“Doctor” Badge Promotes Accurate Role Identification and Reduces Gender-Based Aggressions in Female Resident Physicians

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Abstract

Objective Role misidentification among hospital staff is common. Female resident physicians are more likely to be misidentified as non-physicians. This study utilized a pre-post examination to determine if the usage of a “doctor” badge by resident physicians at a Veterans Affairs Medical Center influences role identification, gender-based aggressions, and workplace experience.

Methods Twenty-six psychiatry residents at the Veterans Affairs Boston Healthcare System participated in a voluntary, anonymous electronic pre-survey in December 2020 and post-survey in March 2021 to report their experiences with role identification and gender-based aggressions before and after the implementation of a “doctor” badge.

Results Females were significantly more likely than males to report role misidentification ($\chi^2(1)=10.8, p=0.001$). Females were significantly more likely to experience gender-based aggressions compared to males ($\chi^2(1)=19.5, p<0.001$). Compared to pre-intervention, females who wore the badge were significantly less likely to be misidentified ($\chi^2(1)=9.6, p=0.002$). There was no significance when comparing males who were misidentified pre- to post-intervention ($\chi^2(1)=1.1, p=0.294$). Compared to pre-intervention, females who wore the badge were significantly less likely to experience gender-based aggressions ($\chi^2(1)=17.3, p<0.001$). Compared to pre-intervention, there was no significant change in gender-based aggressions for males who wore the badge ($\chi^2(1)=1.05, p=0.306$).

Conclusions Female residents were more likely than male residents to report role misidentification. Usage of the “doctor” badge resulted in improved role identification and a reduction in gender-based aggressions for females, but not males. “Doctor” badges can improve role identification, gender-based aggressions, workplace experience, patient communication, and care.

Keywords Residents · Psychiatry · Aggression · Workplace · Communication

Role misidentification is a common experience of healthcare providers, especially in academic medical centers where interdisciplinary teams frequently include physician trainees [1]. Misidentification of a physician’s role has important implications for physician wellbeing, burnout, and overall patient care [2]. For example, hospitalized patients who can correctly identify physicians on their healthcare team exhibit greater satisfaction with care [3–5].

Female resident physicians experience greater rates of misidentification as a non-physician than male resident physicians. Berwick et al. [2] surveyed resident physicians across internal medicine, surgery, and emergency medicine programs. One hundred percent of female resident physicians reported being misidentified at least once during the study period, compared to 49% of male resident physicians. Furthermore, over one-third of women experienced more than eight misidentifications per month, compared with 1% of men. Misidentified female resident physicians felt four times angrier and “less satisfied” with their job than men reporting misidentification. Most of these physicians reported changing their style of clothing or how they introduced themselves because of misidentification, suggesting that misidentification has behavioral costs.

Jain et al. [6] found that a majority of female physicians experience role misidentification. Furthermore, physicians experiencing at least weekly misidentification were at elevated risk for burnout. The thematic concerns identified included feelings of “not belonging,” “not being fit for the occupation,” “irritation,” and finding that role misidentification “interfere[d] with patient communication,” and “interfere[d] with work.”
Role misidentification is one of many microaggressions and macroaggressions that women in medicine experience throughout their careers [7]. Microaggressions are defined as intentional or unintentional verbal or behavioral indignities which convey hostile, derogatory, or negative insults [8], while macroaggressions tend to manifest within systems or institutions as bias or discrimination [9]. Understanding role misidentification through the lens of prejudice and discrimination further enforces the need to strategically intervene.

Foote et al. [10] previously shared a cross-sectional survey-based study that utilized “doctor” badges to reduce role misidentification. Nearly 93% of female resident physicians noted an improvement in their subjective work experience following the implementation of these badges. Furthermore, badges are an inexpensive tool that can provide clarification across the medical system for patients, families, and other staff who may not correctly identify hospital staff. However, the authors noted that the study design was vulnerable to recall bias since participants were given the badges and then asked about events from months prior.

