

Orthopaedic Adult Reconstruction Fellowship Match Rates: Does Gender Affect Match Success?

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INTRODUCTION:

While orthopaedic surgery has historically been the least gender diverse medical specialty, recent literature has shown that the number of females in orthopaedic surgery residency has increased. Previous literature also noted that a higher proportion of females than males matched into all orthopaedic surgery fellowships from 2010-2014. However, this has not been investigated specifically in regards to adult reconstruction fellowships or with more recent match data. Therefore, the purpose of this study was to evaluate the trends in applicant gender for orthopaedic surgery adult reconstruction fellowships over the last 12 years and to evaluate the differences in match rates between male and female applicants.

METHODS: Beginning in 2010, orthopaedic surgery started using the San Francisco Match (SF Match) platform for eight different fellowship subspecialties, including adult reconstruction. SF Match data from 2012 to 2023 was extracted and analyzed. The gender, number of applicants, and number of matched applicants into orthopaedic adult reconstruction fellowship was reviewed. In addition, trends regarding number of applicants and match rates based on gender were evaluated. Pearson's correlation test was used to evaluate trends and proportions for number of applicants and match rates. Fisher's exact test was used to compare the match rates of male and female applicants.

RESULTS:

There were 3014 applicants for adult reconstruction fellowships from 2012-2023. There were 840 (27.9%) international medical graduates who were excluded from this analysis, leaving 2174 applicants in the study cohort. There were 157 female applicants (7.2%) and 2017 Male applicants (92.8%). The number of female applicants ranged from a low of 6 in 2012 to a high of 19 in 2018, (mean 13.1 +/- 4.7) with significant increase over the study period ($r=0.64$, $p=0.009$). The match rate for female applicants increased from a low of 70.6% (12 of 17) in 2016 to 100.0% (18 of 18) in 2021, (mean 87.6% +/- 10.6%), with no statistically significant change over the study period ($r=0.27$, $p=0.19$). The mean female applicant rank on the programs' lists ranged from a low of 9.25 in 2016 to a high of 4.06 in 2023, (mean 6.03 +/- 1.9), with no significant change over the study period ($r=0.04$, $p=0.45$). The mean program rank on female applicants' lists ranged from a low of 4.60 in 2013 to a high of 1.09 in 2022, (mean 2.84 +/- 0.96), with a significant decrease over the study period ($r=-0.70$, $p=0.0056$). For male residents, the number of applicants ranged from a low of 103 in 2012 to a high of 175 in 2021 (mean 141.4 +/- 26.3), with significant increase over the study period ($r=0.81$, $p=0.0004$). The match rate for male applicants ranged from a low of 77.6% (149 of 192) in 2017 to a high of 94.0% (172 of 183) in 2023 (mean 84.8% +/- 5.9%). There was a significant increase in the match rate of male applicants over the study period ($r=0.74$, $p=0.002$). The mean male applicant rank on the programs' lists ranged from a low of 10.79 in 2022 to a high of 6.12 in 2014, (mean 7.85 +/- 1.6), with a significant increase over the study period ($r=0.82$, $p=0.0006$). The mean program rank on male applicants' lists ranged from a low of 3.92 in 2020 to a high of 2.70 in 2022, (mean 3.15 +/- 0.37), with no significant change over the study period ($r=0.17$, $p=0.29$). Female applicants matched at a slightly higher rate than male applicants (87.6.1% v. 84.8%) although this difference was not statistically significant (OR=1.14, $p=0.64$).

DISCUSSION AND CONCLUSION:

Since 2012, there has been no statistically significant change in the number of male and female applicants applying to orthopaedic sports medicine fellowship. Over the study period, female applicant match rates significantly increased, while male applicants had no significant statistical change. Although no statistical difference was found regarding the match rate between male and female applicants, the number of females applying to orthopaedic sports medicine fellowship remains disproportionately lower than expected. Gender diversity continues to be an issue in orthopedics prompting the need for further investigation in future studies.