that could previously be expected. These factors coupled with the unique roles that women play in both academia and home life resulted in the coronavirus having a disproportionate impact on women.

GENDER INEQUITY IN THE SPECIALTY

Gender imbalance is common among most surgical specialties in the United States, with women comprising only a small minority of the surgical workforce.[11] The paucity of active women in OMS participating at the national level is evident, with female participants of AAOMS and American College of Oral and Maxillofacial Surgeons being only 8% and 10%, respectively.[12] In order to analyze the reasons for the scarceness of women in oral surgery and its impact, one must consider the process of becoming an oral surgeon, starting with dental school. Many sacrifices must be made in order to gain acceptance to an oral surgery program. Matriculation necessitates decreased family time, increased hours dedicated to the oral surgery service at one's dental school and thus preparing for the comprehensive basic sciences examination (which is the standard metric used to distinguish candidates), and increased hours participating in several externships. All of these factors are required to exhibit true dedication and preparedness. In a survey conducted on the perception of women in the field, Rostami and Laskin[13] noted that a potential reason for the disparity of women in OMS could be attributed to a low applicant pool as opposed to implicit bias among program directors at OMS programs. However, Rostami and Laskin also found that male residents did have biases against their female counterparts, and they were concerned that the reason for the difference in responses among residents and program directors could be because of leaders in the specialty answering with only "socially acceptable viewpoints rather than the true condition." This quandary begs the question, what then are the underlying difficulties that influence women to forego applying to an OMS program?

Gender bias starts early in the career of a female OMS, as early as dental school. As Rostami and Laskin stated: "Although most practicing surgeons, residents, and program directors agreed that women are as capable as men to practice OMS, there continues to be some bias against women in the field." This analysis by Rostami and Laskin included the conclusion by Brunner and Campbell, that this bias was also a perception of female dental students.[13] A survey published in the *Journal of Oral and Maxillofacial Surgery* in 2019 focusing on the sexual harassment of women concluded that sexually harassing behavior of women is prevalent, and it "erodes [their] personal confidence and career development."[14] This award-winning abstract was also the subject of a 2019 editorial published in *Forbes* and submitted to the Academic Surgical Congress by a team from the University of North Carolina. The survey regarded the harassment and bullying of female surgeons. It was revealed that 58% of women surgeons, in the year leading up to the survey, experienced sexual harassment. Interestingly, "the majority (84%) of incidents of harassment reported by women as part of the survey were not reported to any institutional authority." The reason? Fear. "Fear of negative impact on career (43%), fear of retribution (32%), and fear of being dismissed and/or inaction towards the perpetrator (31%)."[15,16] The problem is two-fold: women are experiencing harassment, which can affect all aspects of one's surgical production and success, and women feel they cannot report these issues without inflicting increased damage on their already precarious careers. This issue is a social issue, at best, and a safety issue at worst. It is imperative to analyze findings such as these, as historical norms and trends only become more evident and prevalent in times of crisis, such as the COVID-19 pandemic. Examination must be made of how women fared before the pandemic to understand the subsequent inequities that surface and escalate afterward.

Women are often encouraged to pursue career paths other than surgery. Despite women making up 50% or greater of the populace of US dental schools, there is still a disproportionate number of women who choose not to pursue surgical residency.[17] Women who enter surgical residency forego careers in academic medicine. Attributed reasons for this could be the lack of leadership roles available to women, decreased pay for equal effort, and the preexisting biases regarding motherhood. An Ontario study also reported that women in surgery are paid 24% less per hour than their male counterparts.[18] In the United States, women physicians earn 75 cents on the dollar compared with men. This pay disparity is one of the largest in any profession.[19] Disparity in earnings and the lack of leadership roles for women are just two of the many factors influencing women to forego academic surgical careers. In 2018, Debra M. Sacco, DMD, MD was the first woman elected to the AAOMS Board of Trustees, despite AAOMS originating in the year 1918,[20] which indicates the impediment of the male-dominated OMS field to diversify leadership.

