

Peer Review File

Article information: <https://dx.doi.org/10.21037/jtd-23-1123>

Reviewer A

Worthwhile manuscript as it outlines clearly the experiences, challenges, and working environment of Italian women surgeons in CT surgery and vascular surgery. **It would be beneficial to have the questionnaire included as an appendix.** Was the survey reviewed by a qualitative researcher to ensure that the questions were clearly formed and asking the question intended? Were the identities of the individuals who answered the survey confirmed via social media? Did the surveys that were submitted via email go to professional/hospital affiliated emails? These questions are in an effort to understand if there was any false attribution of results to a person who did not complete the survey. What was the survey response rate? Were some questions answered more than others? Were any questions required questions or were all optional? Could a person submit the survey more than one time?

Understanding the validity of the survey is important for the context of this important work and the findings. Thank you for taking this work on. It is important to outline the barriers to supporting women in these well-recognized male-dominated, gate-kept fields of CT surgery and vascular surgery.

Reply:

Dear reviewer, we would like to thank you for your time and helpful observations.

The questionnaire is included as an appendix (original version, in Italian – Appendix)

The questionnaire was formulated by SP, DL, and DV, and then tested and revised by 7 women surgeons who were board members of Women in Surgery Italia. The survey was disseminated via social media and to hospital-affiliated emails, so the identities of the responders were self-declared, and we cannot guarantee there were no multiple submissions from a single responder. As you underlined, unfortunately this distribution method hinders the response rate calculation. Regarding the questions, all were optional. Some were branching survey questions according to the response to specific previous questions, which were skipped by the respondents if the question did not apply to their situation. We have included the responders who answered to at least 50% of the questions, and 222 identified themselves as thoracic, cardiac, or vascular surgeons. These 222 respondents were included in this sub-analysis. All the questions were answered by more than 200 responders apart from the last question: “Would you choose your job again?” that was answered by 196 responders.

Reviewer B

It was a pleasure and privilege to review your paper based on a national survey for female surgeons in the cardiac, thoracic, and vascular specialty claiming a change in the working situation in Italy. Certainly, the topic is of very high importance and should be focused not only on a national but also international level. The survey includes extended questions compared to

former surveys in this field. Specifically, the performance and number of operations is a new measure.

However, partially I find the manuscript a bit one-sided. One of the paragraphs can be found on Page 12, 306-307 stating that “male co-workers should be educated how to avoid perpetuating the gender gap”, which excludes women who are sometimes also not helpful to provide an inclusive working place. Also, the manuscript is rather focused on harassment and discrimination which is basically unnecessary, since you did investigate interesting measures like the lack of exposure in surgery and missing mentorship.

With the purpose to improve the reporting of the results and put the actual documented measures into the spotlight I would like to go into detail with my further comments:

Abstract:

1) Reporting on results: Only 7 (3%) reached leadership positions. Please reframe this sentence, for example: Only 7 female participants who answered the questionnaire were in leadership positions.

Changed as suggested (abstract)

2) Please focus on other parameters of your survey, for example lack of mentorship and missing opportunities in operating theatre. I would summarize the expression of “too aggressive” and “surgery is not for women” into one sentence that a high percentage of women experienced discrimination due to their gender in their professional life.

Changed as suggested (abstract)

3) Conclusion: Please do not use the word “microaggression” since you did not investigate this measure and did not ask specifically in the questionnaire. What is more interesting is the lack of opportunities in theatres and missing mentorship. Also, main sources of dissatisfaction, namely lack of surgical training, work-life-balance, and amount of administrative work could be highlighted.

Changed as suggested (abstract)

Introduction:

4) Please specify the pathway of all three disciplines that you have investigated. Are all three usually led by one large department? Does everyone who performs cardiac surgery need to spend some time in the other discipline?

Changed as suggested (line 100)

Results:

5) Page 6, lines 150: Same phrase which incorrect conclusion: Only 7 (3%) reached leadership positions. Please change to 7 participants (3%) were in leadership roles.

Changed as suggested (line 171)

6) Page 7, 163: Please avoid the word microaggression since this is an interpretation rather than a measure that has been documented

Changed as suggested (line 182)

Limitations:

7) The number of respondents in the three categories is small: please add

Changed as suggested (line 316)

Conclusion:

8) Page 12, 306-307: “and educating male co-workers on how to avoid perpetuating the gender gap and create an inclusive workplace. “ Please remove this sentence that suggests that the situation of women in cardiac, vascular, and thoracic surgery is exclusively caused by male behaviour which might be correct to a larger amount, but is after all speculative.

Changed as suggested (line 337 – the word “male has been removed”)

Reviewer C

The authors performed a subgroup analysis if CT and vascular surgeons from a nationwide Italian survey of women in surgery.

1. the authors stated that no workplace environment survey tool is inexistence. as such, their survey tool as tested on 7 surgeons and then disseminated. in reality, there are several workplace environment tools in existence, particularly thos addressing gender bias and sexual harassment (eg, CDC, University of Michigan). the statement that no survey tool exists should be removed from the manuscript and this fact/weakness of the paper should be addressed in the discussion.

Reply: Changed as suggested

2. the survey was disseminated via social media, emails, through professional organizations and training programs. how were duplicate responses avoided (given multiple sources of survey dissemination)? additionally, an accurate response rate could not be calculated given this fact (which was mentioned in the discussion).

Reply: The survey was disseminated via social media and to hospital-affiliated emails, so the identities of the responders were self-declared, and we cannot guarantee there were no multiple submissions from a single responder.

This was added in the limitations (line 318).

3. the results from trainees and attendings were grouped together. in reality, the issues facing a

trainee is very different from the issues facing an attending. the data from residents and faculty/attendings should be analyzed separately.

Reply: The number of respondents for each group in each specialty was too low, so we couldn't analyze attendings and trainees separately.

4. the authors report "assignment to endoscopy, 33% or less of service cases, 1/12 high complexity cases/mth." how does this compare to male surgeons (to junior male surgeons, in particular)?

Reply: Unfortunately, this is a strong limitation because we do not have a control group composed by men. For this reason, a comparison between men and women is not available in the paper.

5. the authors use the report "poor surgical training" (line 186). can the authors please elaborate (eg, poor didactic training or clinical experience/volume)?

Reply: On average, our respondents took part in 33% of all surgical cases performed in their units; however, of 12 high-complexity surgeries per month, less than one is performed by them. In the operating room, only 31% of respondents declared they did not meet any difficulty, while 38% thought they did not receive adequate surgical training. This complaint was particularly common among cardiac surgeons (46% of responders). Moreover they declare the most common sources of dissatisfaction were the lack of surgical training, work-life balance, and the amount of administrative work. These elements underline that the lack of training and experience in the operating room is a key component of their dissatisfaction.

Below are 2 manuscripts the authors may want to peruse. The essence of the work is very similar to this manuscript and the authors are promoting the same message.

Work-life balance in CTS (Ann Thorac Surg. 2022 Nov;114(5):1933-1942.)

Status of women in CTS (Ann Thorac Surg. 2022 Mar;113(3):918-925.)