The present study utilized a pre-post design to assess the prevalence of role misidentification among resident physicians and whether “doctor” badges reduced misidentification over a two-month period. This study also examines whether there were perceived changes in gender-based microaggressions or macroaggressions during the study period. This study is unique because it was conducted at a Veterans Affairs (VA) medical center. Military culture as well as the high ratio of male to female patients receiving care at the VA may have implications for role misidentification for female physicians. Examining role misidentification in this setting is important since more than 70% of all US practicing physicians train at the VA [11]. Furthermore, this study took place during the coronavirus pandemic, which is significant given the expected prolonged duration of mask and shield wearing that may impact facial recognition and identification of healthcare providers. The underlying goal of this work is to ascertain whether there are feasible and high-yield interventions that can help reduce role misidentification and gender-based aggressions experienced by resident physicians.

Methods

This study was approved as a Category #1 exemption under the 2018 revision of the Common Rule 45 CFR 46 [12] to evaluate the effect of changes to the education training environment via the “doctor” badge intervention at the Harvard South Shore Psychiatry Residency Training Program. Post-graduate year one through four psychiatry resident physicians rotating through inpatient, outpatient, and emergency psychiatry services at the VA Boston Healthcare System participated in a voluntary and anonymous pre-survey to report their work experiences with regards to role identification and gender-based microaggressions and macroaggressions in the preceding two months. Electronic pre-surveys were collected between December 3, 2020, and December 14, 2020.

Afterwards, these residents were offered a 2-inch-wide by 4-inch-tall red-colored badge to hang beneath their hospital identification card that said “doctor” printed in all capital letters. The authors had a primary role in the development and implementation of these badges, as they were not previously available to resident physicians. Of note, at this VA medical center, badges of all employees including doctoral-level clinicians carry first and last name, but do not include credentials, such as doctor, or M.D., and D.O. Approximately two months after being given the “doctor” badge, residents completed a voluntary and anonymous post-survey to ascertain whether the badge made a difference in their role identification and work experience. Electronic post-surveys were collected between March 17, 2021, and March 24, 2021.

The survey was developed using information provided by Foote and colleagues about the survey used in their 2019 study [10]. Survey questions were written and reviewed by study authors and included Likert style questions, multiple-choice questions, and free-response questions so participants could describe emotions and experiences during the study period. Surveys were administered electronically using Microsoft Forms. Questions assessed the presence and frequency of role misidentification, which group(s) were responsible for misidentifying physicians, the presence and frequency of gender-based aggressions, perception of whether the badge improved patient communication and care, and perception of whether the badge improved workplace experiences. Categorical variables were reported as frequencies and proportions. Results were stratified by reported gender. Chi-squares were calculated in excel using a significance of 0.005 [13]. Free text responses were analyzed using directed content analysis [14], using a priori codes including (i) experience/impact of being misidentified and (ii) experience/impact of wearing the “doctor” badge. Data associated with each code was analyzed to identify notable themes and select illustrative verbatim responses. Each of the data coding, theme identification, and response selection steps was documented in Excel, led by the first author, and reviewed and discussed for consensus by all the authors.

Results

Respondent demographics are listed in Table 1. Of the 33 psychiatry residents, 27 (82%) completed the initial, pre-intervention survey (15 females, 12 males). Eighteen out of the 27 respondents (67%) reported that they had experienced role misidentification in the previous two months. In analyzing the pre-intervention data by self-reported gender, 14 of the
15 female residents (93%) reported being misidentified as a non-physician, while four of the 12 male residents (33%) reported being misidentified as a non-physician. Female residents were significantly more likely than male residents to report role misidentification \( x^2(1)=10.8, p=0.001 \) (Table 2). Of the 18 respondents who experienced role misidentification, 14 (78%) reported patients as the group that most frequently misidentified residents. Using free text, over half of residents reported negative emotions in response to misidentification such as feeling “annoyed,” “frustrated,” “mad,” “humiliated,” “degraded,” “undervalued,” “unappreciated,” and “disrespected.” Female residents were also more likely to experience gender-based aggressions occasionally, frequently, or very frequently compared to male residents \( x^2(1)=19.5, p<0.001 \).