QUARANTINE ISSUES FOR WOMEN IN ORAL AND MAXILLOFACIAL SURGERY

Pandemic quarantine issues were vastly different for women than their male counterparts. Women typically assume a greater amount of the domestic duties at home and care for children and elderly on average more than men.[8] This increased burden alone decreases the time that women are attributing to their career and academic aspirations. During the COVID-19 pandemic, this issue is compounded by the fact that daycares and schools were closed. Many female academicians were sequestered to home, quarantined with children who required attention and care, further decreasing a woman's academic productivity. Although COVID-19 affected men also, women were in the majority of those assuming traditional duties at home. School closings and self-isolation at home necessitated women sacrificing their academic work for responsibilities in the household.[10] Unpaid childcare is often devalued and exploited, which further pervades the gender pay disparity[21]; this permeates all areas of advancement for women when combined with inherent biases in the work place.

PAY GAP AND TENURE TRACK

The concerns encompassing the gender pay gap must be assessed by considering all factors that contribute to delays in academic progression. The family household and childcare burdens of women diminish the time and effort women are able to contribute to their career. Placing the onus on women influences the time allocated to writing research papers and applying for grants, which directly affects achieving tenure and potential career advancement. Although women increased their contributions to coauthored research before the pandemic, their presence as first author has continued to dwindle. Article submissions during COVID-19 have shown a decreased female presence, and this includes both coauthorship and first-author positions.[4] The lack of authorship affects a female surgeon's ability to climb the tenure

ladder and alters potential raises in salary. Subsequently, women have less resources for retirement and investments. In addition to women contributing to fewer publications and having less time for authorship, women are overlooked for their service and committee participant contributions. All of these factors combined decreases and delays potential tenure achievement, as research, teaching, and clinical time are regarded with more esteem.[5] Women are more often involved in unpaid committees and service opportunities that progress the specialty, yet these contributions are not weighted as heavily as research contributions, further widening both the promotion and the pay gap.[5,19,22]

In an editorial regarding gender wage gap, it was noted that "because women tend to work fewer hours to accommodate caregiving and other unpaid obligations, they are also more likely to work part-time, which means lower hourly wages and fewer benefits compared with full-time workers."[23] Tenure leads to increased pay, promotional opportunities, and academic freedom. When women are not afforded these opportunities, it limits the advancement of women in the specialty. These key issues culminate in women becoming sole caretakers, missing more work, logging less hours at work, qualifying for less benefits, and being offered fewer promotions and prospects. According to an article written in *Sustainability: Science, Practice and Policy*, "Women are also less likely to have a financial safety net, due to greater job insecurity and lower average pay rates for women."[21] Interestingly, a *New York Times* editorial published in 2020 embellishing on the research findings that women undergo harsher end of contract evaluations concluded "women and people of color are more likely than men to get comments related to their appearance or the tone of their voice," factors that have no relation to one's ability to teach. It was also noted that these unjust criticisms could intensify during the pandemic.[22] Women are trapped in an inescapable gender-bias whirlpool culminating in the loss of career advancement and financial success, resulting in their male counterparts flourishing and women floundering.

Women who contribute more time to clinical and surgical education and who focus on committee work are particularly disadvantaged, as these activities are not weighted as heavily as research and grant approvals for the traditional tenure track. During the pandemic, women who were able to continue surgical duties continued to be exposed to coronavirus at an increased rate than their male colleagues. Some physicians saw a clear gender disparity in patients being treated for post-COVID-19 conditions as "long haulers," with women facing higher rates of chronic conditions.[24] The potential increase in viral exposure combined with the chronicity of illness could result in decreased time at work contributing to surgical and clinical teaching and decreased attention to academic research thus limiting the chances of progression.

