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# Reply to comment on: Operator gender differences in major mechanical complications after central line insertions: a subgroup analysis of a prospective multicentre cohort study

Leila Naddi<sup>1,2\*</sup>, Janna Hübinette<sup>3</sup>, Thomas Kander<sup>1,2</sup>, Ola Borgquist<sup>1,4</sup> and Maria Adrian<sup>1,4</sup>

## REPLY

*Dear Editor:* First of all, we would like to thank Dr. Calvache and Dr. Klimek for taking the time and effort to read and comment on our article.

We agree that gender is a complex issue with far more depth than merely biological sex. Any true differences that do exist in the studied area are, according to our beliefs, more likely to be explained by social and cultural factors rather than inherent biological differences.

However, we do not agree with the statement that we are attributing the observed difference in complication rates solely to gender. Our study is observational, the reported association between operator gender and major mechanical complications is regarded as hypothesis-generating and causality is not asserted in the article. We have clearly stated that our results should be interpreted with caution, that the findings should be confirmed in

future studies, and that studies investigating possible explanatory mechanisms are warranted.

We appreciate the respondents' study on data from Colombia, although we are unable to find that inserting physician gender is reported [1]. Furthermore, a possible explanation for the respondents' inability to replicate an association in their own data may be the difficulties to calculate an estimate for major mechanical complications. In the CVC-MECH trial, we found an association between operator gender and major mechanical complications, but there was no association between operator gender and the much more common minor mechanical complications [2].

Regarding the respondents' comment on "Tables 2 and Table 4 fallacy," we report the distribution of major mechanical complications between operator gender and associations with major mechanical complications, not causations - and they are clearly reported as such. The article was written with medical academics as primary audience, and we are certain that the intended reader has the knowledge to distinguish between association and causation.

Sincerely,  
Leila Naddi.  
Corresponding author.

## Acknowledgements

Not applicable.

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\*Correspondence:

Leila Naddi  
leila.naddi@med.lu.se

<sup>1</sup>Anaesthesiology and Intensive Care, Department of Clinical Sciences, Lund University, Lund, Sweden

<sup>2</sup>Department of Intensive and Perioperative Care, Skåne University Hospital, Lund 221 85, Sweden

<sup>3</sup>Medical Faculty, Lund University, Lund, Sweden

<sup>4</sup>Department of Cardiothoracic Surgery, Anaesthesia and Intensive Care, Skåne University Hospital, Lund, Sweden



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#### Author contributions

LN wrote the first version of the reply, all other authors reviewed, contributed to and approved to the final version.

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#### Data availability

No datasets were generated or analysed during the current study.

#### Declarations

##### Ethics approval and consent to participate

Not applicable.

##### Consent for publication

Not applicable.

##### Competing interests

The authors declare no competing interests.

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