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Female Endoscopists in Gastroenterology

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Despite the increasing number of women enrolling in the field of endoscopic gastroen-terology, gender stereotypes and workplace discrimination remain significant issues. Female endoscopists experience higher rates of musculoskeletal injuries and burnout. In this study, we highlight the need for improved training systems and supportive work environments and also the effects of gender concordance on patient satisfaction and outcomes. Furthermore, we recommend the establishment of policies to enhance gender diversity in healthcare. Addressing these challenges is essential to ensure that female gastroenterologists receive optimal training and opportunities, which are important to improve patient care.

Keywords Female; Endoscopy; Education.

Globally, the number of female endoscopists in gastroenterology has significantly increased compared to the past, and they are gaining more attention for their roles. According to 2008 statistics from the Association of American Medical Colleges, female residents have steadily increased since 2005. In contrast, the number of male residents has slowly declined.[1] Despite the increasing number of women entering the medical field, gender-related issues persist. This review aims to explore and review recent studies on the barriers and contributions of female gastroenterology endoscopists.

Despite the increasing number of female trainees, gender stereotyping remains a significant issue, particularly when considering the cultural differences between Eastern and Western countries. A study highlights that gender preferences often influence early career aspirations in medical school.[2] However, after graduation and actual specialty selection, factors such as job values, work-life balance, meaningful other support, and mentorship come into play. This shift in focus can lead to a gender skew in different specialties, which can be attributed to personal preferences, the organizational culture of medical schools and hospitals, and gender discrimination in the selection process. For instance, only 17% of US gastroenterologists are women, despite the increasing number of female physicians.[3] A 2021 study involving 403 gastroenterologists from 12 academic in-

stitutions and three large private hospitals found that the impact of gender bias on female endoscopists is significant. For instance, the percent of those trained using tactile instruction were 67% for men and 41% female.[4] Women who experienced gender bias during training were 57.4%, compared to 13.1% for men, and 50.0% of women experienced gender bias in their current careers, compared to 9.8% for men. These findings underscore the need for a more inclusive and supportive work environment, as half of the participating women reported experiencing gender bias in their current workplaces, and one-third felt that the environment of the endoscopy unit negatively impacted their career decisions.

A 2018 UEG Week symposium included a survey comparing risk attitudes by gender.[5] The authors found that female therapeutic endoscopists were more cautious, especially in scenarios involving obtaining consent. This risk aversion may stem from personal and professional factors, including social expectations and potential legal consequences. Women in the study reported being more affected by minor adverse events like bleeding during procedures than their male colleagues. This heightened sensitivity to complications may lead to a reluctance to take on challenging cases, impacting overall training and expertise in advanced endoscopy. The study underscores the need for tailored training programs to address these differences in risk perception and support female endoscopists in confidently performing advanced procedures.

Endoscopic procedures are physically demanding, requiring significant stamina and skill, which can pose physical constraints, especially for women. Prolonged standing and repetitive muscle and joint use during endoscopic examinations can lead to musculoskeletal injuries, regardless of gender.[6] A survey in Korea confirmed this, with 199 respondents (89.6%) reporting musculoskeletal pain, and women across all age groups having higher total pain scores than men (p=0.016).[7] Endoscopic-related injuries (ERIs) primarily result from the repetitive nature of the procedures. A 2022 study on ERI prevalence and ergonomic training during gastroenterology fellowship found that, on average, female fellows had shorter hand sizes, with many reporting that endoscopic equipment was not ergonomically optimized. This study emphasizes the need for formal ergonomic training for trainees and trainers with smaller hands.[8] Training systems using artificial intelligence, which has recently gained interest, and simulator training may overcome the limitations of past systems.[9]

Kim[10] also highlight the significant impact of work-related injuries and burnout among female endoscopists, noting that younger female gastroenterologists have lower job satisfaction and higher burnout rates than their male colleagues. Factors such as domestic responsibilities and societal expectations exacerbate these issues, leading to emotional exhaustion and decreased job fulfillment. The study calls for targeted interventions to address these challenges, including ergonomic improvements to endoscopic equipment, adequate support for physical rehabilitation, and fostering a supportive work environment that acknowledges and accommodates the unique needs of female endoscopists. Strategies to reduce burnout, such as flexible working hours, on-site childcare, and mental health support programs, can enhance job satisfaction and retention among female gastroenterologists.