PHYSICIAN BURNOUT

The COVID-19 pandemic increased the already high incidence of physician burnout among women. Although the pandemic contributed to physician burnout across both genders, women were disproportionally affected.[8] According to a descriptive study recently published in *JAMA Network*, "women surgeons experience less achievement, are more dissatisfied, and have higher levels of burnout compared with their male colleagues."[25] Burnout decreases production, increases errors at work, and decreases motivation. If burnout is affecting women at a greater incidence than men, it is axiomatic that women will suffer greater consequences in the academic and surgical arena. Anecdotally but also supported by the findings of Rostami and Laskin,[13] women are perceived as weaker and less emotionally stable than men. These fallacies can result in "imposter syndrome" and the quest to stay one step ahead of their male counterparts to be viewed as "at par," fostering additional burnout. A survey published in *The Journal of Surgical Education* highlights this concept, finding that women "trainees in male dominate specialties were more likely to report gender bias …may leave medicine/retire early, and would not recommend [the] profession to trainees or family members."[26] The prejudice experienced by women is a compounding and unfortunate issue, as less women in OMS will recommend the specialty to their colleagues, further exacerbating the gender discrepancy. These matters are only amplified during a pandemic where both genders experience additional burnout and fatigue.

LACK OF IN-PERSON MEETINGS, INTERVIEWS, EXTERNSHIPS

Recently, women have organized to form special interest groups, such as the women's special interest group at AAOMS. Due to COVID-19, the special interest group was completely removed from the virtual forum AAOMS used for their 2020 annual meeting. COVID-19 continues to decrease past progression of women in the specialty. With fewer opportunities for women to comingle with like-minded individuals for support

and advice, women are left without significant mentors and role models. Lacking female leadership and attendings in OMS only perpetuates preexisting biases. The overall lack of female promotion results in less women in leadership roles where influential and consequential decisions are made.[27] Ultimately, the deficiency of women in leadership positions at universities and medical centers distances women from discussions regarding important policies, such as maternity leave, paid leave, childcare options, and other benefits that specifically affect women. COVID-19 will further exacerbate these matters, as there will be decreased funding for grants and potential departmental funds. Women will be the first on the chopping block.

The inability for women to be physically present at externships, interviews, and symposiums decreases chances for acceptance. When women are afforded the opportunity to interact with their male counterparts, they are able to exhibit their proficiency, knowledge, and expertise in their field. Female representation, in turn, results in greater reception of women in the surgical workforce and debunks myths regarding women and their ability to perform as well as men.

SUMMARY

The COVID-19 pandemic did not create the gender disparity in pay, opportunity, and academic advancement, but it has exacerbated it and highlighted those areas where the inequity exists. In order to combat the issues encompassing implicit bias that cultivates an environment where women struggle to excel, education must be rendered to ensure that those in the profession are cognizant that these inequities do exist. Childcare at work and paid leave to care for children at home are just some of the many options that must be made available to women. Tenure tracks must include all academic roles, including service and committee work as ways to ascend the tenure path. Extension of the tenure timeline must also be considered. Women need a seat at the table when influential decisions are being made and policies are implemented. These policies ultimately affect women's ability to adequately have work-life balance with continued path for progress and success. Transparency is key, and women OMS should have a voice in the decision-making processes, especially when establishing criteria for salary promotion and tenure achievement. Women should have the opportunity to serve in leadership positions, both for mentorship of female surgeons to come and to aid in making decisions that affect all surgeons. Women can help facilitate the difficult discussions and assist in resolving implicit gender bias. Until the time comes when "female" is not a prefix to "surgeon," gender inequity will not be overcome. Rostami and colleagues[17] wrote that there has been an increased representation of women in both residency training programs and practice, but highlighted the ever-present bias, sexual harassment, and social dilemmas that discourage women from choosing OMS as a specialty. Although women have progressed since the early days of Elaine Steubner's tenure (the first female OMS, graduating residency in 1958), the specialty and women still have a long way to go.

DISCLOSURE STATEMENT

The authors have no conflicts of interest, disclosures, or financial interests in any matter or material discussed in the article.

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