Of the 33 psychiatry residents, 26 (79%) completed the post-intervention follow-up survey (15 females, 11 males). Of those 26 residents, 21 (81%) reported that they wore the “doctor” badge in the previous two months (13 females, 8 males). Compared to the pre-intervention, there was no significant change of misidentification for all residents who wore the badge \( x^2(1)=6.86, p=0.009 \). However, upon further analysis by gender, there were significant findings. Compared to the pre-intervention, female residents who wore the badge were significantly less likely to be misidentified \( x^2(1)=9.6, p=0.002 \), but not male residents \( x^2(1)=1.05, p=0.306 \). The frequency of these aggressions also decreased significantly for female residents from pre- to post-intervention \( x^2(1)=10.15, p=0.001 \).

### Discussion

In a cohort of psychiatry residents, the prevalence of role misidentification was comparable to rates noted by colleagues in different specialties [2]. In our sample, female physicians experienced a disproportionate burden of role misidentification, as 93% of females experienced misidentification in the two months prior to the intervention. Also, at baseline, female resident physicians experienced significantly higher amounts of gender-based aggressions than their male colleagues. The misidentifications and aggressions significantly improved with the implementation of a “doctor” badge.

The improvements suggest that “doctor” badges may be useful for addressing concerns reported in prior studies and that role misidentification and gender-based aggressions make residents feel undervalued in the workplace, detracting from their clinical duties [2]. Our survey participants shared similar perceptions using free-text comments, reflecting that the badge helps with feeling more appreciated and communicating better with patients.

Our results appear consistent with Berwick et al. [2] and Salles et al. [15], whose cohorts did not specifically comprise psychiatry residents. The similar results may be surprising, as one might expect psychiatry trainees to experience an increased baseline rate of misidentification due to the stigma surrounding the field of psychiatry, rooted in societal views of mental healthcare [16, 17]. Further assessment is needed to understand whether the stigma of the specialty impacts misidentification.

This investigation is novel because it was conducted at a VA medical center, where thousands of trainees provide patient care each year [11]. Less than 10% of veterans are females and the majority of VA patients are white, non-Hispanic, and older males, which could have an impact on role misidentification among female employees [18]. Future work should assess whether experiences vary at VA versus non-VA training sites, community versus academic medical centers, and clinics versus inpatient hospital settings.

Unique to this study is that it took place during the coronavirus pandemic. The 64% utilization rate of the “doctor” badge likely reflects the fact that a portion of residents were completing virtual rotations, where a badge may have been less frequently used. Importantly, obstructing facial features with a mask and shield is problematic for older patients, who comprise a large portion of the veteran population, since they are more likely to have visual and hearing impairment at baseline. Hospital mask policies are unlikely to change in the near
future, thus developing other ways to clearly identify members of the care team is essential.

Role misidentification has been linked with an increased risk of physician burnout [6, 15]. It remains unclear whether enhanced role identification with the usage of a “doctor” badge is associated with reduced rates of physician burnout. This would be an important investigation given the consequences of physician burnout including the negative impact on physical and mental health, adverse effects on patient care, and the resultant deleterious effects on the healthcare system [19].