The recent COVID-19 pandemic has reduced the quality of education and opportunities for physicians in training. In particular, endoscopy is a procedure performed through the oral cavity. It is directly affected by the pandemic, which may have reduced training opportunities for women involved in pregnancy and childbirth. As well as non-gastroenterology-related work. In addition, they may have experienced physical and mental burnout while performing clinical tasks related to quarantine. In addition, since 2017, the training period for internal medicine specialists in Korea has been shortened from four to three years. After three years of training in internal medicine, they can choose to specialize in gastroenterology. In addition, a standard training program for gastroenterologists was proposed for each year of training, with the first year being mandatory and the second year optional. In addition, this year heralds many changes in Korean healthcare. Many doctors are concerned about negative changes in the education system due to changes in the government's healthcare policy. The biggest problem with these changes is that they have significantly declined applicants to residency programs. How these changes in the healthcare environment and policies will affect the acquisition of gastroenterology expertise by female physicians and how they will affect the selection and retention of female physicians themselves in the future will require a longer-term perspective.

There may be educational and professional disadvantages for women physicians and how this affects their patients. While the limitations of female physicians may compromise patient care, they may have an advantage regarding patient preference for endoscopy. Gastrointestinal endoscopy procedures can be invasive, potentially causing fear and embarrassment, which can act as barriers to care and result in a more cautious approach by female physicians.[11,12] A study on the impact of endoscopist gender on patient outcomes found that female endoscopists are associated with better outcomes across various medical fields.[13] Many female patients prefer female endoscopists to reduce embarrassment and foster empathy, even willing to delay procedures to ensure gender concordance. This preference can lead to significant delays in diagnosis and treatment,

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highlighting the impact of gender dynamics on patient care. The study suggests that cultural factors play an essential role in patient preferences, especially in conservative regions where female patients often prefer female providers for invasive procedures like colonoscopies. This preference can significantly affect screening adherence and subsequent health outcomes, emphasizing the need to increase the number of trained female endoscopists and address potential biases in patient-provider interactions. Similar findings have been reported in other studies: in a past study, 45% of women waiting for a colonoscopy expressed a preference for the female gender, and in another study, 43% of women surveyed said they preferred a female endoscopist, and 87% of them were willing to wait even if it delayed their examination.[14,15]

Kim[10] underscore the importance of gender concordance between patients and endoscopists. According to their research, female patients, particularly for invasive procedures like colonoscopies, prefer female endoscopists due to concerns about modesty and comfort. This preference significantly affects patient compliance and satisfaction, ultimately impacting clinical outcomes. The study emphasizes the need to increase the number of female gastroenterologists to meet patient demands and ensure adherence to recommended screenings and follow-up procedures. An analysis of patient preferences in 2016 found that 95% of female patients preferred female endoscopists for colonoscopies, a significant increase from 32% in a similar 2008 study.[16] Cultural and social factors significantly contribute to these preferences, and promoting gender diversity in healthcare can help address these needs and improve access to care.

Despite the increasing presence of female endoscopists in gastroenterology, significant challenges remain. Addressing these challenges requires a multifaceted approach to improve gender equality in education and practice, provide appropriate support for work-life balance, and address cultural and societal barriers. Ongoing research and policy efforts are essential to ensure female endoscopists can thrive and fully contribute to gastroenterology. We must consider recruiting and educating high-caliber female endoscopists in a rapidly changing healthcare environment. Implementing the recommendations of recent studies can create a more inclusive and supportive environment for female endoscopists. By addressing the specific barriers women face in this field, the medical community can ensure that female gastroenterologists receive excellent training and opportunities, ultimately improving patient care and outcomes through diverse perspectives and experiences.

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