A salient limitation of our work is the small sample size, which informed our decision to exclude racial, ethnic, and sexual/gender minority identities from data collection. With a residency complement of 33 residents and only a small number of residents known to identify as racial/ethnic or sexual/gender minorities, collecting this data could have compromised the anonymity of certain residents. Respondents could report gender identity by selecting “male,” “female,” or “other,” but due to the sample size and residency demographics, respondents may have felt uncomfortable selecting “other” without the risk of their responses being identifiable to study authors. This study therefore does not include the experiences of gender non-conforming, non-binary, and other gender identities. It also does not differentiate between transgender versus cisgender trainees. Whether minoritized trainees have a higher baseline burden of microaggressions and misidentification is a topic for further exploration, especially for institutions that are actively moving towards an anti-racist, more inclusive stance. Because we did not gather

Table 2  Role misidentification and gender based aggressions

| All pre-intervention respondents [N_{pre} = 27] | Female (55.6%) | Male (44.4%) | χ² | p |
|---|---|---|---|---|
| Role misidentification | | | | |
| Yes (66.7%) | 14 | 4 | 10.80 | 0.001 |
| No (33.3%) | 1 | 8 | | |
| Gender-based aggressions | | | | |
| Occasionally, frequently, or very frequently (55.6%) | 14 | 1 | 19.51 | <0.001 |
| Rarely, never (44.4%) | 1 | 11 | | |
| All respondents | | | | |
| Role misidentification | | | | |
| Yes | 6 (28.6%) | 18 (66.7%) | 6.86 | 0.009 |
| No | 15 (71.4%) | 9 (33.3%) | | |
| Gender-based aggressions | | | | |
| Occasionally, frequently, or very frequently | 4 (19.0%) | 15 (55.6%) | 6.58 | 0.010 |
| Rarely or never | 17 (81.0%) | 12 (44.4%) | | |
| Female respondents | | | | |
| Role misidentification | | | | |
| Yes | 5 (38.5%) | 14 (93.3%) | 9.61 | 0.002 |
| No | 8 (61.5%) | 1 (6.7%) | | |
| Gender-based aggressions | | | | |
| Occasionally, frequently, or very frequently | 2 (15.4%) | 14 (93.3%) | 17.28 | <0.001 |
| Rarely or never | 11 (84.6%) | 1 (6.7%) | | |
| Male respondents | | | | |
| Role misidentification | | | | |
| Yes | 1 (12.5%) | 4 (33.3%) | 1.11 | 0.292 |
| No | 7 (87.5%) | 8 (66.7%) | | |
| Gender-based aggressions | | | | |
| Occasionally, frequently, or very frequently | 2 (25.0%) | 1 (8.3%) | 1.05 | 0.306 |
| Rarely or never | 6 (75.0%) | 11 (91.7%) | | |
demographic data for the non-participating residents, we were not able to examine, as a potential source of bias, whether the characteristics of non-participating residents differed significantly from those who participated. Furthermore, this study is not a randomized controlled trial and therefore participants may have self-selected based on their own experiences with misidentification and microaggressions in residency training. Since badge wearing was voluntary, physicians reporting role misidentification may have been more likely to utilize the badge during the study period. Another limitation of our study is that we developed the survey based on the work of Foote and colleagues [10], rather than using a psychometrically validated survey. Finally, the study was restricted to one site and involved only a veteran patient population, thus generalizability may be limited.

This study examined the use of a “doctor” badge by psychiatry residents at a VA medical center, which is among the largest healthcare systems in the nation. Our study employs a pre-post design to assess the intervention’s impact. Our sample was an anonymous, voluntary group of residents in all years of psychiatry residency training. This study is an important early step in establishing how to strategically intervene to prevent gender-based discrimination and misidentification in the medical setting.

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Declarations

Ethics Approval This study was approved as a Category #1 exemption from the Health Care Systems Institutional Review Board at the VA Boston Healthcare System. This study was approved as a Category #1 exemption (Ethics Approval). This study was approved as a Category #1 exemption (Ethics Approval). This study was approved as a Category #1 exemption (Ethics Approval). This study was approved as a Category #1 exemption (Ethics Approval). This study was approved as a Category #1 exemption (Ethics Approval).

Disclosures On behalf of all authors, the corresponding author states that there is no conflict of interest.

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